



Survivor!: Volume 1

Surviving Outdoor Adventures

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Welcome to Surviving Outdoor Adventures!

Surviving Outdoor Adventures is a K-12 curriculum designed to be used in its entirety or in parts to help you prepare children and young adults to play and work safely in the outdoors and around cold water. This curriculum consists of four volumes:

1. *Survivor!* (for kindergarten-2nd grades)
2. *Cold Water Safety and Survival* (for 3rd-12th grades)
3. *Small Boat Safety and Survival* (for 3rd-12th grades)
4. *Land Safety and Survival* (for 3rd-12th grades)

Each volume can be used alone and contains:

- Instructional units—each with a brief introduction and goal statement, background information, an activities guide, a variety of student activities, and content standards
- Overhead masters (except in *Survivor!*)
- Resources

Each instructional unit has an introduction page that summarizes the rationale and goal of the unit. Used with the activities guide, it provides a tool for you to choose the topics and activities that are most relevant to your students and their outdoor safety and survival. Activities are approached in a variety of ways and incorporate the following Content Standards subjects: Language Arts, Mathematics, Science, Geography, Government and Citizenship, History, Skills for a Healthy Life, Arts, World Languages, Technology, Library/Information Literacy, and Cultural Standards (*Alaska Content Standards*, 2000 edition).



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Volume 1: Survivor!

Why teach cold water and outdoor safety and survival skills to young children? The answer is simple and compelling. The second leading cause of death for children nationwide is drowning. Many other children, far too many, die of hypothermia as a result of getting lost in the wilderness. Most of these tragedies are avoidable, and most cold water emergencies are survivable. Education and training often separate the survivors from the victims.

Americans spend a great deal of time and money on outdoor activities, and seem especially fond of activities on or near the water. Our ocean beaches, lakes, rivers, and streams are popular destinations for family outings. Unfortunately, it takes a mere blink of the eye to turn an outdoor activity into a survival situation, oftentimes with tragic results.

It does not have to be that way. Study after study has shown that education and training can make the difference between life and death in an outdoor emergency.

By educating children now in cold water safety and survival we can instill new habits that will carry them through life. This training will not only help save their lives, but will contribute to the safety of the adults of tomorrow.

How to Use Volume 1: Survivor!

Survivor! is organized into six units:

1. Preparation for Outdoor Activities
2. Personal Flotation Devices
3. Cold Water Survival Skills
4. Ice Safety
5. Boating Safety
6. Lost or Stranded

Whether you are teaching one lesson, a semester, or a year-long program, this volume provides information and activities for teaching cold water and outdoor safety and survival to young children. Each unit assumes knowledge of the material in the preceding unit(s).

Survivor! is the first volume of *Surviving Outdoor Adventures* and is intended to be used with kindergarten through second grade students. It contains topics covered in the other three volumes in much the same order, although the content is not identical. For more in-depth information see the other three volumes.

Getting around Volume 1: Survivor!

Each of the six units in this volume contains the following:

- Overview—the unit rationale and goal.
- Teacher Information—in-depth background information presented in outline form to supply the latest information to effectively teach the unit. Icons appear in the margin to illustrate material as needed.
- Activities Guide—a teacher’s planning guide with a list of activities that coincide with major topics in the Teacher Information, a brief summary of each activity, its objectives, Alaska Content Standards, and page numbers.
- Activities—stand-alone lessons that include an overview, objectives, materials list, procedures, Alaska Content Standards, plus student handouts, songs, scripts, and templates.



Permission Forms and Waivers

Any hands-on activity carries risk of injury to participants. AMSEA is not responsible for injuries resulting from the activities in this publication. Teachers are strongly encouraged to follow the safety guidelines in the activities and provide proper supervision and organization. This is especially critical for in-water activities. Instructors are encouraged to co-teach and report to AMSEA safety problems or concerns that arise.

It is strongly suggested that instructors get signed permission forms for each student participating in hands-on activities. It is especially important that students' parents/guardians note any health problems or physical considerations that may limit students' participation. A sample form follows.

A sample liability form (waiver) is also included in case you are not instructing under the liability protection of a school or other organization. Check with the organization you are working under regarding your liability. It is up to the instructor to ensure that they have proper liability protection.

Surviving Outdoor Adventures Permission Slip

I give my permission for _____ to participate in the water or land safety and survival training exercise field trip as part of Mr./Ms. _____ class. Staff and students will be traveling to _____ on date(s) and time(s) _____.

- _____ We will be taking the bus to and from the school.
- _____ We will be walking to and from the school

Please list any special needs or concerns your child may have _____

Parent/Guardian Signature _____ Date _____

Printed name _____

..... 

Surviving Outdoor Adventures Permission Slip

I give my permission for _____ to participate in the water or land safety and survival training exercise field trip as part of Mr./Ms. _____ class. Staff and students will be traveling to _____ on date(s) and time(s) _____.

- _____ We will be taking the bus to and from the school.
- _____ We will be walking to and from the school

Please list any special needs or concerns your child may have _____

Parent/Guardian Signature _____ Date _____

Printed name _____



Sample Waiver Form

Waivers are a controversial topic. Some legal experts believe they limit liability by making students aware of hazards, while others believe they increase liability. Instructors should make their own choice, consulting a lawyer, if necessary, to make a decision. If you use a waiver in your class, get it signed *before* the class begins. Parents should never be pressed to sign a waiver. A sample follows.

Cold Water Survival Program Assumption of Risk and Waiver & Release

I, _____ (print name) recognize the activity in which my child desires to participate involves a risk of injury. I am aware and accept the risks involved, which may include but are not limited to: striking objects when entering water, cardiac arrest, ventricular fibrillation, inadvertent gasping and inhalation of water, sudden drowning syndrome, or drowning from other causes, hypothermia, falls from walking on slippery beaches or woods, and other injuries which may occur due to the use of safety and survival equipment such as distress flares, liferafts, personal flotation devices, dewatering pumps, fire extinguishers, etc.

I hereby execute this release as a condition of and in partial consideration for allowing my child to participate in all or a portion of the cold water training program conducted by

_____. I am familiar with the activities and events which will be included in this training and I have read a copy of the schedule of activities in which my child is to participate. I have read and voluntarily signed this release, waiver of liability and indemnity agreement, intending legally to be bound, and I further agree that no oral representations, statements or inducements apart from those contained in this release have been made to me.

I hereby release, discharge and covenant not to sue _____, its agents, employees, representatives, officers, directors members and all other persons acting for

_____ and all instructors, participants and advertisers (hereinafter called "Releasees") from all liability. This includes me, my child, my personal representatives, heirs, assigns, and next of kin, for any and all loss or damage, and any claim or demands thereof on account of injury to my child, his/her or property or his/her death, whether caused by the negligence of the Releasees or otherwise, as the result of my child having participated in any portion of the program.

I hereby agree to indemnify and save and hold harmless the Releasees and each of them from any loss, liability, damage or cost they might incur due to my child's participation in the survival program in any manner and assume responsibility for, and the risk of, bodily injury, death or property damage due to the negligence of Releasees or otherwise, resulting from my child's participation in the program. I acknowledge that my child's health and physical condition will allow him/her to perform the activities in this training.

IN WITNESS THEREOF, I have executed this release on _____ (date.)

Releasor signature _____

Printed name _____

Please list any health problems or injuries that may limit your child's participation on the back of this page and return to instructor.



Unit 1: Preparation for Outdoor Activities

Unit Rationale

Proper planning and preparation are an essential part of safe and enjoyable outdoor activities, and should begin the moment the decision is made to spend time outdoors. Good advance preparation can help you survive an outdoor emergency.

Boating, hiking, camping, or any other outdoor adventure can quickly turn into a survival situation when weather conditions suddenly change, or an accident or injury occurs.

Hypothermia is a life-threatening condition that often kills the unprepared, and immersion hypothermia is a contributing factor in many deaths attributed to drowning.

Knowing the risks inherent in outdoor activities and how to prepare for and prevent emergencies can make the difference between a safe, enjoyable outing and a life-threatening emergency. This unit contains information that will help you prepare your students.

Unit Goal

Children will learn the fundamental steps in preparing for a safe outdoor activity, including recognition of the dangers of hypothermia and how to prevent it.



Preparation for Outdoor Activities: Teacher Information

The information in this section gives teachers a background in the topic. Use judgment when presenting this material; some concepts may not be suitable for young children.

Weather

Introduction

- A. Weather can make your outdoor experience a pleasure or a disaster
- B. Learn your limits for traveling in unfavorable weather
 - 1. If tempted to go out in marginal conditions, remember, “When in doubt, chicken out!”
 - 2. Avoid “get-home-itis”—it can be fatal! It’s better to be late than never get there
- C. Movement of large air masses around the earth create weather
 - 1. Weather fronts
 - a. Are located where two air masses meet
 - b. Are often marked by different cloud formations and wind shifts
 - c. Indicate a change in weather
 - 2. Local weather
 - a. Influenced by local geographic variations
 - b. Highly variable; changes can be sudden
 - c. Get local knowledge to understand dangers
 - 3. Seasonal weather conditions
 - a. Changes tend to occur more suddenly near fall and spring equinoxes
 - b. Higher incidence of strong winds autumn through winter in Alaska
 - c. Other regions of U.S. have different seasonal weather, e.g., in southern U.S., summer brings more hurricanes
 - 4. Sudden changes in weather can occur during any part of year

Evaluating the weather

- A. Weather can change quickly—evaluate **before** and **during** trip
- B. Use more than one source to evaluate weather
 - 1. Check most recent weather reports and forecasts for departure, route, and destination
 - a. Scheduled forecasts on AM and FM radio stations
 - b. VHF radio—on demand
 - c. TV weather stations
 - d. Internet—links for Alaska weather on AMSEA’s Web site: www.amsea.org
 - e. Telephone—number varies, marine weather is 907-790-6850 in Alaska
 - 2. Check local conditions
 - a. Check and interpret local weather conditions and patterns

- b. Learn local patterns—look for fog, clouds, squalls, etc.
 - (1) Clouds
 - (a) High, fast-moving clouds indicate surface winds will increase
 - (b) Darker clouds are heavily laden with water and indicate wet, windy weather
 - (2) Sudden drop in temperature and/or a rapid change in wind speed or direction usually indicate a front coming through
- c. Check barometer to measure current air pressure
 - (1) Low pressure system in Northern Hemisphere—counterclockwise air flow—brings wet, windy, foul weather
 - (2) High pressure system in Northern Hemisphere—clockwise air flow—brings clear, dry, and sometimes windy weather
 - (3) The greater the difference between nearby pressure systems, the greater the wind
 - (4) Rapidity of barometer’s rise and fall
 - (a) Is more important than barometer reading at any given time
 - (b) Indicates strength of weather system
 - (5) Generally, a rising barometer brings improving weather
- d. Use local knowledge—Elders and experienced outdoors people are a good source of local weather information

Wind

- A. Wind can cool you down faster than still air and increase your risk of hypothermia
- B. Extreme wind can increase your risk of falling and can destroy your camp

Fog

- A. Increases risk of getting lost
- B. Types
 - 1. Radiation fog
 - a. It develops at night or in early morning when there is no wind
 - b. If not cleared by warming sun in late morning, it may stay all day
 - 2. Advection fog—caused by warm moist air moving over colder surfaces
 - a. Can develop night or day
 - b. Needs wind to clear up

Tides

- Vertical change in water depth caused by gravitational pull of moon and sun
- A. Affect water conditions and where you can safely travel, beach, or anchor
- B. Are affected by barometric pressure
 - 1. Low pressure systems cause water levels to rise higher than expected
 - 2. High pressure systems cause water levels to be lower than expected

Tidal range—vertical distance between high and low tides

- A. Varies greatly by location
 - 1. Bay of Fundy in eastern Canada has highest tidal range in North America (about 53 feet)
 - 2. Cook Inlet has highest tidal range in Alaska (up to 38.9 feet), second highest in North America
 - 3. Can be as low as 1 to 2 feet in other parts of U.S.
- B. Big tidal ranges can result in dangerous currents, especially in restricted channels
- C. Gradually sloped beaches with large tidal range result in extensive horizontal tidal areas

Tide cycles

- A. Can be predicted by using tide tables
- B. Vary depending on location and oceanographic conditions
 - 1. Some places like Gulf of Mexico have one high and one low tide per day (diurnal or daily tides)
 - 2. Others have two high tides and two low tides per day
 - a. Semi-diurnal—twice daily tide cycle where both high tides are the same level, and both low tides are the same level (common in Atlantic Ocean)
 - b. Mixed semi-diurnal—twice daily tide cycle where both high tides are different levels, and both low tides are different levels (common in Pacific Ocean waters)
 - c. Occasionally there will only be three tide changes in a 24-hour period
- C. Definitions
 - 1. Higher high tide or higher high water = the highest of the day's two high tides
 - 2. Lower low tide or lower low water = the lowest of the day's two low tides
 - 3. Mean lower low water = average of lower low tides, depth shown on charts in areas with mixed semi-diurnal tides
 - 4. Spring tides
 - a. Twice-monthly tides with greatest tidal variation—get highest highs and lowest lows of month
 - b. Caused by combined gravitational pull of sun and moon in alignment with earth at new and full moon
 - 5. Neap tides
 - a. Twice-monthly tides with least tidal variation
 - b. Caused by partially offset gravitational forces of sun and moon at quarter and three-quarters moon
 - 6. Low pressure systems often cause higher-than-predicted tides
 - 7. High pressure systems can make tides lower than predicted

Tide books contain

- A. Tide tables that predict, *not* guarantee, times and heights of high and low tides by date and location
- B. Correction tables that correct for specific geographic locations
- C. Other valuable information

Currents

- Caused by ocean circulation, tides, rivers, and wind
 - Can cause rapid water condition changes and dangers
 - Affect boat's speed, how long it takes to get to destination, and heading that must be maintained
- A. When traveling against current you will travel more slowly
 - B. When traveling with current you will travel more rapidly and may have difficulty controlling your boat
 - C. When current is at an angle to boat's course, it affects speed and course over ground in direct proportion to the angle
 - D. Strong winds running against strong currents, especially in narrow passages, can cause steep and standing waves
 - E. Currents meeting each other can cause rips, whirlpools, and standing waves

Tidal currents

- A. **Horizontal** motion of water from one point to another resulting from difference in tidal height between those points
- B. Greatest velocities occur during middle third of each rising or falling tide
- C. Velocities may reach up to 8 knots in certain locations
- D. Tidal current tables predict current strength, direction, and time by date and specific location

River current

- A. Strongest over deepest part of channel
- B. Stronger during and immediately following rain
- C. Can overpower boats and people in the water

Hypothermia

- The hypothermia signs, symptoms, and treatment described here are based on guidelines developed by the State of Alaska and revised in 1996. Consult your state Emergency Medical Services office for current recognition and treatment guidelines. It is important to keep current with new developments in this field.
- Hypothermia kills many people on outdoor adventures; knowing how to prevent it is critical!

Definitions

- A. Hypothermia = drop in body core temperature

- B. Core = inside head and trunk where vital organs like brain, heart, and lungs are
- C. Dry hypothermia—also called chronic, land, or slow onset hypothermia
 - 1. Dry hypothermia is most common on land
 - 2. Onset can be extremely slow and can occur in relatively mild conditions
 - 3. It is sometimes difficult to recognize
- D. Immersion hypothermia—also called acute, wet, or rapid onset hypothermia
 - 1. Can occur from being in water
 - 2. Onset is rapid due to heat loss in water from conduction and convection
 - 3. Loss of muscle coordination decreases ability to self-rescue, and increases rescue difficulties and likelihood of drowning
 - 4. Victims of immersion hypothermia continue to cool rapidly once out of the water because they are wet
- E. High heat loss areas
 - 1. Head—50% of your body's heat is lost from your head
 - 2. Neck
 - 3. Underarms
 - 4. Sides of chest
 - 5. Groin

Heat gain vs. heat loss

- A. Any time you lose more heat than you produce, hypothermia results
- B. Without adequate food and clothing or external heat sources, your core temperature cannot be maintained except in tropical climates
- C. Your body at rest loses more heat than it generates
 - 1. In air less than 80°F
 - 2. In water less than 91°F
- D. Heat regulation
 - 1. Your body tries to maintain normal body temperature (usually 98.6°F, 37°C)
 - 2. Your body reduces circulation to extremities when cold
- E. How your body gains heat
 - 1. Muscle activity
 - a. Initially may increase body heat
 - b. May be voluntary or involuntary (shivering)
 - c. Without adequate food, water, and rest, activity leads to exhaustion
 - 2. Food
 - a. Required for your body to generate heat

- b. You need more food when under stress
- c. You cannot fully compensate for environmental cooling by eating—you also need to insulate your body
- 3. External heat sources (e.g., warm food and drinks, sunlight, fire) can assist in maintaining body temperature
- F. Your body loses heat five ways
 - 1. Radiation
 - a. Your body is like large radiator 70% full of hot water, giving off heat to environment 24 hours a day
 - b. To minimize, insulate body well, drink water, and eat
 - 2. Respiration
 - a. Air cooler than your body is inhaled, warmed, then exhaled
 - b. To minimize, breathe through your nose or a scarf
 - 3. Conduction
 - a. Occurs when in contact with surfaces cooler than your body
 - b. Is 25 times faster in water than in still air
 - c. To minimize, stay as dry as possible and insulate yourself from cold surfaces
 - 4. Evaporation
 - a. Heat is lost when sweat or water on skin evaporates
 - b. To minimize, reduce exposure to precipitation and sweating
 - (1) Use a waterproof outer layer as appropriate
 - (2) Regulate body temperature with layers of clothing
 - (3) Reduce activity to minimize sweating
 - 5. Convection
 - a. Occurs when moving air or water removes body heat
 - b. Heat loss increases as air or water speed increases
 - c. Speeds up process of cooling from other four heat loss mechanisms
 - d. To minimize, stay out of wind and water, and wear windproof outer layer

General causes of hypothermia

- A. Poor judgment
- B. Exposure to wind, wet, and cold
- C. Improper clothing
- D. Contributing factors
 - 1. Age—very young or very old people may not have adequate heat regulating systems
 - 2. Body fat—people with less body fat cool faster than people with more body fat

3. Alcohol—dilates blood vessels (which speeds up heat loss), and impairs judgment
4. Other drugs can hasten heat loss
5. Mental depression can lower body temperature

Preventing hypothermia

- A. Use good judgment—know your limits, equipment, and environment
- B. Eat nutritious foods and drink water regularly
 1. Eat to increase heat production before heat loss is a problem
 2. Digestion requires water; you will dehydrate if you eat without drinking water
- C. Rest frequently
- D. Reduce exposure to wind, wet, and cold—stay dry and warm!
- E. Have a positive mental attitude—depression makes you cooler
- F. If you are getting cold, stop your activity, decrease heat loss, and increase heat gain while you are still able to control cooling process
- G. Wear proper clothing (see below)

Hypothermia treatment basics for children

- A. Get help from an adult
- B. Be gentle
- C. Dry victim and protect from wind, if possible
- D. Keep victim as warm as possible
 1. Put a hat on victim
 2. Cover victim's high heat loss areas
- E. Children should *not*
 1. Use their own bodies to warm victims—they may become hypothermic
 2. Massage victims
 3. Help victims into warm showers or baths

Clothing

Clothes are your primary shelter

- A. Body heat is retained by trapping air next to it
- B. The more still air clothing holds and keeps warm, the better its insulating value
- C. Proper clothing protects against wind, wet, and cold, and protects high heat loss areas—waterproof and windproof layers are a must
- D. Avoid “day trip” mentality—bring enough clothing to spend an unexpected night
 - Dark colors absorb more heat from external sources but are more difficult to see than bright or light colors

Type of fabric and presence of water affect how well clothing insulates—some fabrics lose most of their insulating value when wet

A. Wool

1. Provides good insulation when dry
2. Traps water, loses some insulating ability, and is heavy when wet
3. Not readily flammable

B. Polypropylene, “pile,” polyesters, Polartec™, fleece, and other synthetics

1. Generally light weight and dry quickly
2. Provide good insulation
3. Some engineered to wick water away from body, helping prevent heat loss
4. When wet, fibers retain most of their insulating ability
5. Most are not windproof unless specially designed
6. Some chemically treated to not hold body odor
7. Low ignition temperature so can get burn holes or melt onto skin if worn too close to heat
8. Products and properties vary widely; read manufacturer’s information

C. Cotton

1. Rapidly absorbs and holds water; provides no insulation, feels clammy and cold when wet
2. Wet cotton increases heat loss
3. Poor fabric choice for wet climate outdoor activities

D. Silk

1. Very thin and loses insulating ability when wet
2. Can be an effective insulator in dry climates

E. Down

1. One of the most efficient insulators for weight when dry
2. Provides no insulation when wet and very hard to dry once wet
3. Poor choice for wet climate outdoor activities

F. Animal fur

1. Excellent insulator when dry
2. Naturally water resistant due to natural oils, but becomes less water resistant over time due to breakdown of natural oils
3. Best insulating fur has hollow or very dense hair (e.g., caribou, seal, otter)
4. Very effective at shedding frost and ice

Wear layered clothing

- A. In general, multiple layers trap more air than single layer of same thickness

- B. Adjusting to environmental changes is easier when you layer clothing
- C. Remove layers before overheating to reduce sweating and heat loss
- D. Inner layer = underwear, long underwear, inner socks
 - 1. Purpose = to wick moisture from skin and provide some insulation
 - 2. Materials = polypropylene and other synthetics, wool, silk
 - 3. Should be snug, have close contact with skin
- E. Middle layers = shirts, pants, sweaters, vests, jackets, hats, thick socks, mittens or gloves
 - 1. Purpose = provide additional insulation and absorb or transmit moisture wicked from inner layer
 - 2. Materials = polypropylene and other synthetics, wool, animal furs
 - 3. Should fit loosely to hold warmed air
 - 4. May use multiple insulating layers
 - 5. Should have adjustable closures and be easy to remove to prevent sweating
 - 6. Hats
 - a. Reduce heat loss from highest heat loss area
 - b. Effective way to help keep whole body warm—Cold feet? Put on a hat
 - c. Wool and synthetic hats are more effective than cotton baseball caps
 - d. Can be middle or outer layer, or combination
- F. Outer/shell layer = wind and waterproof shell, hooded jacket, snow pants, raingear, PFD, waterproof overmitts or gloves, boots, shoes
 - 1. Purpose = protects from wind, wet, and weather
 - 2. Materials = water and wind barrier fabrics such as oilskins, rubber, coated nylon, specially treated fabrics, animal fur (if dry), wool (if dry)
 - 3. Windproofing increases efficiency of middle layers by keeping cooler air away from your skin and holding warmed air still
 - 4. Should fit loosely and have adequate closures
 - 5. Should let moisture escape
 - 6. Down parkas combine insulation with a wind shell but offer no protection from rain or wet snow
 - 7. Fur and snowsuits combine insulation with shell layer

Personal Survival Kits

- Most people arrive in survival situations with just clothing they are wearing and what's in their pockets

Items to have on your person at all times

- A. Clothing appropriate for outside environment—cotton is often a poor choice

- B. Hat—wool or synthetic stocking/watch cap
- C. Knife—sheath-type or good pocket knife (not safe for small children)
- D. Personal survival kit
 1. Must be light and small enough so it is always on your person
 2. Essential areas of contents
 - a. Shelter aids—such as twine or cordage, dental floss, large garbage bags, space blanket, bug head-net
 - b. Signal aids—such as mirrors, whistle, foil, surveyor’s flagging tape, flares, chemical lights, strobe light, paper and pencil
 - c. Personal health needs—such as medication, water purification tablets, eye care, tampons, bug repellent, bouillon, energy bars
 - d. Fire starter (not appropriate for young children)
 3. Multi-purpose items are best
 4. Contents depend on individual, environment, and activity
 5. Contents should not be dominated by one or two items or categories of items
 6. Everyone on trip should have 1 or 2 kits
 7. Commercially purchased kits may not be adequate
 8. Should be inspected regularly and outdated items replaced
 9. Container must be waterproof and sturdy
 10. For children: choose age-appropriate items and train to use all items

Comfort Kits

Nice to have items

- A. Bigger version of personal survival kit; add Personal Locator Beacon (PLB), hand-held VHF radio, flares, food and water, first aid kit
- B. Use primarily for vehicle-based land travel or boating
- C. Should be accessible, but don’t count on it being there
- D. Container should be waterproof and have a handle
- E. Should be inspected regularly

Equipment

Camping gear—choices and amounts will be individual choice

- A. Shelter aids
 1. Extra clothes
 2. Tent, tarp, line, folding saw, hatchet, etc.
 3. Sleeping bag, pad
- B. Signals—PLB, hand-held VHF radio, cellular phone, etc.
- C. Water, extra water containers, a way to purify water
- D. Food, cook stove, fuel, matches/lighter, pots, fire starter, etc.
- E. Flashlight/headlamp with spare batteries
- F. Topographic maps, nautical charts, compass
- G. First aid kit

- H. Insect repellent
- I. Bear protection—bear spray, flares, gun (not appropriate for small children)
- J. Personal hygiene items
- K. Backcountry snow shovel

Vehicle gear

- A. Extra fuel
- B. Spare parts
- C. Tool kit
- D. First aid kit

Boat or vehicle kit

1. Safety and survival equipment, repair equipment and tools, spare parts, and extra fuel specific to boat or vehicle and planned activity
2. Accessible and in waterproof container
3. Examples of boat gear: extra clothes, water and food, oars, extra bailer and/or pump, tarp, extra anchor and line, maps or charts of area
4. Vehicle kit might include tent, sleeping bag or blankets, cook stove, food, water

Pre-trip Procedures

- Children should always ask permission before going
 - Check weather
 - Make a float or trip plan (This is not appropriate for young children who should not be off by themselves; emphasize asking permission)
- A. For every outdoor activity or trip and include
 1. **Who** is going
 2. **Where** you are going and your route there
 3. **When** you will arrive at your destination and when you expect to return
 4. **What** equipment you are taking
 - a. Include a description of your boat or vehicle
 - b. Shoe size and tread, and description of clothing can also help searchers
 5. **Why** you are going
 - B. Leave plan with responsible person
 - C. Update plan promptly if plans change
 - D. Notify holder of plan when you return
 - Gather and check necessary equipment
 - Dress appropriately for weather and planned activities
 - Don PFD if boating

Preparation for Outdoor Activities: Activities Guide

- Activities in this volume are sequential and each unit assumes some knowledge of the material in the preceding unit.
- Activities are arranged by topic in the same order as the Teacher Information.
- Detailed Alaska Content Standards are located at the end of each activity’s procedures.
- Times given for activities are approximate.
- In order to provide a choice of handouts for pre-readers and readers, many activities have more than one handout that covers the same information.
- Many activities contain true stories; be sensitive to the possibility that they could be written about your students’ relatives or friends.
- **AMSEA** This symbol means the items are available to borrow from AMSEA.

Topic: Weather

Activity	Objectives	Standards
1. Weather Stories and an art project introduce weather p. 27	<ul style="list-style-type: none"> • List two dangers of boating in the fog • Describe how five types of weather could affect a trip • Describe how wind affects the water 	Language Arts Science Skills for a Healthy Life Arts
2. Rain A picture book teaches about rain p. 34	<ul style="list-style-type: none"> • List three pieces of clothing that can help keep them dry • List two behaviors that can help them stay dry 	Language Arts Science Skills for a Healthy Life
3. Weather Log Students make weather observations and learn where to find weather information p. 35	<ul style="list-style-type: none"> • Describe weather conditions • Describe two ways to check the weather 	Language Arts Mathematics Science Geography Skills for a Healthy Life Arts Technology Library/Information Literacy

Topic: Tides

Activity	Objectives	Standards
4. Tides Discussion and a field trip to observe tides p. 37	<ul style="list-style-type: none"> • Describe a tide cycle • Describe two dangers of tides 	Language Arts Mathematics Science Geography Skills for a Healthy Life Library/Information Literacy

Topic: Currents

Activity	Objectives	Standards
5. Currents A field trip to observe currents p. 39	<ul style="list-style-type: none">• Explain the importance of wearing a PFD when on or near the water• Describe how currents affect floating objects• List one dangerous situation caused by currents	Language Arts Mathematics Science Geography Skills for a Healthy Life

Topic: Hypothermia

Activity	Objectives	Standards
6. Bodies Making Heat Students learn about gaining body heat p. 42	<ul style="list-style-type: none">• List three ways to gain body heat• Describe one high energy snack for a hiking or boating trip Language Arts	Mathematics Science Skills for a Healthy Life Arts
7. Bodies Losing Heat A song and discussion explore the five high heat loss areas p. 45	<ul style="list-style-type: none">• List the five high heat loss areas• Show where the body's core is• List five ways their bodies lose heat• List two ways to reduce heat loss	Language Arts Science Skills for a Healthy Life Arts
8. Hypothermia Happens An introduction to causes and prevention of hypothermia p. 53	<ul style="list-style-type: none">• List three actions that can lead to hypothermia• List three actions that can help prevent hypothermia	Language Arts Science Skills for a Healthy Life
9. Hypothermia Signs, Symptoms, and Treatment Video, role playing, discussion, and a writing project introduce students to the signs and symptoms of hypothermia p. 57	<ul style="list-style-type: none">• List six signs and symptoms of hypothermia• List three things they can do to treat a hypothermic person• List four things they should not do to treat a hypothermic person	Language Arts Science Skills for a Healthy Life Arts

Topic: Clothing

Activities	Objectives	Standards
10. Dressing in Layers A story and class activity introduce dressing in layers p. 61	<ul style="list-style-type: none">• List three layers of clothing appropriate for a cold, wet environment• List six items of clothing appropriate for a cold, wet environment• List two materials that insulate well	Language Arts Skills for a Healthy Life Arts
11. Wear a Hat! An experiment illustrating how hats affect heat loss p. 64	<ul style="list-style-type: none">• Explain that wearing a hat helps prevent hypothermia	Science Skills for a Healthy Life
12. All Wet An experiment exploring the qualities of fabrics when wet p. 65	<ul style="list-style-type: none">• Identify cotton as a material that absorbs water quickly and does not insulate when wet• Identify wool and synthetic fleece as materials that do not absorb water quickly and insulate even when wet• Compare the insulating qualities of various fabrics when wet	Language Arts Science Skills for a Healthy Life Library/Information Literacy
13. Find and Wear Those Warm Clothes A song, counting exercise, maze, hidden puzzle, and paper dolls teach about dressing for the outdoors p. 67	<ul style="list-style-type: none">• List eight pieces of clothing appropriate to wear on an outing near or on the water	Language Arts Mathematics Skills for a Healthy Life Arts
14. The Jacket I Wear in the Snow A story, craft project, and worksheets introduce cold weather clothing p. 74	<ul style="list-style-type: none">• List nine pieces of clothing appropriate to wear in the snow	Language Arts Skills for a Healthy Life Arts

<p>15. Playground Dressing Contest A contest to dress appropriately for hypothermia protection p. 77</p>	<ul style="list-style-type: none"> List the five high heat loss areas and describe clothing appropriate for insulating them Explain why insulating the high heat loss areas is important 	<p>Language Arts Skills for a Healthy Life</p>
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Topics: Hypothermia and Clothing Culminating Activity

Activity	Objective	Standards
<p>16. Hypothermia Handbooks Students create a hypothermia handbook p. 78</p>	<ul style="list-style-type: none"> Assemble a hypothermia handbook 	<p>Language Arts Skills for a Healthy Life Arts Library/Information Literacy</p>

Topic: Personal Survival Kits

Activities	Objectives	Standards
<p>17. Survival Kits Worksheets and a discussion introduce personal survival kits p. 79</p>	<ul style="list-style-type: none"> Define a personal survival kit List four categories of items to carry in a personal survival kit Select at least four appropriate items for a personal survival kit 	<p>Language Arts Mathematics Skills for a Healthy Life Library/Information Literacy</p>

Topics: Comfort Kits, Equipment, Pre-trip Procedures

Activities	Objectives	Standards
<p>18. Permission Role playing to explore the importance of asking permission p. 84</p>	<ul style="list-style-type: none"> List two reasons for asking permission 	<p>Language Arts Skills for a Healthy Life Arts</p>
<p>19. Float Plans Discussion and worksheets introduce float plans p. 85</p>	<ul style="list-style-type: none"> Fill in the five essential parts of a float plan List one person they can give their float plan to 	<p>Language Arts Skills for a Healthy Life</p>
<p>20. Tracks! Track-making and search activities help students understand how footprints and clothing description can help searchers p. 88</p>	<ul style="list-style-type: none"> State why shoe size and tread help searchers locate lost people State why knowing what a lost person is wearing helps searchers find the lost person 	<p>Language Arts Mathematics Science Skills for a Healthy Life Arts</p>

21. The Numbers Game

Card game and cut and paste activity to review preparing for an outdoor adventure
p. 90

- List seven appropriate actions to take, items to bring, or clothing to wear on an outdoor trip

Mathematics
Skills for a Healthy Life
Arts

22. Preparation Checklist

Students make a checklist in preparation for an outdoor activity
p. 96

- Create a checklist of things to do in preparation for an outdoor activity

Language Arts
Skills for a Healthy Life
Arts
Library/Information Literacy

Weather

Time: 45-60 minutes

Use with Teacher Information

Overview

Stories and an art project introduce weather.

Objectives

After completing this activity, students should be able to:

1. List two dangers of boating in the fog.
2. Describe how five types of weather could affect a boat trip.
3. Describe how wind affects the water.

Materials

Part 1

- *Weather* by Seymour Simon [AMSEA](#)
- 1 piece per student, white drawing paper
- 1 piece per student, tracing paper
- Markers, paints, or crayons
- Clear tape

Part 2

- *Whatever the Weather* by Karen Wallace, *Adrift* by Colleen Politano and Joan Neudecker, *Sailor Dog* by Margaret Wise Brown, or *Weather Words* by Gail Gibbons [AMSEA](#)
- Story #1 **Woman and Dog Caught in the Weather**
- 1 per student, Student Handouts #1, **Weather to Watch Out For**; #2, **Weather That Can Cause Problems**; and #3, **Weather Words**
- Construction paper of different colors
- Glue, tape
- Scissors
- Ball of string
- 1 per student, clothes hanger or dowel

Procedure

Part 1

1. Read *Weather* and discuss:
 - How the sun affects weather on earth.
 - How altitude, forests, oceans, and large lakes affect weather.
 - What a weather front is.
 - Different kinds of clouds and the kinds of weather they can bring.
 - How scientists measure weather.
 - How anyone can observe weather and the effects of weather.
2. Have students color or paint a picture of a boating activity on a sunny day.
3. Have students cover their pictures with tracing paper to simulate fog.
4. Discuss the difference between seeing in the fog and seeing in clear weather.

5. List and describe two dangers of boating in the fog.
6. Remind students that weather can change very quickly on the water, and that watching the weather is important when on the water.
7. Discuss how weather might affect a trip on land.

Part 2

1. Read Story #1 and discuss:
 - The weather conditions at the beginning of the trip.
 - How the weather changed during the day.
 - Signs of bad weather that were ignored.
 - The effect the wind had on the water.

- Ways the accident could have been prevented.
2. Distribute Student Handout #1 or #2 and discuss how each type of weather might affect a boat trip.
 3. If using Student Handout #2 have each student make a mobile of weather pictures.
 - Tape one end of a piece of string to the back of each shape.
 - Tie the other end to the clothes hanger or dowel.
 - Hang the completed mobiles.
 4. Distribute and have students complete Student Handout #3.

Extension

Have students watch the sky for a week and try to identify the clouds they see.

This activity addresses Alaska Content Standards:

Language Arts A-1 Effective writing, A-2 Writing conventions, A-3 Demonstrate speaking skills, A-6 Using visual communication, B-1 Meaning from written, oral, and visual text, B-2 Investigations in written materials, C-1 Developing a project, C-5 Project collaboration, D-1-A Personal experience and prior knowledge, D-1-D Analyzing information, D-2 Evaluating information

Science A-4 Observable natural events, A-5 Forces of nature, A-15 Using local knowledge, D-6 Using reasoned decisions

Skills for a Healthy Life A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices, B-1 Effective communication, D-1 Responsible decisions

Arts A-1 Participate in the arts, A-3 Materials, tools, techniques, and processes

Woman and Dog Caught in the Weather

*(Based on a true story from *Saved by the Jacket*)*

Mr. and Mrs. Boulder and Sam the Dog lived on a little island in the middle of a beautiful little lake.

It was early in May, and the ice had melted off the lake after a long, cold winter. The day was sunny and warm, but the lake water was still very cold. The Boulders had not been able to leave their little island for several weeks while the ice was melting. Their snow machine was too heavy for the thin ice, and their boat was not heavy enough to crunch through the ice.

Mrs. Boulder decided it was a perfect day for a trip to town in their boat. The sky was clear and blue, the water was flat and free of ice, and there was no wind. She wanted to pick up the mail at the post office, visit with her friends, buy groceries, and get seeds for her garden. She and Sam the Dog headed off to town while Mr. Boulder worked in the garden, turning the rich soil and pulling weeds.

Mrs. Boulder and Sam the Dog were both wearing PFDs, as they always did when on the water. The short boat trip to town was perfect, and Sam the Dog stood in the bow of the boat barking with delight.

Mrs. Boulder picked up the mail, bought groceries and seeds, and had a good long chat with her best friend over a steaming cup of coffee at the café. As she loaded her boat she realized the weather was changing. A dark band of clouds was moving across the sky, and the wind was beginning to blow. A few drops of rain landed on Sam's nose. The lake was still calm, with only a few ripples, so she decided to risk the boat ride back to the island.

No sooner had she left than the wind increased. It came from behind her, so at first she didn't feel its strength. As the waves grew higher, she realized she and Sam were in trouble. Just as she looked behind her a large wave rolled over the back of the boat, filling it with ice-cold water and washing her over the side. She was bobbing in the water and the skiff was running in circles with Sam up on the bow barking furiously.

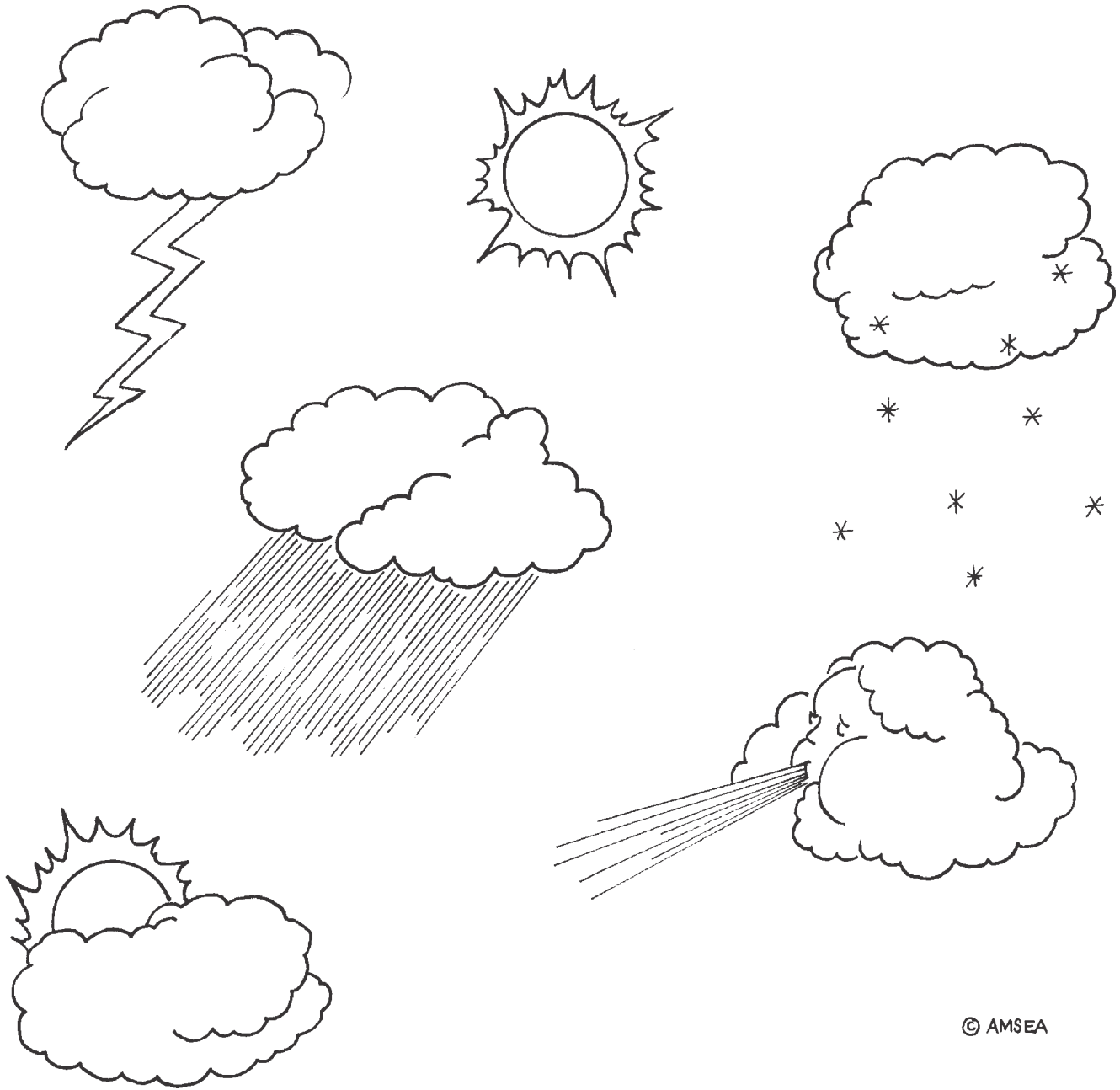
The boat was not far from shore, but the water was icy cold. Mrs. Boulder screamed for help. Fortunately, her neighbors were home in one of the houses along the shore, noticed the boat running in circles and heard her cries for help. They immediately called 911 and ran to their rowboat at the lake edge. The rescue team arrived just as the neighbors pulled Mrs. Boulder from the icy water. She was completely soaked and shivering in her cold clothes, but happy to be alive. The neighbors brought her inside their warm house, gave her dry clothes to wear, and brewed up a big pot of steaming hot chocolate.

Meanwhile, the rescue team saved Sam the Dog and Mrs. Boulder's boat. The next day, when the lake was again flat and the wind was calm, Mrs. Boulder and Sam safely went home to their little island in the middle of the lake.

Name: _____

Weather to Watch Out For

Some kinds of weather can make boating dangerous. Circle the kinds of weather that might make the water dangerous to work or play on.



Name: _____

Weather That Can Cause Problems

Cut out the pictures. Glue on to construction paper shapes.



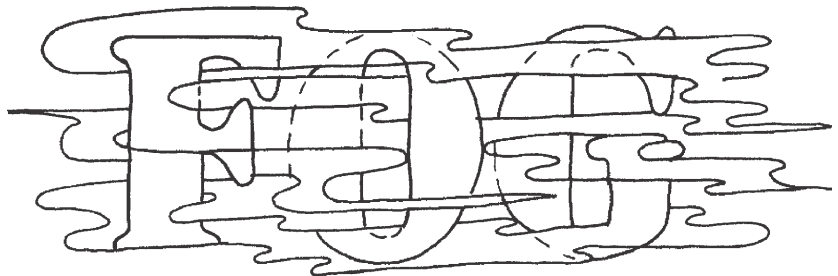
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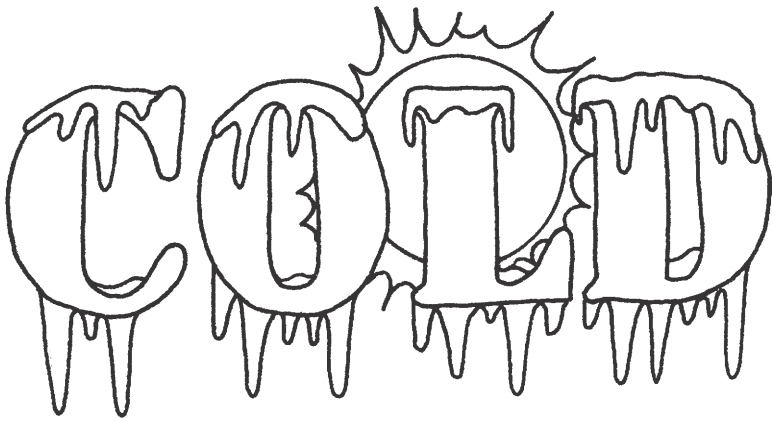
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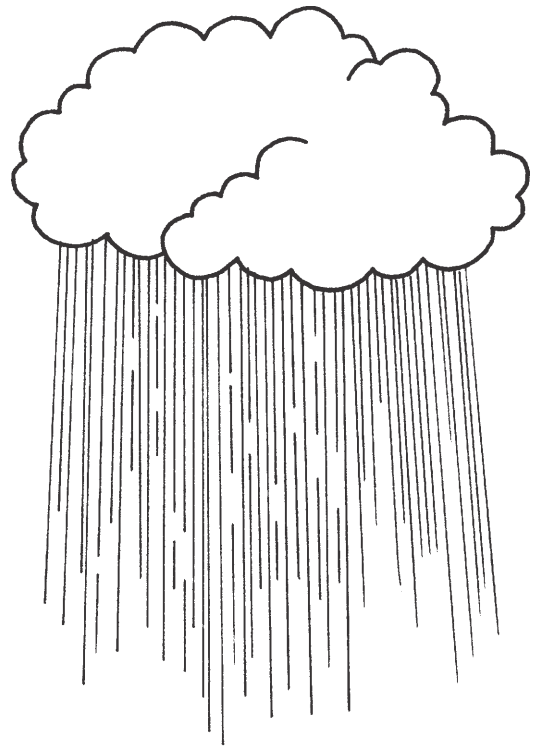
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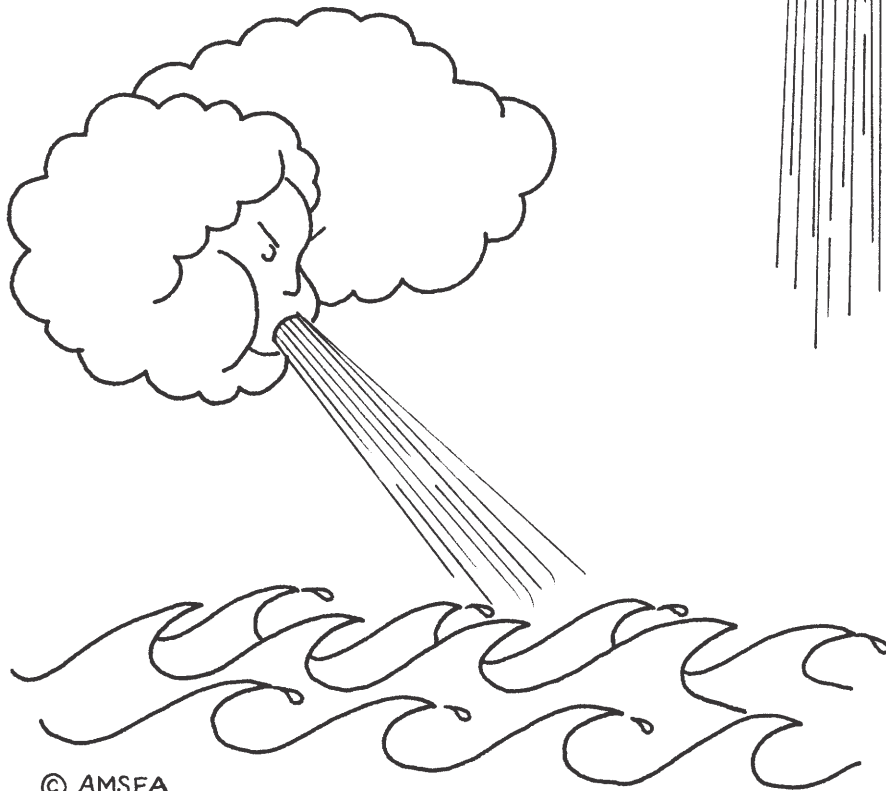
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Name: _____

Weather Words

Fill in the blank spaces with **vowels** to make words about weather.

R__in

S__n

W__nd

W__rm

Sn__w

F__g

Ha__l

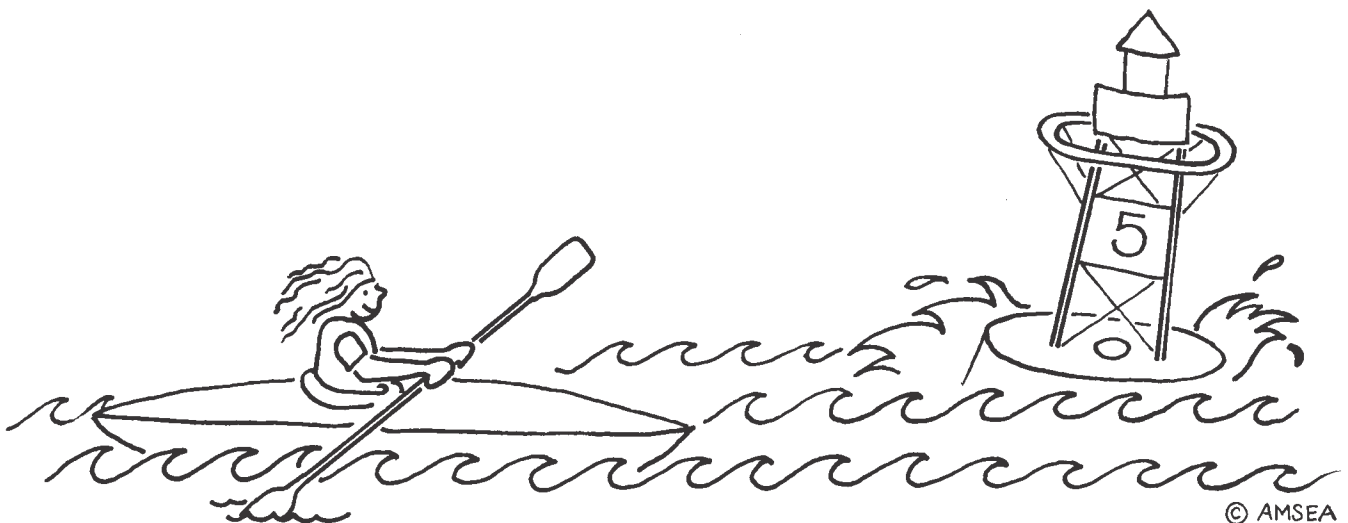
St__rm

C__ld

He__t

Cl__udy

G__le



© AMSEA

Rain

Time: 15 minutes

Use with Teacher Information

Overview

A picture book teaches about rain.

Objectives

After completing this activity, students should be able to:

1. List three pieces of clothing that can help keep them dry.

2. List two behaviors that can help them stay dry.

Materials

- *Rain* by Peter Spier 

Extension

- One per student, stuffed animal
- One per student, a plastic bag

Procedure

1. Present *Rain* and discuss:
 - Weather signs that predicted rain.
 - Clothing the two children wore in the rain.
 - Behavior that got the children wet.
 - Behavior that might have kept the children dry.
 - That the children got cold when they got wet.
 - That you can get wet and cold even when the air is warm.
2. Have students suggest ways to stay dry and warm in the rain. Discuss:
 - Different types of rain gear and boots.
 - Types of clothing to wear in rainy weather.
3. Have students relate experiences they have had in the rain.
 - The importance of being prepared for a change in the weather.
 - Ask if they were dressed properly.
 - Did they get wet?
 - Did they get cold?
 - What would they do next time to stay dry and warm?
4. Have students write stories about their experiences in the rain.

Extension

Have students bring a stuffed animal to class and dress it for the rain using plastic bags.

This activity addresses Alaska Content Standards:

Language Arts A-1 Effective writing, A-2 Writing conventions, A-3 Demonstrate speaking skills, A-6 Using visual communication, B-1 Meaning from written, oral, and visual text, B-2 Investigations in written materials

Science A-4 Observable natural events, A-15 Using local knowledge

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, B-1 Effective communication, C-1 Conflict resolution, D-5 Effects of attitudes and behavior

Weather Log

Time: 10 minutes per day for a month

Use with Teacher Information

Overview

Students make weather observations and learn where to find weather information.

Objectives

After completing this activity, students should be able to:

1. Describe weather conditions.
2. Describe two ways to check the weather.

Materials

- Large calendar or butcher paper
- Outdoor thermometer
- Daily newspaper or Internet weather reports
- Weather radio or VHF radio

Procedure

1. Hang a large calendar on the bulletin board, or create a large calendar for the month on butcher paper.
2. Have students make weather observations on a daily basis, and record the following information on the calendar:
 - Outside temperature
 - Wind direction
 - Wind strength
 - Sky conditions
 - Precipitation
3. Have students discuss the appropriate clothing for different weather conditions.
4. Use a Weather radio or a VHF radio tuned to a weather channel to listen to the weather forecast in your area.
5. Discuss the weather reports available on local radio and TV.
6. Compare the newspaper weather report and/or online weather reports for your area with local observations.
7. Have students make predictions about the next day's weather.
8. Emphasize that weather conditions are easy to observe, that weather information is easy to find, and that it is very important to check the weather before going on an outdoor adventure.

This activity addresses Alaska Content Standards:

Language Arts A-7 Using electronic communications, B-1 Meaning from written, oral, and visual text, C-1 Developing a project, C-3 Group decision making

Mathematics A-2 Measurement, A-3 Arithmetic and computation, A-6 Statistics and data analysis, B-2 Investigations in written materials, B-3 Using mathematics in real-life situations, C-1 Developing a project, D-1 Developing a logical position, D-2 Evaluating information, D-4 Explain and defend a position

Science A-4 Observable natural events, A-5 Forces of nature, A-15 Using local knowledge, B-1 Scientific processes, B-2 Tools of scientific investigation, C-1 Earth's physical systems, D-1 Practical applications of scientific knowledge

Geography C-1 Using maps

Skills for a Healthy Life A-2 Healthy behaviors, A-6 Making informed choices

Arts A-1 Participate in the arts, A-3 Materials, tools, techniques, and processes

Tides

Time: 30 minutes

Use with Teacher Information

Overview

Discussion and a field trip to observe tides.

Objectives

After completing this activity, students should be able to:

1. Describe a tide cycle.
2. Describe two dangers of tides.

Materials

- *Comet* by Jan Brett or *Adrift* by Colleen Politano and Joan Neudecker **AMSEA**
- Tide book for your area
- One per student and teacher, PFD for the field trip **AMSEA**

Extension

- One long shallow pan
- Rocks and sand

Procedure

1. Introduce the topic of tides by reading and discussing *Comet* or *Adrift*.
2. Take the class on a field trip to a body of water with tides.
 - Have students mark the height of the tide with a pile of rocks.
 - Have students observe the water level as it changes over time.
 - Use the tide book to determine when the tide cycle will change.
 - Use the tide book to determine how much the water level will change.
3. Discuss why the changing water level might be dangerous.
 - Objects left on the beach at low tide might drift away.
 - Rising water might strand people on a high area of the beach.
 - A boat anchored near the beach at low tide might be hard to reach when the tide rises and the water gets deeper, etc.

Extension

Use a long shallow pan to demonstrate a tide cycle by creating a beach with rocks and sand in one end of the pan. Add an inch or two of water and slowly tilt the pan back and forth to simulate rising and falling tides.

This activity addresses Alaska Content Standards:

Language Arts A-3 Demonstrate speaking skills, D-2 Evaluating information

Mathematics A-2 Measurement, A-6 Statistics and data analysis, B-2 Investigations in written materials, B-3 Using mathematics in real-life situations, B-4 Developing problem solving strategies, C-1 Developing a project, D-1 Developing a logical position, D-2 Evaluating information, E-2 Practical applications of mathematics

Science A-4 Observable natural events, A-5 Forces of nature, A-15 Using local knowledge,

C-1 Earth's physical systems, C-6 Scientific discovery

Geography C-1 Using maps, E-3 Physical systems

Skills for a Healthy Life A-2 Healthy behaviors

Library/Information Literacy A-4 Search for information and resources, A-5 Identify and use search strategies

Currents

Time: 30 minutes

Use with Teacher Information

Overview

A field trip to observe currents.

Objectives

After completing this activity, students should be able to:

1. Explain the importance of wearing a PFD when on or near the water.
2. Describe how currents affect floating objects.
3. List one dangerous situation caused by currents.

Materials

- *Paddle-to-the-Sea* by Holling Clancy Holling or *The House at Pooh Corner* by A.A. Milne, Chapter 6 “In Which Pooh Invents a New Game and Eeyore Joins In” **AMSEA**
- One per student, Student Handout #1
Danger: Quickly Moving Water
- One per student and teacher, PFD for the field trip **AMSEA**
- Twigs or leaves that will float

Procedure

1. Introduce the activity with *Paddle-to-the-Sea* or *The House at Pooh Corner*.
2. Take the class on a field trip to a bridge or other spot where you can observe moving water.
 - Everyone must wear a PFD. Explain why.
 - Have students drop twigs and leaves into the moving water.
 - Have students drop twigs and leaves in different places and compare current speeds.
3. Discuss the dangers of currents:
 - Boats can be swept away if not securely tied.
 - Swimmers can be carried away by the current.
 - Heavy objects can be moved by the force of the water, etc.
4. Distribute and have students complete Student Handout #1. This may be done as a whole group activity.

This activity addresses Alaska Content Standards:

Language Arts A-3 Demonstrate speaking skills

Mathematics A-2 Measurement, A-3 Arithmetic and computation, A-6 Statistics and data analysis, B-2 Investigations in written materials, B-3 Using mathematics in real-life situations, B-4 Developing problem solving strategies, B-5 Checking results, C-1 Developing a project, D-1 Developing a logical position, D-2 Evaluating information

Science A-4 Observable natural events, A-5 Forces of nature, A-15 Using local knowledge, B-1 Scientific processes, B-2 Tools of scientific investigation, C-1 Earth's physical systems, C-2 Knowledge through experimentation

Geography A-1 Using maps, B-6 Making informed decisions about place

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices, B-1 Risk and consequence

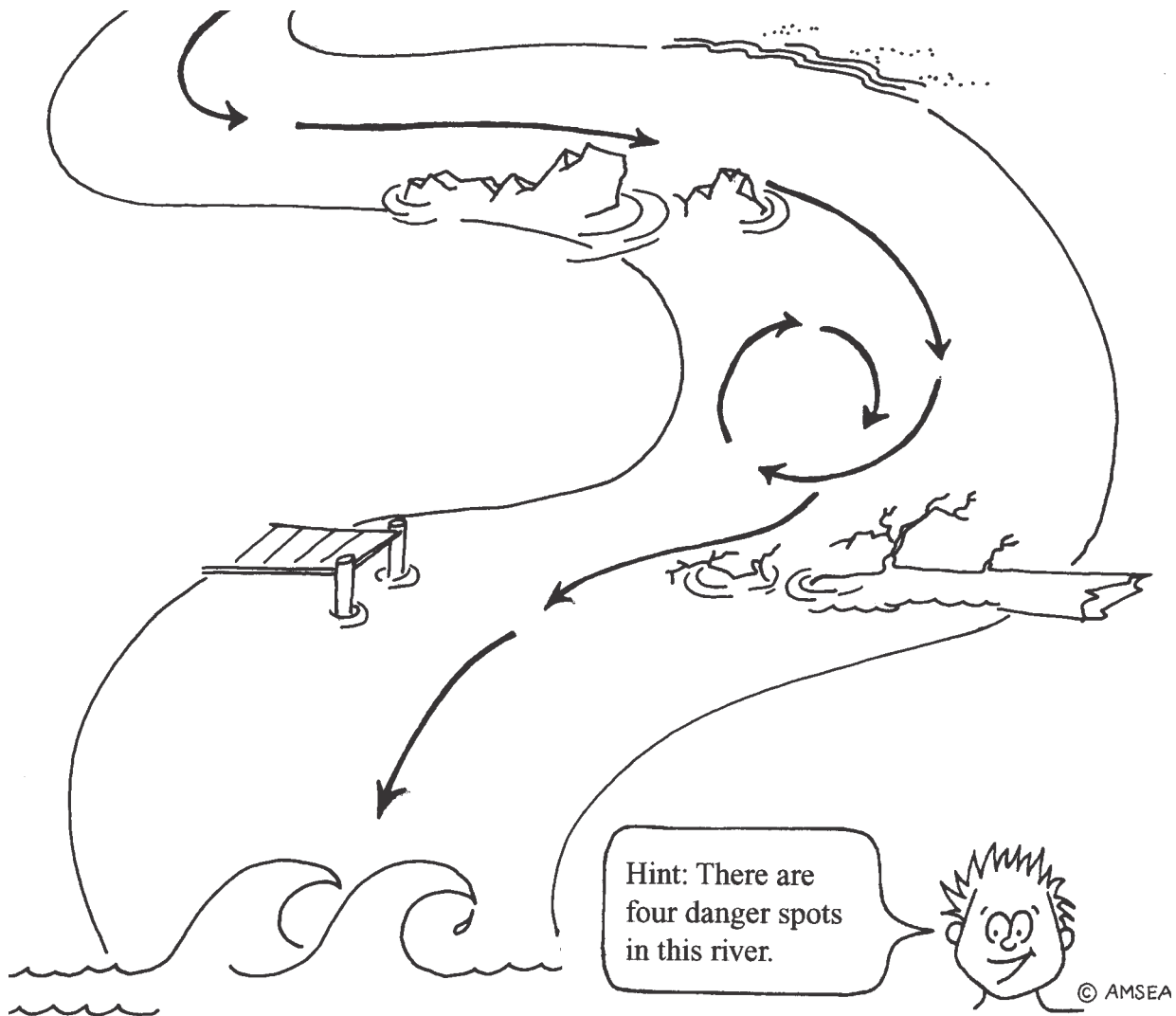
Name: _____

Danger: Quickly Moving Water

Currents and tides can mean that water is moving fast. They can push swimmers or boats into dangerous places.

This river has a current that moves water fast. Follow the current by tracing the arrows.

Put an X on the four spots where this current could push a boat or swimmer into danger.



Bodies Making Heat

Time: 35 minutes

Use with Teacher Information

Overview


Students learn about gaining body heat.

Objectives

After completing this activity, students should be able to:

1. List three ways to gain body heat.
2. Describe one high energy snack for a hiking or boating trip.

Materials

- *Stone Soup* by Marcia Brown 
- Large mixing bowl and mixing spoons
- Measuring cup
- 3 cups unsweetened ready-to-eat cereal, pretzels, or small crackers, or a combination of all three
- 1 cup shelled sunflower seeds
- 2 cup raisins or other dried fruit
- 1 cup chocolate chips or other small candy
- 1 cup shredded coconut
- Reclosable sandwich bags
- One per student, Student Handout #1 **Your Body Makes Heat in Two Ways**

Procedure

1. Discuss various ways to increase body temperature by having students:
 - List activities that make them warm.
 - List foods and drinks that make them warm.
 - List places they can go to get warmed up.
2. Have students stand by their seats and run in place for 3 minutes. Discuss different kinds of exercise that can be used when they feel cold.
3. Discuss how eating food helps you stay warm. Remind students that digestion requires water, and that they should drink when they eat.
4. Read *Stone Soup*. Emphasize working together.
5. Have students suggest foods that would be appropriate to take on a hike or boating trip. Stress that the foods should provide quick energy, not require refrigeration or heating, and can be easily carried in a pocket.
6. After washing hands, make a Keep-Me-Warm-Snack by placing all the ingredients in the bowl and mixing thoroughly. Fill the sandwich bags with equal amounts and distribute one bag per student, and one for the teacher.
7. Distribute and have students complete Student Handout #1. Save students' work for Activity #16.
8. Discuss external heat sources as another way to gain body heat.
 - Have students describe how they feel on a sunny day and on a cloudy day.
 - Relate experiences about campfires, fireplaces, wood stoves, and saunas.
9. Summarize by having students state three ways they can gain body heat.

This activity addresses Alaska Content Standards:

Language Arts A-1 Effective writing, A-2 Writing conventions, A-3 Demonstrate speaking skills, C-3 Group decision making

Mathematics A-2 Measurement, A-3 Arithmetic and computation, B-2 Investigations in written materials, B-3 Using mathematics in real-life situations, B-5 Checking results, D-4 Explain and defend a position, E-1 Exploring problems using mathematics, E-2 Practical applications of mathematics

Science A-14 Living things and their environments, B-2 Tools of scientific investigation, D-1, 3 Practical applications of scientific knowledge

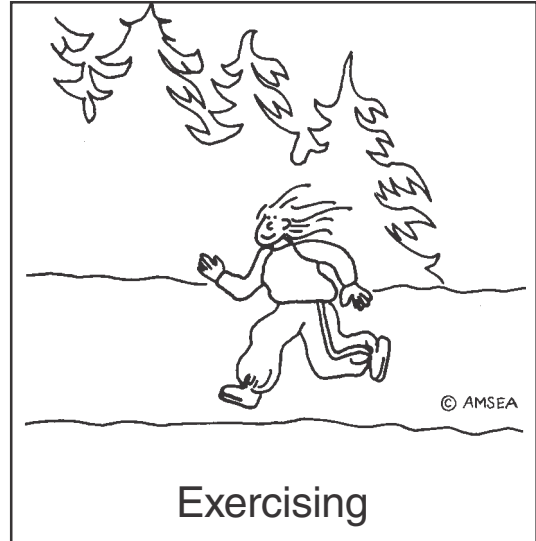
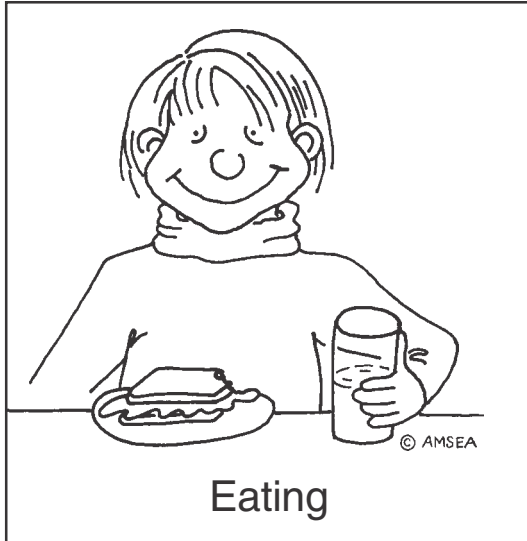
Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices, C-5 Effects of attitude and behavior, D-2 Safe and healthy environments

Arts A-1 Participate in the arts, A-3 Materials, tools, techniques, and processes

Name: _____

Your Body Makes Heat in Two Ways

Your body needs food and water. It makes heat when it digests food.



What do you like to eat? _____

To exercise you need food, water, and rest.

How do you exercise your body? Draw a picture of you exercising.



Bodies Losing Heat

Time: 45 minutes

Use with Teacher Information

Overview

A song and discussion explore the five high heat loss areas.

Objectives

After completing this activity, students should be able to:

1. List the five high heat loss areas.
2. Show where the body's core is.

3. List five ways their bodies lose heat.
4. List two ways to reduce heat loss.

Materials

- Song #1 **Heat Loss Song**
- 1 per student, Student Handouts #1 **Our Bodies Are Warm**, #2 **High Heat Loss Areas**, #3 **High Heat Loss Areas Word Search**, and #4 **Ways You Lose Heat**
- Hats, coats, scarves, and gloves or mittens

Procedure

1. Review the ways bodies gain heat (see previous activity).
2. Define "core," and discuss the five high heat loss areas of the body.
3. Sing the **Heat Loss Song**, having students act it out as it is sung. Repeat until all students know the five high heat loss areas.
4. Distribute and have students complete Student Handouts #1, #2, and #3.
5. Discuss five ways bodies lose heat.
 - Have students place their palms 1/8" from their foreheads to demonstrate that bodies radiate heat.
 - Have students breathe into their cupped hands to demonstrate heat lost through respiration.
 - Have students place one hand on a cool surface to illustrate conduction.
 - Have students describe how their skin feels when they touch a cold object.
 - Have students describe how their skin feels on a cold windy day, and how it feels on the same day, when protected from the wind.
 - Have students describe how their head feels when they go outside with wet hair.
6. List and discuss ways to reduce the different types of heat loss. Have volunteers dress in hats, scarves, and warm coats and ask them if they feel warmer. Discuss:
 - Appropriate types of clothing and hats to reduce radiated heat.
 - Wearing a scarf over your mouth on very cold days to reduce heat loss through respiration.
 - Appropriate shoes, and gloves or mittens to reduce heat loss through contact with cold surfaces.
 - Ways to protect your body from the wind.
 - The importance of staying dry to reduce heat loss through evaporation and conduction.
7. Distribute and have students complete Student Handout #4. Students may interpret these pictures differently; ask them about their reasoning for their choices.
8. Save students' work for Activity #16.

This activity addresses Alaska Content Standards:

Language Arts A-3 Demonstrate speaking skills, A-4 Writing and speaking with purpose, B-1 Meaning from written, oral, and visual text

Science A-15 Using local knowledge, B-1 Scientific processes, B-2 Tools of scientific investigation, C-1 Earth's physical systems

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices, B-1 Risk and consequence

Arts A-1 Participate in the arts

Heat Loss Song

Sung to the tune of The Farmer in the Dell

I lose heat from my head,
I lose heat from my head,
I get so cold and shiver so,
I lose heat from my head.

I lose heat from my neck,
I lose heat from my neck,
I get so cold and shiver so,
I lose heat from my neck.

I lose heat from my underarms,
I lose heat from my underarms,
I get so cold and shiver so,
I lose heat from my underarms.

I lose heat from my sides,
I lose heat from my sides,
I get so cold and shiver so,
I lose heat from my sides.

I lose heat from my groin,
I lose heat from my groin,

I get so cold and shiver so,
I lose heat from my groin.

I wear warm pants and shirts,
I wear warm pants and shirts,
I stay so warm and cheery-oh,
I wear warm pants and shirts.

I wear my hat and coat,
I wear my hat and coat,
I stay so warm and cheery-oh,
I wear my hat and coat.

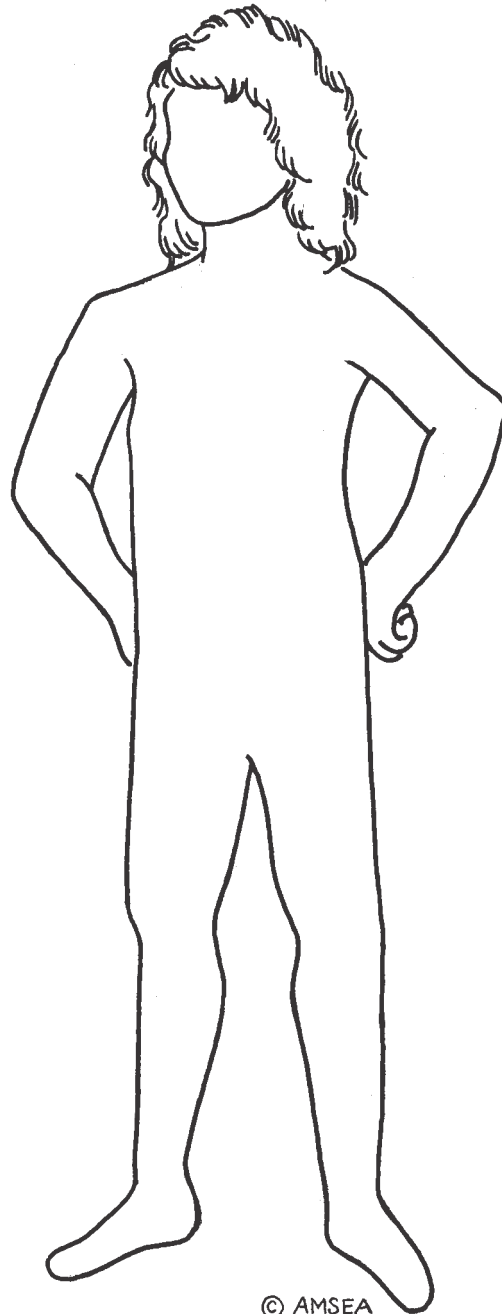
I wear my boots and mitts,
I wear my boots and mitts,
I stay so warm and cheery-oh,
I wear my boots and mitts.

I wear my wooly scarf,
I wear my wooly scarf,
I stay so warm and cheery-oh,
I wear my wooly scarf.

Name: _____

Our Bodies Are Warm

Your body makes heat to keep it warm. Most of your body's heat is stored in your body's core. Your core is your head and your trunk. Color the CORE on this girl's body.



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Name: _____

High Heat Loss Areas

List the five high heat loss areas on your body.

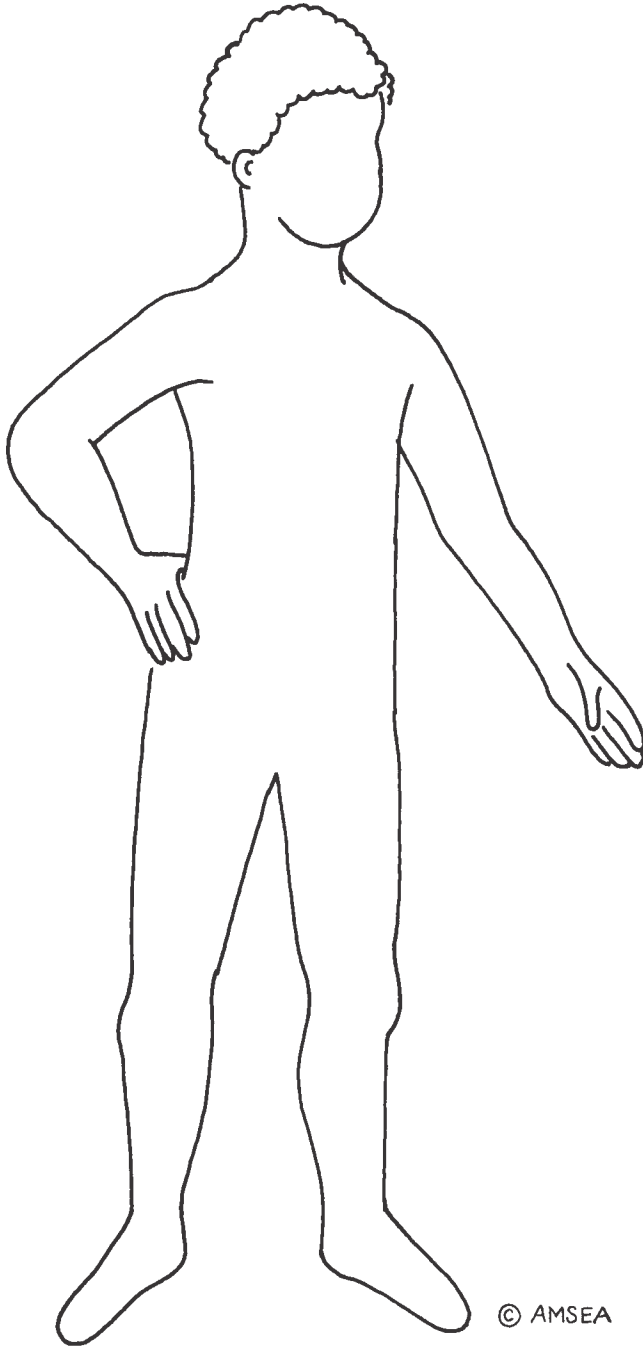
1. _____

2. _____

3. _____

4. _____

5. _____



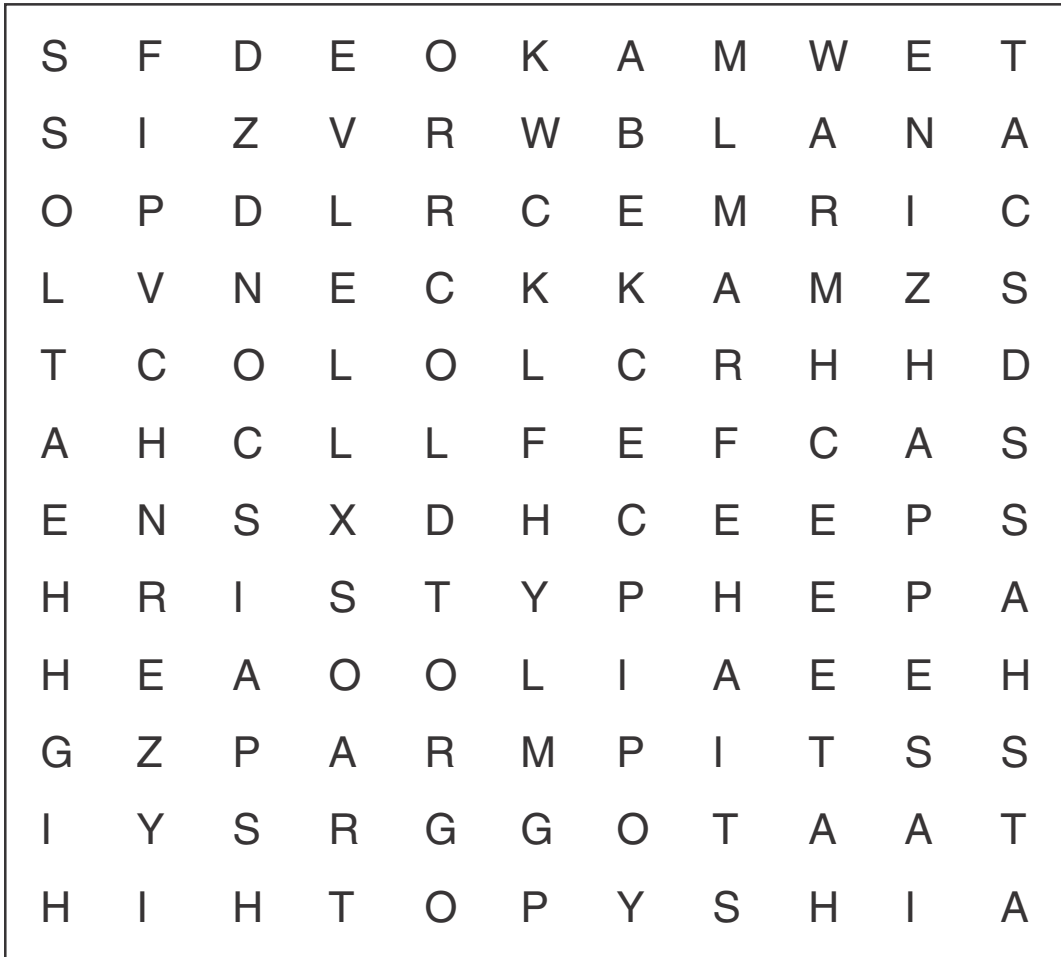
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Color the high heat loss areas on this boy's body.

Name: _____

High Heat Loss Areas Word Search

Find and circle the following words (be sure to look up, down, and diagonally, too):



ARMPITS

HYPOTHERMIA

COLD

NECK

GROIN

SIDE OF CHEST

HAT

WARM

HEAD

WET

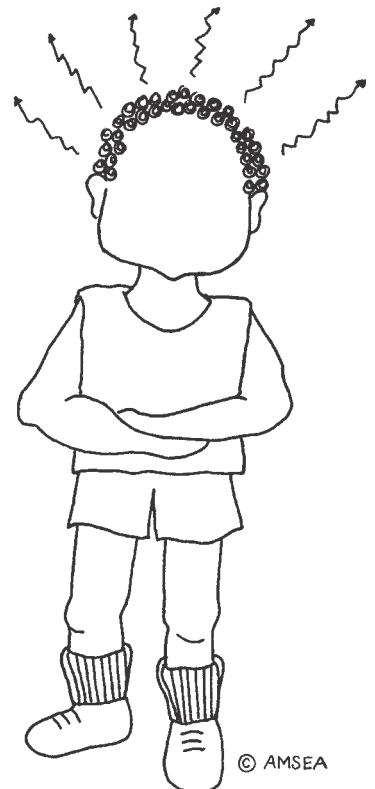
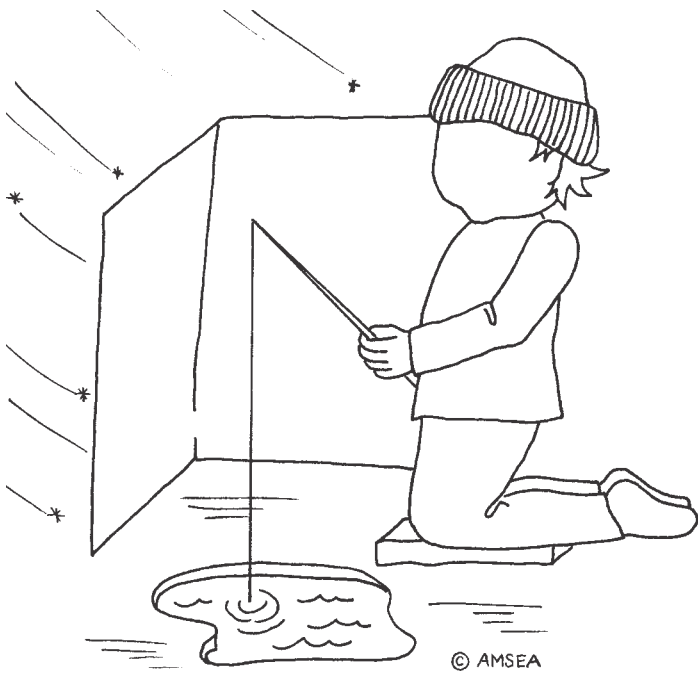
HIGH HEAT LOSS

Name: _____

Ways You Lose Heat

Draw a smiling face on the pictures showing ways we stay warm. Draw a sad face on pictures showing ways we get cold.





Hypothermia Happens

Time: 15 minutes

Use with Teacher Information

Overview

An introduction to causes and prevention of hypothermia.

Objectives

After completing this activity, students should be able to:

1. List three actions that can lead to hypothermia.

2. List three actions that can help prevent hypothermia.

Materials

- Story #1 **Rescued from a Raft**
- 1 per student, Student Handouts #1 **What Is Hypothermia** and #2 **Who Gets Hypothermia?**

Procedure

1. Review how bodies gain and lose heat.
2. Define hypothermia. Stress that hypothermia happens when bodies lose too much heat, and that it can be prevented by keeping your body warm.
3. Read and discuss Story #1.
4. List and discuss actions that can lead to hypothermia.
5. Discuss how drinking alcohol can increase the risk of hypothermia.
6. List and discuss actions that can reduce the risk of hypothermia.
7. Distribute and have students complete Student Handout #1.
8. Distribute and discuss Student Handout #2.
 - Have students list the actions in the picture that might lead to hypothermia.
 - Have students describe what the people **should** be doing.
 - Have students describe how they would be acting if they were in the boat.
9. Have students draw a picture and/or write a story about how they stay warm and dry.
10. Save students' work for Activity #16.

This activity addresses Alaska Content Standards:

Language Arts A-1 Effective writing, A-2 Writing conventions, A-3 Demonstrate speaking skills, A-4 Writing and speaking with

Science A-14 Living things and their environment, B-1 Scientific processes, B-2 Tools of scientific investigation

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices, B-1 Risk and consequence, D-1 Responsible decision making

Rescued from a Raft

Adapted from a newspaper article from the Cape Cod Times.

Tiffany and her little brother Bernie were playing on the beach and in the waves at their summer home. Their mother watched from her hammock on the front porch. It was a hot summer day and they decided to swim to a nearby wooden raft. The swim was not too long, but they were tired because the water was cold and the current pushed them sideways.

They plopped themselves down on the raft in the warm sun, rolled onto their stomachs and drifted off to sleep. Back on the porch, their mother also napped.

A light breeze began to blow, causing them to feel cool. They sat up and looked toward shore. Bernie said, "Look where we are! I can barely see land!" Tiffany responded, "Oh-oh. We're in big trouble!"

Tiffany and Bernie began to feel really cold. They talked about swimming to shore, but decided it was too far. They tried different things to stay warm. They told funny stories and started to do the Hokey Pokey and then the tango, but soon they felt tired, hungry, and thirsty. Bernie could not stop shivering. Tiffany was also cold, but not as miserable as Bernie. They tried to make an oar from a plank and row the raft, but the wind and current were too strong. Waves lapped over the side and the raft drifted farther out to sea.

Tiffany was beginning to feel the seriousness of their situation. Bernie was moving very slowly and he didn't care much about anything. When he spoke he mumbled. He acted like he wanted to curl up and forget about everything.

Their mother had watched the children swim to the raft and then had dozed off in her hammock. She awoke a little later and realized the raft and her children were gone. She ran to the phone and called 911.

Within minutes the U.S. Coast Guard sent up a helicopter to search the shoreline, and the harbormaster posted lookouts for the missing raft. One of the officers saw a tiny speck on the horizon with his binoculars, and sped toward it in the harbormaster's boat. Within minutes, the children were safely inside the boat, but Bernie was mumbling and very drowsy.

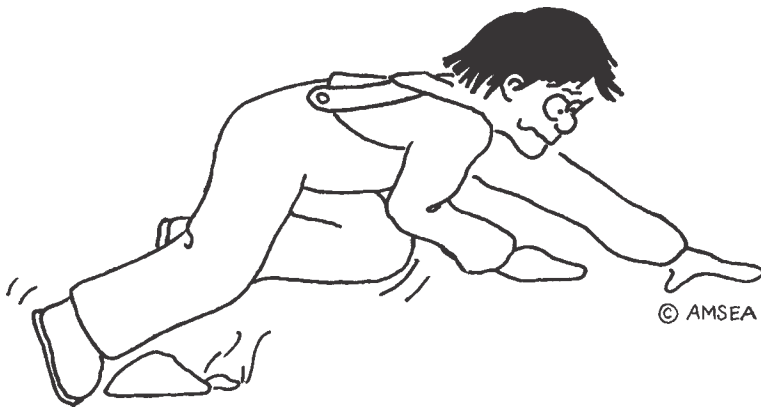
Bernie spent the night in the hospital wrapped in warm blankets and drinking hot chocolate. His core temperature had dropped a degree, but he was back on the beach the next day.

Name: _____

What Is Hypothermia?

Hypothermia happens when your body core gets cold. Here are some things that can happen if you are hypothermic.

- You cannot stop shivering.
- You move slowly.
- You become clumsy.
- You don't think well.
- You become drowsy.
- You cannot keep your face out of the water.
- You may die.



Name: _____

Who Gets Hypothermia?

Circle the things in this picture that might lead to hypothermia.



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Hypothermia Signs, Symptoms, and Treatment

Time: 20 minutes

Use with Teacher Information

Overview

Videos, role playing, discussion, and a writing project introduce students to the signs, symptoms, and treatment of hypothermia.


Objectives

After completing this activity, students should be able to:


1. List six signs and symptoms of hypothermia.
2. List three things they can do to treat a hypothermic person.
3. List four things they should not do to treat a hypothermic person.

Materials

Part 1

- *Cold, Wet and Alive* video (20 minutes) 
- 1 set per class, **Hypothermia Signs and Symptoms cards** (make from Template #1)
- 1 per student, stuffed animal

Part 2

- *It Could Have Been Prevented* video (17 minutes) 
- 1 per student, Student Handout #1 **Treating Hypothermia**
- Stuffed animal
- Warm clothing for stuffed animal including hat, sweater, coat, warm pants, etc
- Small towel
- Small blanket

Procedure

Before Class

1. Cue *Cold, Wet and Alive* to 16 minutes from the beginning, when the two men bring David out of the water.

During Class

Part 1

1. Introduce *Cold, Wet and Alive* by explaining that the video is about a group of friends who go boating in the spring. One of them gets wet several times during the day. The scene they will see is after he falls in the water for the last time.
2. Show a one minute section of *Cold, Wet and Alive*
3. Discuss the signs and symptoms of hypothermia.
4. Discuss David's signs and symptoms.
5. Discuss how David's situation could have been prevented.

6. Let students, in turn, pick a random **Hypothermia Signs and Symptoms card**.
7. Have each student act out the sign or symptom on the card he/she chooses, using stuffed animals if desired.

Part 2

1. Watch *It Could Have Been Prevented*.
2. Discuss with your students what they could have done to help the hypothermic person.
 - Stress the importance of going for adult help first.
 - Have students relate how they feel when they are very cold.
3. List three things children can do to help treat a hypothermic person.
4. List four things they should not do to treat a hypothermic person.
5. Use a stuffed animal to demonstrate appropriate treatment for hypothermia.

6. Distribute and read Student Handout #1 together.
7. Have students write a story about finding and treating someone who is hypothermic. Have them answer these questions in the story:
 - Who did it happen to?
 - Where and how did it happen?
 - Why did it happen?
 - What was done to treat the person?
8. Save students' work for Activity #16.

Extension

Have a member of your local ambulance or search and rescue team visit to present their protocol for treating hypothermia.

This activity addresses Alaska Content Standards:

Language Arts A-1 Effective writing, A-2 Writing conventions, A-3 Demonstrate speaking skills, A-4 Writing and speaking with purpose, A-6 Using visual communication, B-1 Meaning from written, oral, and visual text, C-4 Project quality, D-1 Developing a logical position, D-1-A Personal experience and prior knowledge

Science A-4 Observable natural events, A-14 Living things and their environment

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, C-5 Effects of attitude and behavior

Arts A-1 Participate in the arts

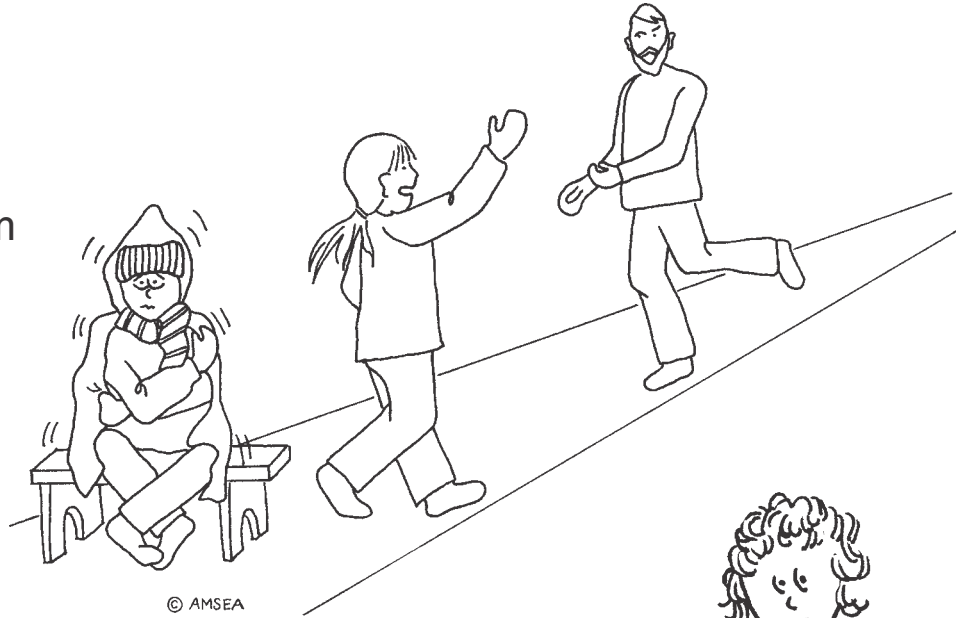
Hypothermia Signs and Symptoms Cards

Cold and shivering	Cold and not shivering
Cold and not using good judgment	Cold and mumbling
Cold and stumbling	Cold and fumbling
Cold and confused	Cold and uncoordinated
Cold and breathing slowly	Cold and drowsy
Cold and unconscious	Cold and not responding to voice commands

Name: _____

Treating Hypothermia

1. Get help from an adult.



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2. Dry the victim gently.



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3. Help the victim stay as warm as possible.



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Dressing in Layers

Time: 30 minutes

Use with Teacher Information

Overview

A story and class activity introduce dressing in layers.

Objectives

After completing this activity, students should be able to:

1. List three layers of clothing appropriate for a cold, wet environment.
2. List six items of clothing appropriate for a cold, wet environment.
3. List two materials that insulate well.

Materials

- *Runaway Mittens* by Jean Rogers [AMSEA](#)
 - 1 per student, Student Handout #1
- ### Clothing Layers
- 2 large bags
 - Selection of clothing appropriate for a cold, wet environment, including polypropylene long underwear, wool socks, wool or fleece sweater, wool or fleece pants, wool or fleece hat and gloves/mittens, warm coat, wool scarf, waterproof boots, raingear, and waterproof hat
 - Selection of light summer clothing not appropriate for a cold, wet environment, including bathing suit, cotton T-shirt, light rayon or cotton pants, short sleeve cotton shirt, summer hat, shorts, non-waterproof jacket, sandals, cotton socks, sneakers, and cotton baseball cap

Procedure

Before Class

1. Place all the clothing appropriate for a cold, wet environment in one bag.
2. Place all the inappropriate clothing in the other bag.

During Class

1. Introduce the subject by reading *Runaway Mittens*. Discuss the clothing that Pica and Etta are wearing.
2. Describe the process of dressing in layers.
 - Name the three layers.
 - List the principal function of each layer.
 - List fabrics that are well-suited for each layer.
 - Have students suggest garments appropriate for each layer.
 - Have students describe garments they own, and which layer they are in.
3. Distribute and have students complete Student Handout #1.
4. Describe an outdoor activity common in your area on a cold, wet day.
 - Have the class describe the possible weather conditions.
 - Have the class suggest appropriate clothing for the activity and conditions.
5. Have students take turns selecting a garment from the bag containing the clothing appropriate for a cold, wet environment.
 - Have students describe which layer each garment belongs in.
 - Discuss how each garment helps prevent hypothermia, emphasizing the fabric types.
 - Sort the clothing into “inner,” “middle,” and “outer” piles as they are selected from the bag and discussed.
 - Continue until the bag is empty.
6. Have students take turns selecting a light summer garment from the bag containing the clothing **not** appropriate for a cold, wet environment.
 - Have students discuss why each garment is not appropriate, including a mention of the fabric types.

- Have students discuss appropriate times and places to wear these garments.
- Have students suggest how they might feel wearing these garments on a cold, wet day.
- Stress the importance of wearing the right clothing for the weather conditions.

7. Save students' work for Activity #16.

Extension

Have students select garments that are appropriate for a cold, wet activity, put them on over their street clothes, and have a fashion show.

This activity addresses Alaska Content Standards:

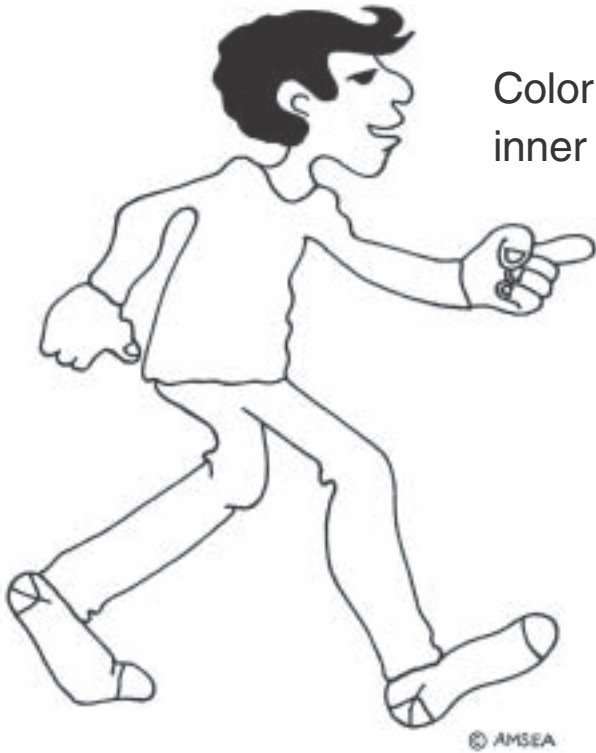
Language Arts A-3 Demonstrate speaking skills

Skills for a Healthy Life A-1 Personal well-being, A-3 Injury prevention, A-6 Making informed choices

Arts A-1 Participate in the arts

Name: _____

Clothing Layers



Color this boy in his inner layer clothing.



Color this boy in his middle layer clothing.



Color this boy in his outer layer clothing.

Wear a Hat!

Time: 20-30 minutes

Use with Teacher Information

Overview

An experiment illustrating how hats affect heat loss.

Objective

After completing this activity, students should be able to explain that wearing a hat helps prevent heat loss.

Materials

- Plastic hair band
- Wool or fleece hat
- Two thermometers

Extension

- One per student, plastic hair band
- One per student, wool or fleece hat
- One per student, thermometer

Procedure

1. Review the high heat loss areas, stressing the importance of keeping the head warm.
2. Select two students.
 - Have one student wear the plastic hair band and place the thermometer under the band on the top of the student's head.
 - Have the other student wear the hat and place the thermometer under the hat, also on top of the student's head.
3. Read the thermometers at 10 minute intervals and record the results.
4. Repeat the experiment outside on a cold day.
5. Discuss the results.

Extension

1. Have each student wear a plastic hair band and thermometer for 10 minutes.
2. Read the thermometers and record the results.
3. Have each student put on a hat over the hair band and thermometer for ten minutes.
4. Again read the thermometers and record the results.
5. Compare readings.

This activity addresses Alaska Content Standards:

Science A-4 Observable natural events, B-1 Scientific processes, C-6 Scientific discovery

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices, B-1 Risk and consequence

All Wet

Time: 25 minutes

Use with Teacher Information

Overview

An experiment exploring the qualities of fabrics when wet.

Objectives

After completing this activity, students should be able to:

1. Identify cotton as a material that absorbs water quickly and does not insulate when wet.

2. Identify wool and synthetic fleece as materials that do not absorb water quickly and insulate even when wet.
3. Compare the insulating qualities of various fabrics when wet.

Materials

- Large, low-sided container of cold water
- Three fabric swatches of about the same thickness: one wool, one synthetic fleece, and one cotton denim (or socks in these three materials of about the same weight)

Procedure

1. Introduce the activity by suggesting to the class an outdoor scenario:
 - The weather is cold and damp.
 - It might rain or even snow.
 - You will be outside for several hours, and probably get wet.
2. Have the class suggest appropriate clothing for such an outing.
3. Identify the dry swatches of fabric (or socks) and pass them around the room. Have students pay particular attention to how the fabrics feel against their skin.
4. Explain that different fabrics behave differently when they get wet.
5. Place the three swatches (or socks) in the container so they float on the water's surface.
6. Have students guess what will happen to each swatch/sock and discuss how warm they felt when dry. Wait at least three minutes.
7. Look at the swatches/socks and make sure students notice the differences between them, especially how quickly cotton becomes wet and how it absorbs water.
8. Discuss variables that can affect the results of this experiment (newness of the fabric/sock, how many times it has been washed, how dirty it is, etc.).
9. Push the three swatches/socks completely under water and leave them there for at least 15 minutes. Use rocks as weights if necessary to keep them submerged.
10. Squeeze out the wet swatches/socks and pass them around.
 - Have students pay attention to the difference in temperature and clamminess between the swatches/socks.
 - Ask students which they would rather wear on a cold wet day.
 - Emphasize that cotton is the least desirable material to wear when it is wet.

Extension

Discuss fabrics and materials traditionally used for outdoor clothing in your area. Compare them with the wool, synthetic fleece, and cotton explored above.

This activity addresses Alaska Content Standards:

Language Arts A-3 Demonstrate speaking skills, A-6 Using visual communication

Science A-4 Observable natural events, B-1 Scientific processes, C-6 Scientific discovery

Skills for a Healthy Life A-2 Healthy behaviors, A-3 Injury prevention

Library/Information Literacy A-4 Search for information and resources, B-2 Consider and determine useful strategies

Find and Wear Those Warm Clothes

Time: 50 minutes

Use with Teacher Information

Overview

A song, counting exercise, hidden puzzle, maze, and paper dolls teach about dressing for the outdoors.

Objective

After completing this activity, students should be able to list eight pieces of clothing appropriate to wear on an outing near or on the water.

Materials

- Song #1 **Wear, Wear, Wear Your Clothes**
- Collection of clothes to accompany song
- One per student, Student Handouts #1 **Counting out the Clothes**, #2 **Amazing Clothes**, #3 **Find Your Clothes for a Safe Boat Trip**, #4 **Paper Dolls**, and #5 **Warm Clothes Can Help Prevent Hypothermia**
- Guitar or piano (optional)
- A few PFDs [AMSEA](#)
- Scissors
- Flannel board (optional)

Procedure

1. Review the process of dressing in layers.
2. Teach the song, holding up the item of clothing mentioned in each verse.
3. Place the garments in a pile and select one at a time.
 - Have students assign each garment to an appropriate clothing layer.
 - Have students discuss similar garments that belong in that layer.
4. Complete Student Handout #1 as a group activity.
5. Distribute and have students complete Student Handouts #2 and #3.
6. Distribute and have students complete Student Handouts #4 and #5 or use them to make flannel board pieces and dress the dolls as a whole class activity.
7. Save students' work for Activity #16.

This activity addresses Alaska Content Standards:

Language Arts A-3 Demonstrate speaking skills, A-6 Using visual communication

Mathematics A-1 Numeration, A-3 Arithmetic and computation, B-3 Using mathematics in real-life situations

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, D-1 Responsible decisions

Arts A-1 Participate in the arts, A-3 Materials, tools, techniques, and processes

Wear, Wear, Wear Your Clothes

Sung to the tune of Row, Row, Row Your Boat

Wear, wear, wear long johns,
When you go out to play,
Warm, warm, warm, warm,
Warm is how you'll stay.

Wear, wear, wear wool socks,
When you go out to play,
Warm, warm, warm, warm,
Warm is how you'll stay.

Wear, wear, wear your warm shirt,
When you go out to play,
Warm, warm, warm, warm,
Warm is how you'll stay.

Wear, wear, wear fleece pants,
When you go out to play,
Warm, warm, warm, warm,
Warm is how you'll stay.

Wear, wear, wear your coat,
When you go out to play,
Warm, warm, warm, warm,
Warm is how you'll stay.

Wear, wear, wear your hat,
When you go out to play,
Warm, warm, warm, warm,
Warm is how you'll stay.

Wear, wear, wear mittens,
When you go out to play,
Warm, warm, warm, warm,
Warm is how you'll stay.

Wear, wear, wear your boots,
When you go out to play,
Warm, warm, warm, warm,
Warm is how you'll stay.

Wear, wear, wear rain pants,
When you go out to play,
Warm, warm, warm, warm,
Warm is how you'll stay.

Wear, wear, wear your PFD,
When you go down to the sea,
Safe, safe, safe, safe,
Safe is how you'll be.

Name: _____

Counting out the Clothes

- _____ 1. Make a pile of all the clothes you wear as an inner layer, and count them.
- _____ 2. Make a pile of all the clothes you wear as a middle layer, and count them.
- _____ 3. Make a pile of all the clothes you wear as an outer layer, and count them.
- _____ 4. If you wear all 3 layers, how many pieces of clothing will you wear?
- _____ 5. If you wear 2 pieces of clothing as an inner layer, 3 pieces as a middle layer, and 2 pieces as an outer layer, how many pieces of clothing will you wear?
- _____ 6. If you want to go outdoors to play on a cold, wet day, how many **more** pieces of clothing will you need?
- _____ 7. You and 2 friends are going on a boat trip in the spring.
Make a pile of the clothes all 3 of you will wear, and count them.
- _____ 8. If 1 more person joins you, how many more pieces of clothing will all 4 of you need?
- _____ 9. How many of the clothes you will wear are bright colored?
- _____ 10. How many PFDs do you need if 4 people are going on the boat?
- _____ 11. How many different colors are the PFDs?
- _____ 12. Which color is easiest to see from far away? How many pieces of clothing are that color?
- _____ 13. How many layers do you need to wear on a boat trip in cold, wet weather?

Name: _____

Amazing Clothes

Help this boy find his warm clothes!

Circle or color these items as you find them.

Long underwear

Hat

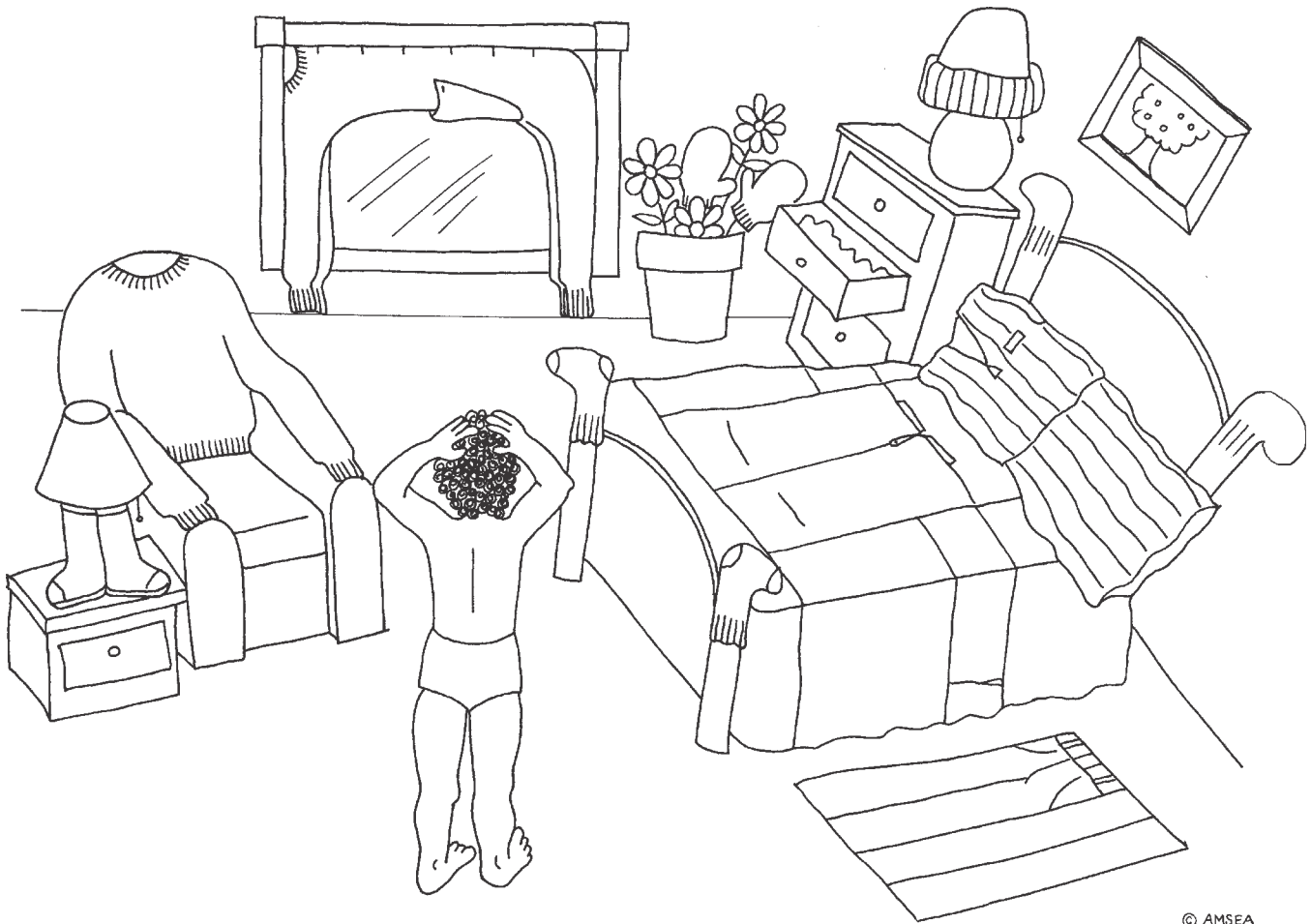
Socks

Mittens

Sweater

Boots

Pants



© AMSEA

Name: _____

Find Your Clothes for a Safe Boat Trip

START

Warm shirt

Shoes that don't keep your feet warm and dry

Cotton shirt

Sweater

Cotton shorts or pants

Wool or fur pants

Wool hat

Alcohol

No hat

Wool mittens

Cotton baseball cap

PFD

High energy snack and juice or water

Warm, waterproof boots and wool socks

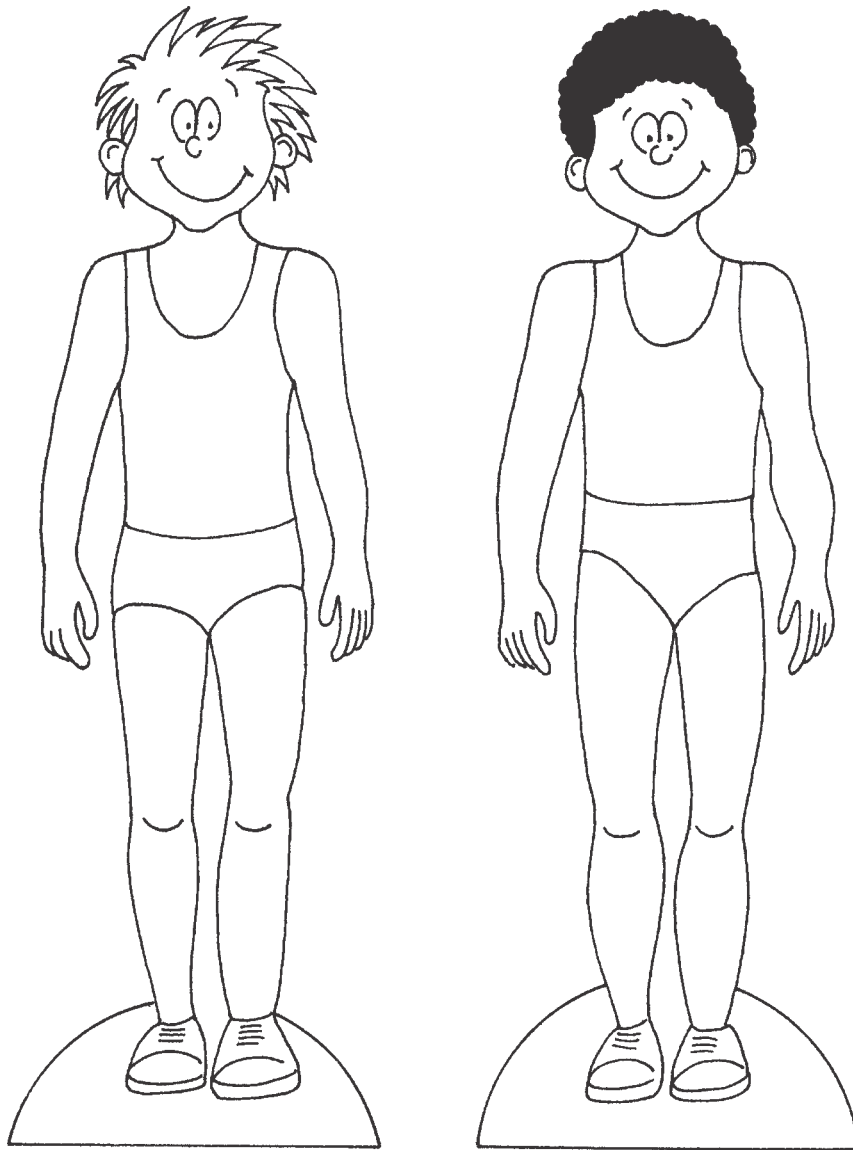
Pocket-size survival kit

DRESSED FOR A SAFE BOAT TRIP!

© AMSEA

Name: _____

Paper Dolls

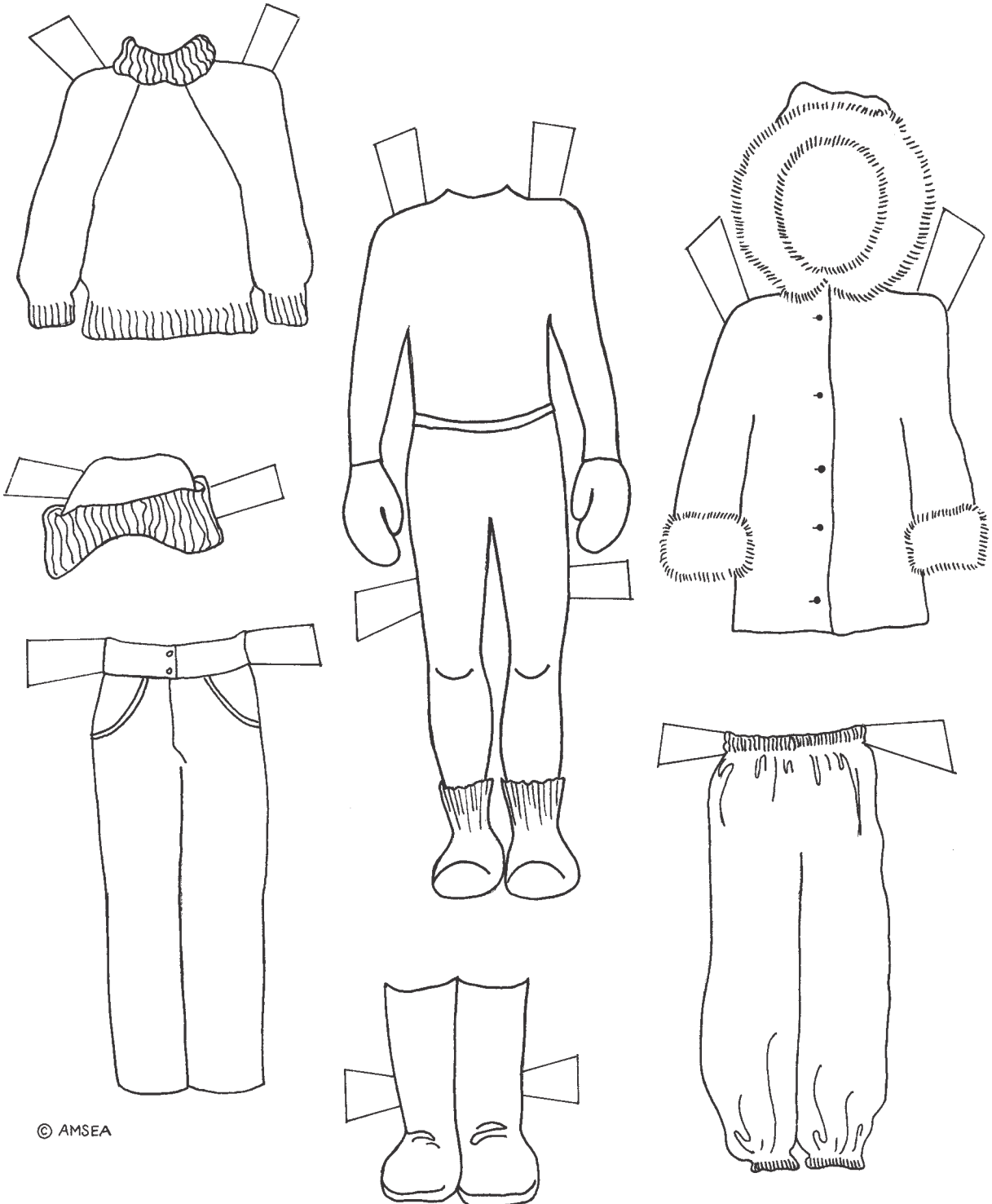


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Name: _____

Warm Clothes Can Help Prevent Hypothermia

Color the clothes before you cut them out.



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The Jacket I Wear in the Snow

Time: 30 minutes

Use with Teacher Information

Overview

A story, craft project, and worksheets introduce cold weather clothing.

Objective

After completing this activity, students should be able to list nine pieces of clothing appropriate to wear in the snow.

Materials

- *The Jacket I Wear in the Snow* by Shirley Neitzel [AMSEA](#)
- Construction paper
- Scissors
- Glue
- Glitter, paints, etc.
- Yarn
- One per student, Student Handouts #1 **Warmly Dressed** and #2 **Warmly Dressed Rhymes**
- Doll with three layers of removable clothing

Procedure

Before Class

1. Create a bulletin board similar to the page in *The Jacket I Wear in the Snow* that begins, “These are the socks, wrinkled a lot, that are pulled over. . . .” Leave spaces where the pictures would be.

During Class

1. Have students discuss the clothing they wear in the snow.
2. Read *The Jacket I Wear in the Snow*. Point out that cotton jeans do not insulate when wet.

3. Dress the doll in the three clothing layers. Review the names and purpose of each layer while dressing the doll.
4. Have students create paper mittens, hats, scarves, and other outside clothing using art supplies.
5. Add these creations to the bulletin board.
6. Distribute and have students complete Student Handouts #1 and #2.
7. Save students’ work for Activity #16.

This activity addresses Alaska Content Standards:

Language Arts A-1 Effective writing, A-3 Demonstrate speaking skills, B-1 Meaning from written, oral, and visual text, B-2 Investigations in written materials

Skills for a Healthy Life A-1 Personal well-being, A-3 Injury prevention, D-1 Responsible decisions

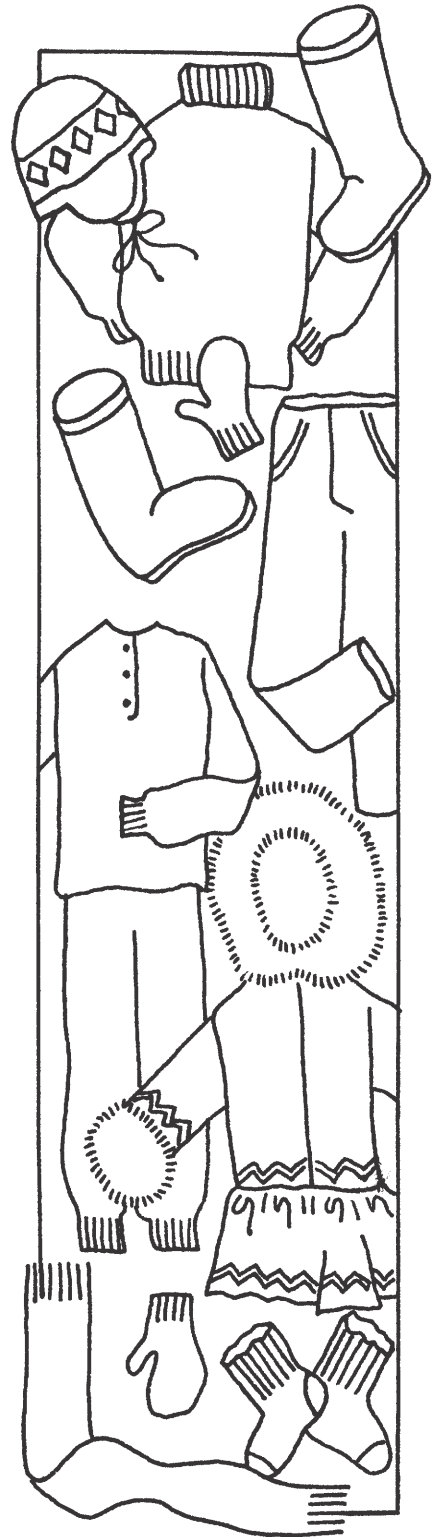
Arts A-1 Participate in the arts, A-3 Materials, tools, techniques, and processes

Name: _____

Warmly Dressed

Write the beginning letter for each word to make a word that is a piece of clothing to keep you warm.

- _____ at
- _____ carf
- _____ weater
- _____ ants
- _____ ocks
- _____ ong johns
- _____ oots
- _____ ittens
- _____ arka



© AMSEA

Name: _____

Warmly Dressed Rhymes

On my head I wear my _____ at.

_____ at rhymes with _____, _____, _____, and _____.

On my feet I wear my _____ oots.

_____ oots rhymes with _____, _____, _____, and _____.

Under my clothes I wear my under _____ ear.

The last part of under _____ ear rhymes with _____, _____, _____, and _____.

Inside my boots I wear my _____ ocks.

_____ ocks rhymes with _____, _____, _____, and _____.

My body is warm inside my _____ oat.

_____ oat rhymes with _____, _____, _____, and _____.

My legs are warm inside my _____ ants.

_____ ants rhymes with _____, _____, _____, and _____.

Make up a poem or song using some of these rhyming words.

Playground Dressing Contest

Time: 10 minutes per day

Use with Teacher Information

Overview


A contest to dress appropriately for hypothermia protection.

Objectives

After completing this activity, students should be able to:

1. List the five high heat loss areas and describe clothing appropriate for insulating them.
2. Explain why insulating the high heat loss areas is important.

Materials

- *Runaway Mittens* by Jean Rogers 
- Collection of warm hats, scarves, jackets, mittens, gloves, boots, or other clothing in appropriate sizes for your class
- Reward suitable for the class as a whole

Procedure

1. Read *Runaway Mittens* and discuss the clothes worn by the children, and their appropriateness for the weather conditions.
2. Review the five high heat loss areas.
3. Review appropriate and inappropriate clothing to wear for hypothermia protection when on the playground. Have students explain why insulating the high heat loss areas is important.
4. Create a list of appropriate clothing (the list may change daily due to changing weather).
5. Divide the class into small teams or have the class work as a whole.
6. Describe the reward, the points required to win it, and the duration of the contest.
7. Explain the rules of the dressing contest:
 - Teams work together to insure that each member is appropriately dressed for hypothermia protection every time students go outside.
 - Students wear their own clothing or choose items from your collection.
 - 1 point is awarded for each team member who is appropriately dressed.
 - 1 point is deducted for each team member who is inappropriately dressed.
8. Run the contest for as many days as you wish.
9. When the combined team scores reach the predetermined number, the class receives the reward.

This activity addresses Alaska Content Standards:

Language Arts B-1 Meaning from written, oral, and visual text

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices

Hypothermia Handbooks

Time: 15 minutes

Use with Teacher Information

Overview

Students create a hypothermia handbook.

Objective

After completing this activity, students should be able to assemble a hypothermia handbook.

Materials

- One per student, Student Handouts from Activities #6-#8, #10, #13, and #14
- Construction paper in various colors
- Colored pencils or crayons
- Scissors, glue, stapler

Procedure

1. Using students' work from Activities #6-#8, #10, #13, and #14, have students put together a handbook on hypothermia.

This activity addresses Alaska Content Standards:

Language Arts A-1 Effective writing, A-2 Writing conventions, A-4 Writing and speaking with purpose, A-6 Using visual communication, B-2 Investigations in written materials, C-1 Developing a project, C-2 Project organization, C-4 Project quality, C-5 Project collaboration, D-1-C Identifying information sources

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, B-2 Effective communication

Arts A-1 Participate in the arts, A-3 Materials, tools, techniques, and processes

Library/Information Literacy B-3 Access information, B-5 Organize and use information to create a product

Survival Kits

Time: 30-45 minutes

Use with Teacher Information

Overview

Worksheets and a discussion introduce personal survival kits.


Objectives

After completing this activity, students should be able to:

1. Define a personal survival kit.

2. List four categories of items to carry in a personal survival kit.
3. Select at least four appropriate items for a personal survival kit.

Materials

- *Willie Takes a Hike* by Gloria Rand 
- 1 per student, Student Handouts #1 **What Is a Survival Kit?**, #2 **Choose Survival Kit Items**, and #3 **My Personal Survival Kit**
- Assorted survival kit items
- Assorted comfort kit items

Procedure

1. Introduce the subject of personal survival kits by reading *Willie Takes a Hike*.
2. Have students suggest items they would really want to have **in their pockets** if they were stranded on a deserted island. Stress the difference between a survival kit and a comfort kit, and list the items on the board under the headings of “survival kit” and “comfort kit.”
3. List the four essential survival kit categories and assign the items in the survival kit list to the appropriate category.
4. Show examples of survival kit items and have the students assign each to the appropriate category.
5. Show examples of comfort kit items and have students discuss why each is not a survival kit item.
6. Distribute and have students complete Student Handouts #1, #2, and #3. Save their work for Activity #21.
7. Discuss survival kit items students have in their homes and suggest they work with their parents to put together a personal survival kit for themselves.
8. Have students bring their personal survival kits to class for discussion.

This activity addresses Alaska Content Standards:

Language Arts A-1 Effective writing, C-5 Project collaboration

Mathematics A-1 Numeration

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices

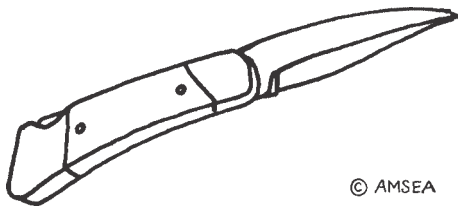
Library/Information Literacy A-4 Search for information and resources

Name: _____

What Is a Survival Kit?

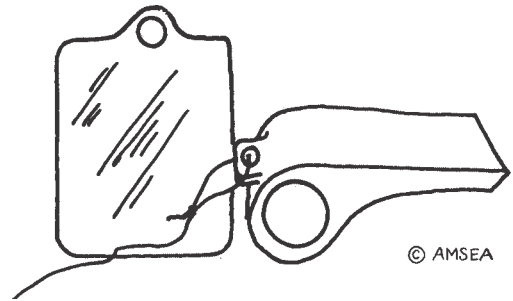
A survival kit is a collection of special items that you should always carry. It can help you stay alive if you get lost or stranded.

Here are pictures of some things that are often in survival kits. Under each picture list two ways you could use the item if you were stranded.



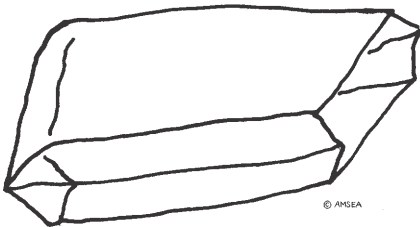
© AMSEA

Knife



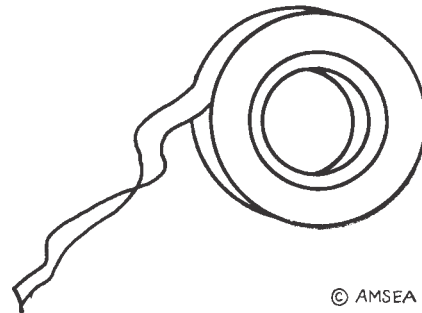
© AMSEA

Mirror and whistle



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Garbage bag



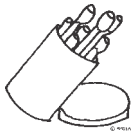
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Surveyor's tape

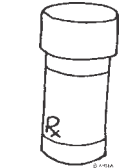
Name: _____

Choose Survival Kit Items

Draw a circle around the things that belong in a survival kit.



Matches



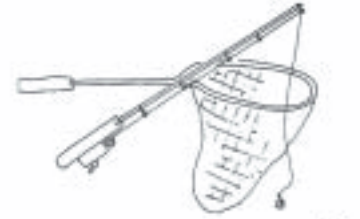
Special medicine



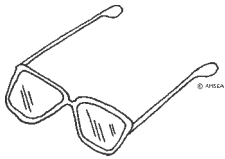
Mirror



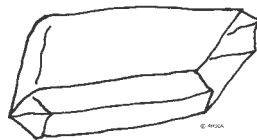
Wire



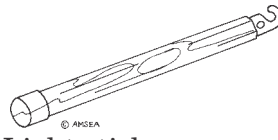
Fishing pole



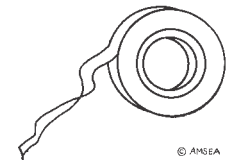
Eyeglasses



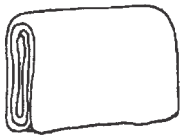
Garbage bag



Light stick



Surveyor's tape



Space blanket



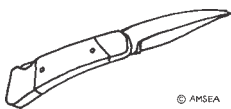
Water bottle



Television



Teddy bear



Knife



Whistle



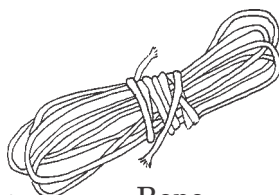
Strobe light



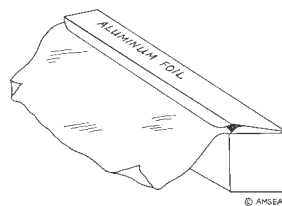
Toothpaste



Flashlight



Rope



Foil



Candle

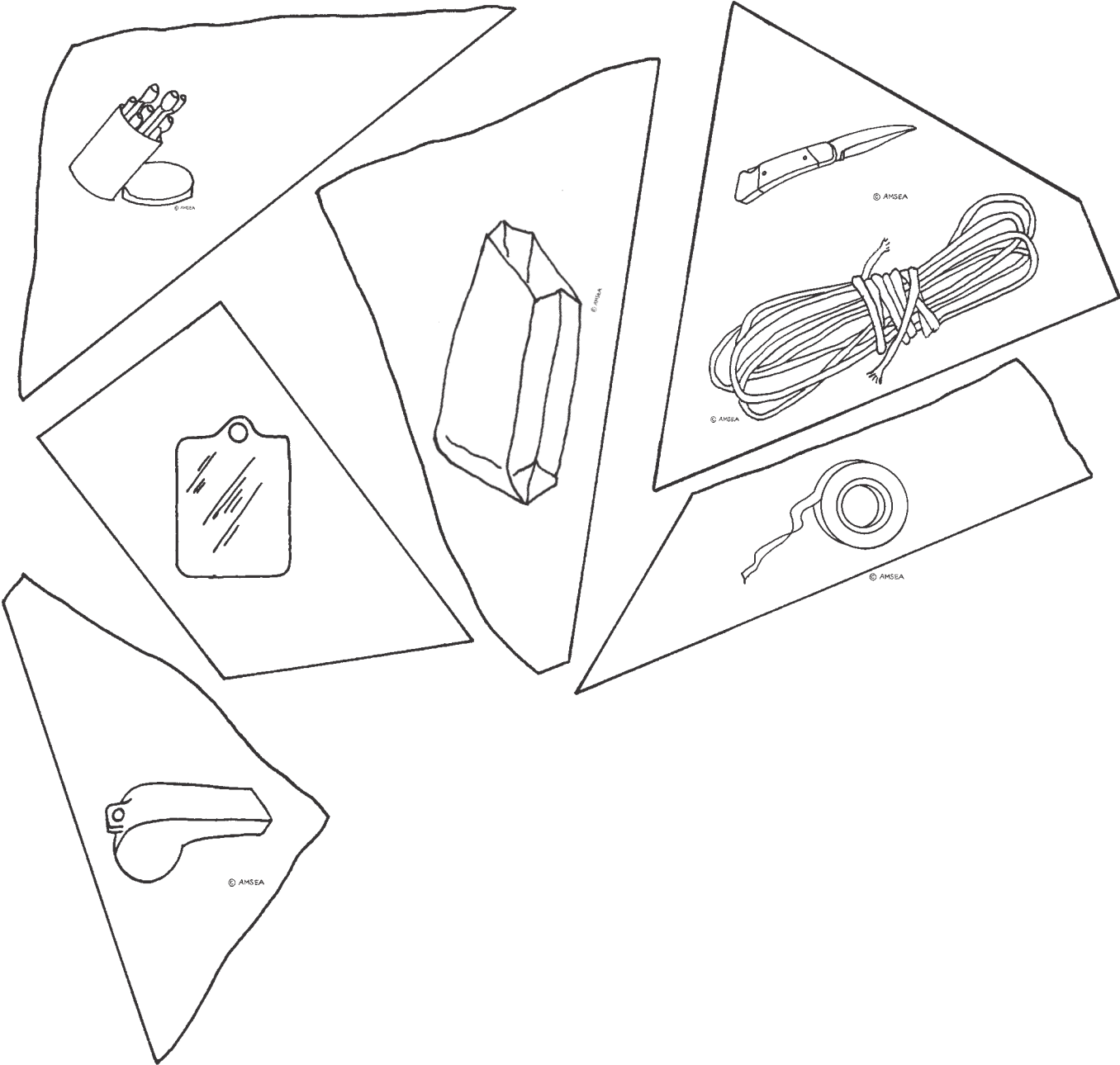


Hatchet

Name: _____

My Personal Survival Kit

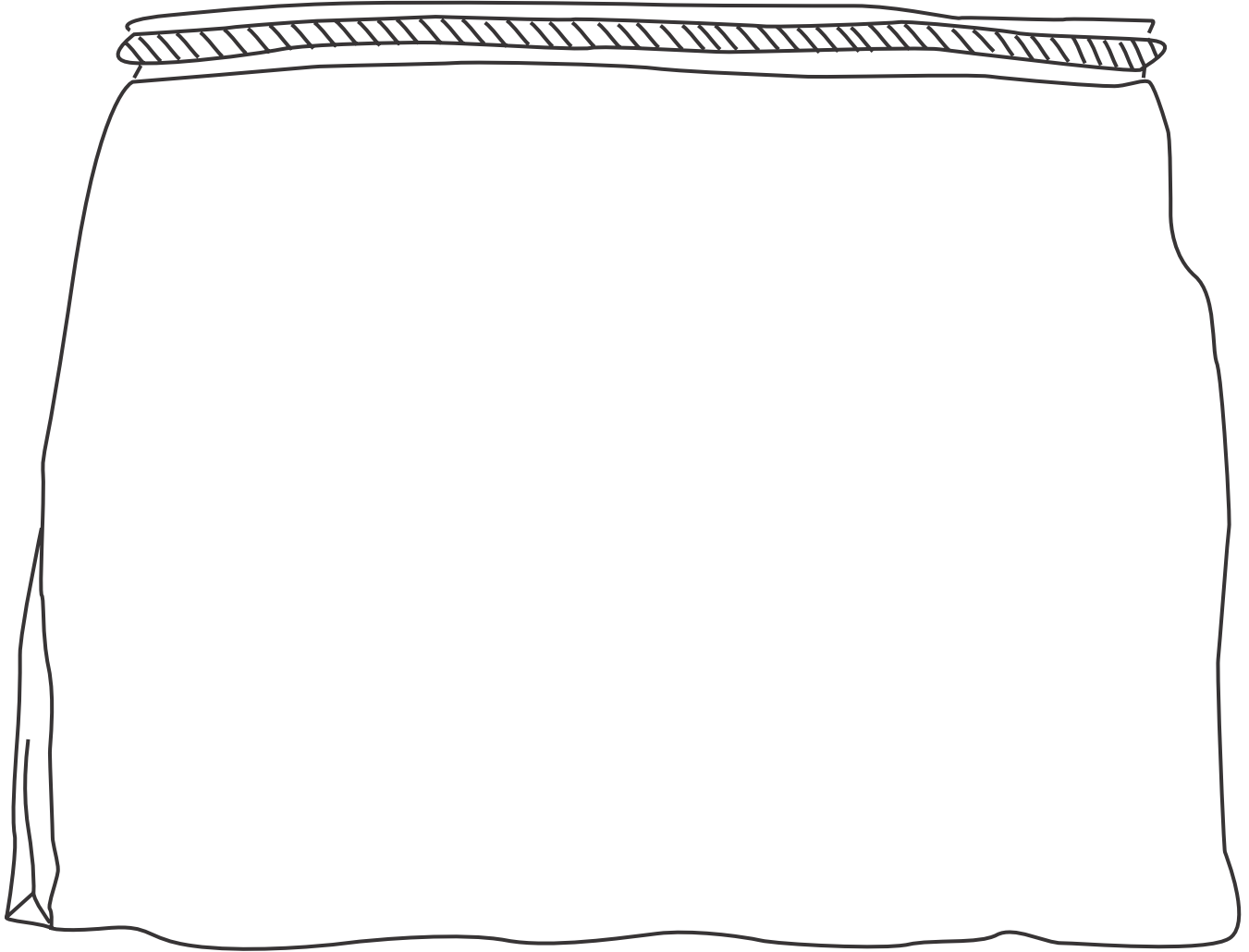
Color these things for a survival kit. Cut them out and paste them onto the bag.



Name: _____

My Personal Survival Kit

Plastic Bag



Permission

Time: 20 minutes

Use with Teacher Information

Overview

Role-playing to explore the importance of asking permission.

Objective

After completing this activity, students should be able to list two reasons for asking permission.

Materials

- *A Promise Is a Promise* by Robert Munsch and Michael Kusagak [AMSEA](#)

Extension

- Students' stuffed animals

Procedure

1. Read and discuss *A Promise Is a Promise*. Stress the following:
 - The girl in the story disobeyed her mother.
 - She went to the ice without letting anyone know where she was going.
 - It was a dangerous place.
 - She got injured.
2. Suggest outdoor situations or activities that parents would not approve of and why parents might not give permission for them.
3. Discuss possible dangers of acting without permission, emphasizing the importance of asking for permission. It may be helpful to teach the four A's: Always Ask An Addult (a guardian or other responsible person).

4. Pick one situation and role-play a child asking an adult for permission.
 - The adult should explain the dangers involved.
 - The adult should offer a reasonable alternative.
5. Summarize and review the importance of asking permission.

Extension

Using stuffed animals, have students engage in imaginary conversations with their animal children, who ask for permission to go on a hike with their uncle, or take a boat ride with their grandparents.

This activity addresses Alaska Content Standards:

Language Arts B-1 Meaning from written, oral, and visual text

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury

prevention, A-6 Making informed choices, B-1 Risk and consequences

Arts A-1 Participate in the arts

Float Plans

Time: 30 minutes

Use with Teacher Information

Overview

Discussion and worksheets introduce float plans.

Objectives

After completing this activity, students should be able to:

1. Fill in the five essential parts of a float plan.

2. List one person they can give their float plan to.

Materials

- *Adrift* by Colleen Politano and Jean Neudecker (optional) [AMSEA](#)
- One per student, Student Handouts #1 **What Is a Float Plan?**
- Directions for **Mother, May I?** (make from Template #1)

Procedure

1. Introduce the topic by reading *Adrift* and discussing:
 - The importance of asking permission before you go on a trip, and letting someone know where you are going. Be sensitive to the fact that some parents may not want children of this age doing float plans and going off by themselves; but for other children it may help save their lives.
 - The dangers around the water.
2. List the five essential parts of a float plan.
 - Stress the importance of a complete and accurate float plan.
 - Stress that the float plan must be left with a responsible person who will act if you do not return on time.
3. Suggest possible boat trips your students might take.
4. Distribute and have students complete Student Handout #1. Save their work for Activity #21.
5. Play **Mother, May I?**
6. After the game, emphasize the importance of asking permission and giving good information.

Extension

Do a trip plan for a land-based trip the students might take. Have students list all the equipment they should take on their trips. Make it realistic, and include survival kits, extra food and water, extra clothes, etc.

This activity addresses Alaska Content Standards:

Language Arts A-1 Effective writing, B-1 Meaning from written, oral, and visual text

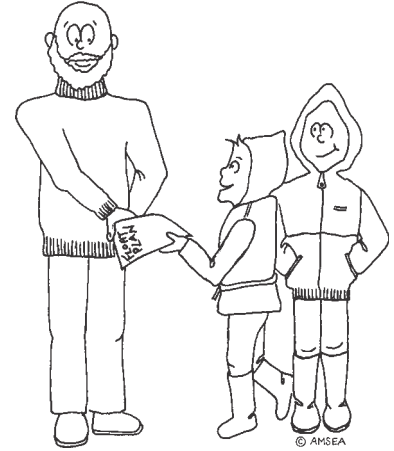
Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices, B-1 Risk and consequences

Name: _____

What Is a Float Plan?

A float plan lets people know where you are going on or near the water, and when you will be coming home.

Ask a parent or other adult if you can go. If they say "Yes," then ask if you can leave your float plan with them.



1. I will give this float plan to:

2. Who is going? Write their names:

3. Name of adult who gave you permission to go.

4. Where are you going? _____
5. How will you get there? What route will you take?

6. When will you be back? Day: _____ Time: _____
7. What are you taking with you? Make a list: _____

8. Why are you going and what will you be doing?

Directions for Playing Mother, May I?

1. The object of the game is for groups of students to advance from the starting point to the finish line.
2. The teacher or other designated person acts as Mother.
3. Students divide themselves into small groups of “traveling companions.”
4. Groups stand at a designated starting point, about 20 feet away from the finish line.
5. Mother calls on an individual in one of the groups, and that person asks, “Mother May I hike to the lake (or some other place he/she would like to go)?”
6. Having asked permission, he/she then files a verbal trip plan by telling Mother who is going (who is in his/her traveling group), when they will be returning home, and what they will be doing while they are gone.
7. If the player/team remembers to include all necessary information, Mother responds by saying, “Yes, you may go X steps to the lake (or wherever).”
8. All students in the named group move forward X steps.
9. If trip plan information is left out, Mother does not let them go.
10. Mother then picks a student from another group, and repeats the steps above. In this manner, Mother works through the groups for the first round.
11. In the second round, a different student from each group addresses Mother.
12. Play continues until one group reaches the finish line or everyone has had an opportunity to ask permission and file a trip plan.

Tracks!

Time: 15-20 minutes

Use with Teacher Information

Overview

Track-making and search activities help students understand how footprints and clothing description can help searchers.

Objectives

After completing this activity, students should be able to:

1. State why shoe size and tread helps searchers locate lost people.
2. State why knowing what a lost person is wearing helps searchers find the lost person.

Materials

Part 1

- *Lost in the Woods* by Colleen Politano or *Willie Takes a Walk* by Gloria Rand [AMSEA](#)
- 10 feet of aluminum foil
- One per pair of students, 5 feet of aluminum foil
- Carpeted floor

Part 2

- Two similar stuffed animals or dolls, dressed differently

Procedure

Before Class

1. Note what both stuffed animals or dolls have on, and hide them in two different places in the classroom.
2. Write a trip plan for the animals/dolls that will lead the students in the general direction of where you hid them.

During Class

Part 1

1. Read *Lost in the Woods* or *Willie Takes a Walk* to introduce the activity.
2. Discuss behaviors that can help you avoid getting lost and what to do if you do get lost.
3. Describe some things that make it possible to track a lost person.
4. Have everyone look at their shoe size and tread.
5. Have students determine how many different kinds of treads and how many different sized feet there are in the class.
6. Roll out 10 feet of aluminum foil on the floor.

7. Have a volunteer walk down the foil. Gather the class to look at the tracks, including tread and how far apart the steps are.
8. Have a second volunteer walk down the same piece of foil.
9. Compare the treads and steps. Did any go on top of the first set? Is it difficult to see which prints were made first?
10. Divide class into groups of two and place 5 feet of foil on the floor in front of each group.
11. Have students take turns walking **once** down their pieces of foil. Compare all the treads and strides.

Part 2

1. Explain to the students that two stuffed animals (or dolls) are lost and they need to help find them.
2. Have students pretend that they are the search and rescue people, and have them ask questions to find out information about the animals/dolls. Steer the discussion to the description of the animals/dolls and their clothing, and the trip they took.

3. Read the trip plan to the students.
4. One at a time, have volunteers try to find the animals/dolls and bring them back to the group. Emphasize the importance of trip plans and clothing descriptions.
2. Make shoe rubbings of treads using paper and crayons and have students take them home.

Extension

1. Post strips of aluminum foil on the wall. Have students match their feet with their prints.

This activity addresses Alaska Content Standards:

Language Arts A-3 Demonstrate speaking skills, D-2 Evaluating information

Mathematics A-1 Numeration, A-3 Arithmetic and computation, B-3 Using mathematics in real-life situations, B-4 Developing problem solving strategies, B-5 Checking results, D-2 Evaluating information, D-4 Explain and defend a position, E-2 Practical applications of mathematics

Science A-4 Observable natural events, A-15 Using local knowledge, C-6 Scientific discovery, D-6 Using reasoned decisions

Skills for a Healthy Life A-1 Personal well-being

Arts A-1 Participate in the arts

The Numbers Game

Time: 20 minutes

Use with Teacher Information

Overview

Card game and cut and paste activity to review preparing for an outdoor adventure.

Objective

After completing this activity, students should be able to list seven appropriate actions to take,

items to bring, or clothing to wear on an outdoor trip.

Materials

- One set **Numbers Game cards** (make from Template #1)
- Chalk or tape
- One per student, Student Handouts #1 **Are You Ready for a Safe Boat Trip?** and #2 **Let's Take a Boat Trip**
- Scissors and glue

Procedure

Before Class

1. Draw or tape a 24 foot straight line. Write the numbers from 0 to 12 along the line at 2 foot intervals.

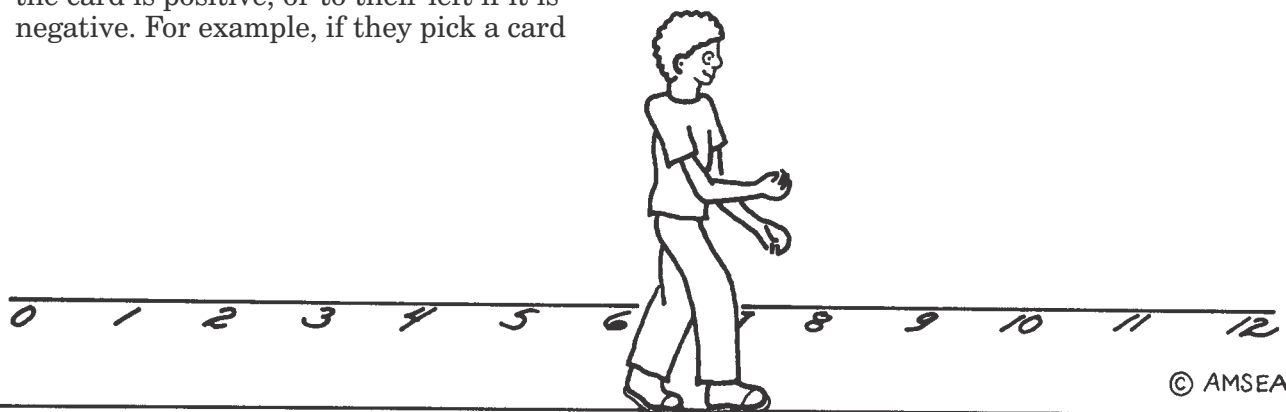
During Class

1. Suggest a cold weather outing and review the following:
 - Appropriate clothing for the weather conditions.
 - Survival kits, comfort kits, and other equipment, including the need for a radio or other communication.
 - Float plans and trip plans.
2. Have all students line up behind the 6 on the number line.
3. Taking turns, each student picks one card and moves to their right if the number on the card is positive, or to their left if it is negative. For example, if they pick a card

with a -3 on it, they walk three numbers to the left and stand behind the 3. If they pick a card with $+3$ they walk three numbers to the right and stand behind the 9.

Kindergarten students may need to be guided. **Discuss why the card has the number on it as the student moves.**

4. After all have had a turn, collect the cards and shuffle. Repeat the process, reviewing the importance of each step as you go.
5. Play continues until someone reaches 12 and is properly prepared for an outdoor activity.
6. Distribute and have students complete Student Handouts #1 and/or #2. Save their work for Activity #21.



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This activity addresses Alaska Content Standards:

Mathematics A-1 Numeration, A-3 Arithmetic and computation, B-3 Using mathematics in real-life situations

prevention, A-5 Well-being of family, A-6 Making informed choices, B-1 Risk and consequences

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury

Arts A-1 Participate in the arts, A-3 Materials, tools, techniques, and processes

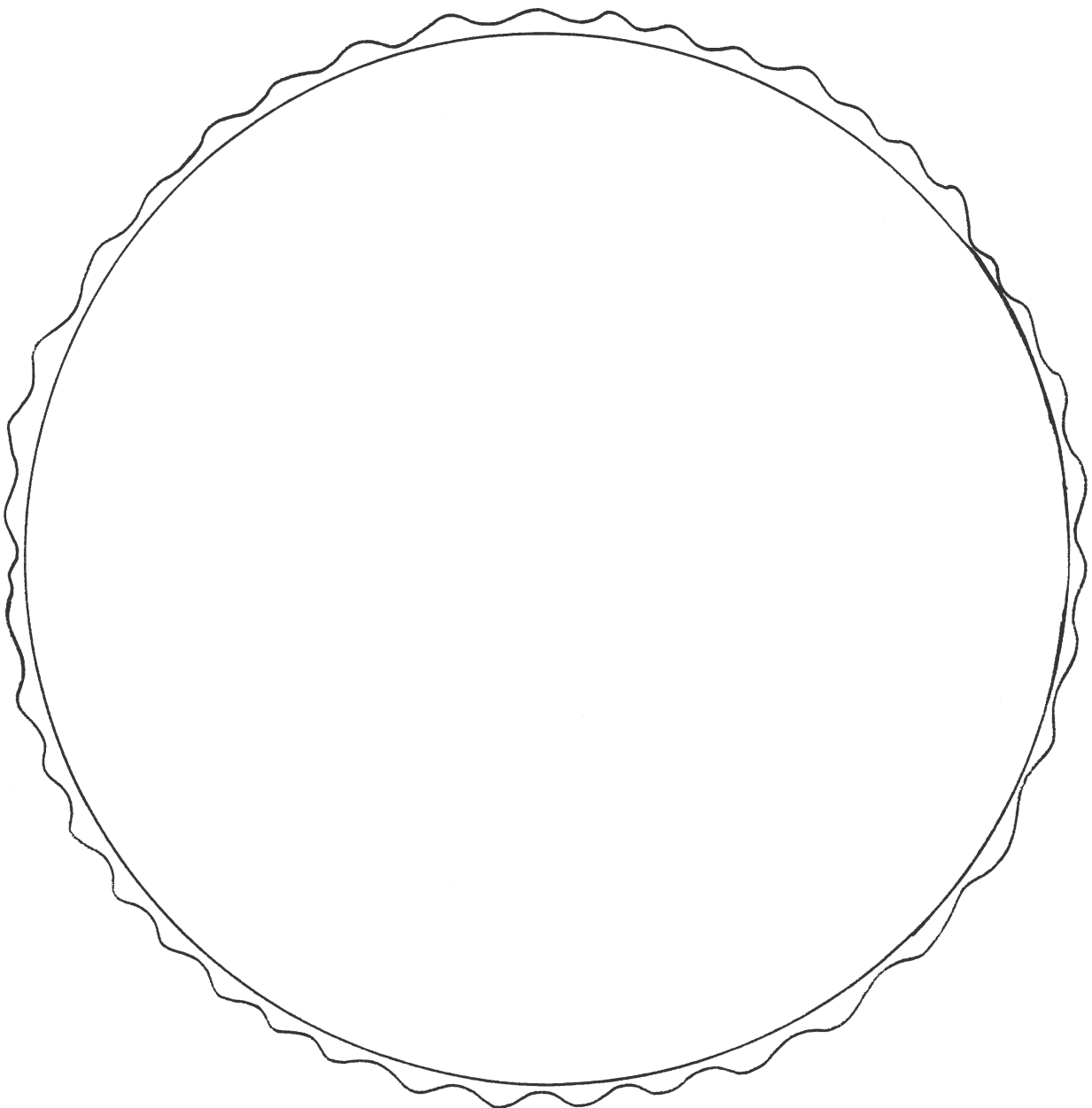
Numbers Game Cards

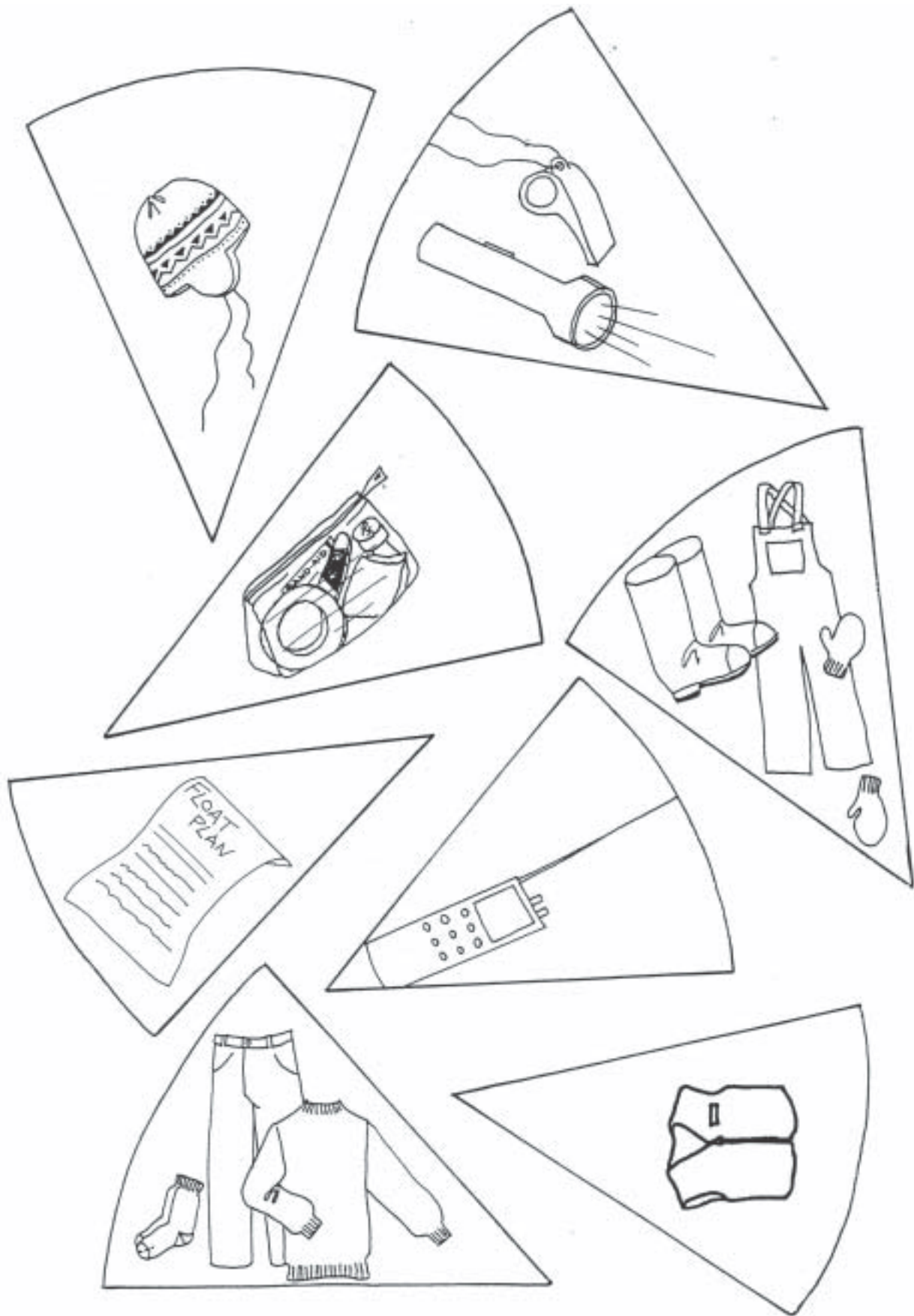
<p>You put on your wool or fleece hat before leaving for a hike.</p> <p style="text-align: center;">+3</p>	<p>You put on a cotton baseball cap before leaving for a hike.</p> <p style="text-align: center;">+1</p>	<p>You have a snack of water, dried fruit, nuts, and chocolate.</p> <p style="text-align: center;">+2</p>
<p>You forgot your survival kit.</p> <p style="text-align: center;">-2</p>	<p>You have a survival kit in your pockets.</p> <p style="text-align: center;">+2</p>	<p>You wear tennis shoes, jeans, and a cotton jacket on a long hike.</p> <p style="text-align: center;">-3</p>
<p>You remembered to take your raingear with you.</p> <p style="text-align: center;">+2</p>	<p>You forgot your hat.</p> <p style="text-align: center;">-3</p>	<p>You forgot to take water and a snack.</p> <p style="text-align: center;">-2</p>
<p>You wear fleece pants with rain pants over them, a sweater, warm hat, coat, and sturdy boots.</p> <p style="text-align: center;">+3</p>	<p>You asked permission to go on the trip.</p> <p style="text-align: center;">+2</p>	<p>You did not ask permission to go on the trip.</p> <p style="text-align: center;">-2</p>
<p>You were told you could not go but disobeyed and went anyway.</p> <p style="text-align: center;">-6</p>	<p>You left a trip plan with someone responsible.</p> <p style="text-align: center;">+2</p>	<p>You did not tell anyone where you were going.</p> <p style="text-align: center;">-2</p>

Name: _____

Are You Ready for a Safe Boat Trip?

Color the pictures in the pieces of pie on the next page. Cut them out and paste them in the pie plate below. Remember, you cannot leave on the boat until the pie is whole.

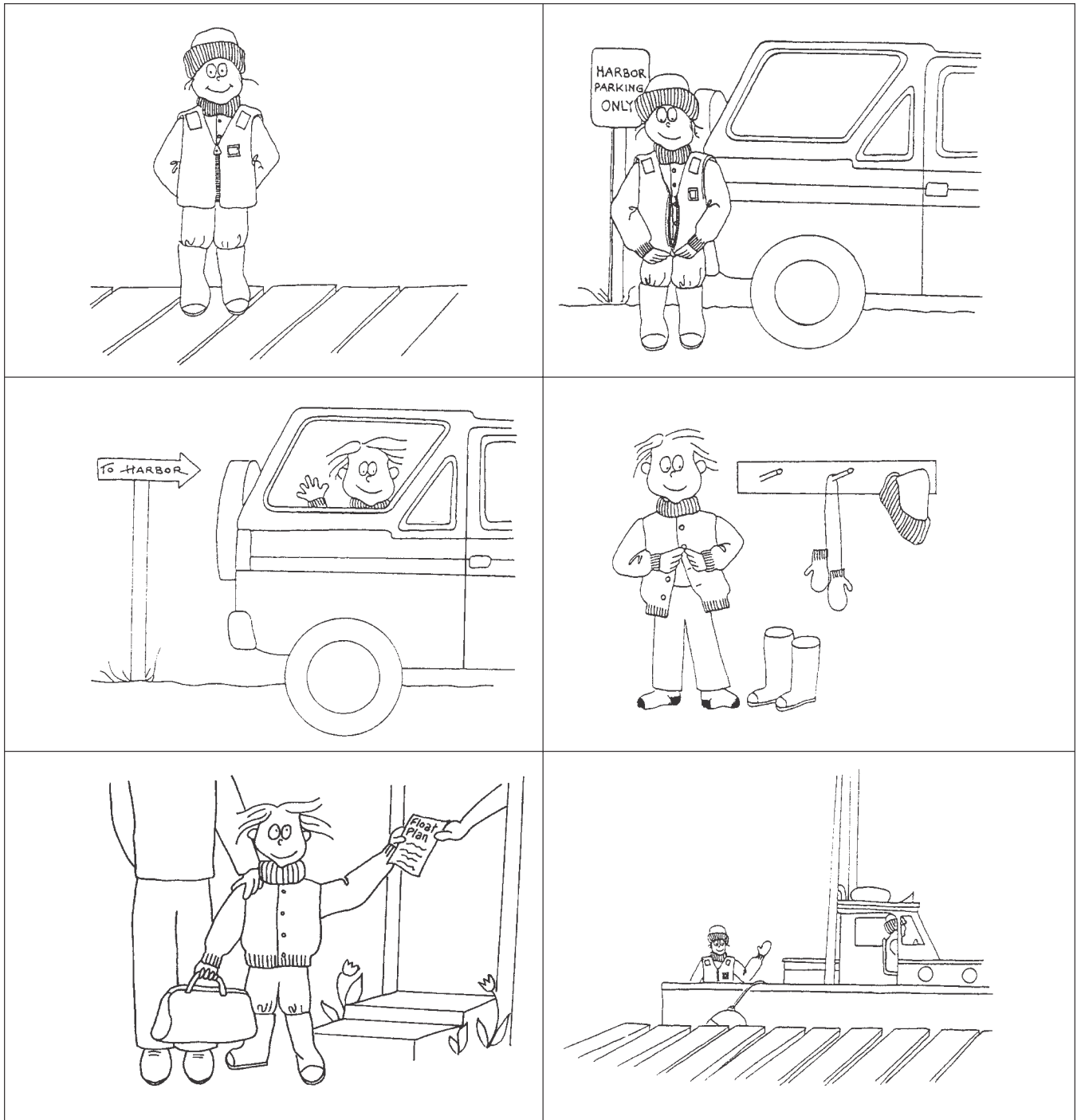




Name: _____

Let's Take a Boat Trip

Cut out the pictures below and paste them in the correct order on another piece of paper.



Preparation Checklist

Time: 30-40 minutes

Use with Teacher Information

Overview

Students make a checklist in preparation for an outdoor activity.

Objective

After completing this activity, students should be able to create a checklist of things to do in preparation for an outdoor activity.

Materials

- Student Handouts from Activities #17, #19, and #20
- Poster board
- Construction paper
- Colored pencils or crayons
- Scissors, glue

Procedure

1. Discuss checklists and how they can help prepare for an outdoor activity.
2. Have each student pick either a boat trip or a trip on land for their outdoor activity.
3. Have each student choose either a poster or a brochure format for their checklist for that activity.
4. Have students create a checklist using the Student Handouts from Activities #17, #19, and #20. Emphasize the importance of asking permission.

This activity addresses Alaska Content Standards:

Language Arts A-1 Effective writing, A-2 Writing conventions, A-4 Writing and speaking with purpose, A-6 Using visual communication, C-1 Developing a project, C-2 Project organization, C-3 Group decision making, C-4 Project quality, C-5 Project collaboration

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices, B-1 Risk and consequences, B-2 Effective communication

Arts A-1 Participate in the arts, A-3 Materials, tools, techniques, and processes

Library/Information Literacy A-4 Search for information and resources, A-5 Identify and use search strategies, B-2 Consider and determine useful strategies, B-3 Access information, B-5 Organize



Unit 2: Personal Flotation Devices (PFDs)

Unit Rationale

The evidence is overwhelming: Personal Flotation Devices (PFDs) save lives. The tragedy is that drowning is the second leading cause of death for children, and many of these drowning deaths could have been avoided if the children had been wearing PFDs.

U.S. Coast Guard statistics consistently show that at least 80% of the people who die in boating accidents nationwide are not wearing PFDs. In a U.S. Coast Guard study on boating fatalities in Alaska between 1996 and 1999, that rate was 58%. This statistic shows improvement, but far too many people still drown. People who wear PFDs have a fighting chance to survive, but those without will not last long in cold water.

This unit provides information and skills to sustain the trend toward increased PFD use and survival in cold water emergencies. The following unit, Cold Water Survival Skills, offers an opportunity to practice these skills in the water.

Unit Goal

Children will understand the need to wear a personal flotation device when on or near the water, and know how to use one properly.



Personal Flotation Devices (PFDs): Teacher Information

The information in this section gives you, the teacher, a background in the topic. Use your judgment when presenting this material. Many concepts are not suitable for young children.

Why Wear a Personal Flotation Device (PFD)?

- A. A PFD is a device used to keep a person afloat—it can save your life!
- B. Helps keep your airway out of the water
- C. Helps you when you can't help yourself if weak, uncoordinated, or incapacitated from hypothermia or other injury
- D. Some states require children to wear them (see below)
- E. In event of death, helps searchers find body, allowing closure for family

PFDs Should Be Worn

- A. In all open boats (put on before you leave dock)
- B. When on deck on larger vessel
- C. When water skiing
- D. When on a personal watercraft
- E. When crossing questionable ice
- F. By young children whenever near the water

PFD Requirements

- A. Federal requirements
 - 1. Boats less than 16 feet must carry one Type I, II, III, or V PFD for each person aboard
 - 2. Boats greater than 16 feet must carry one Type I, II, III, or V PFD for each person aboard **and** one Type IV
 - 3. All PFDs must be
 - a. U.S. Coast Guard approved
 - b. In serviceable condition
 - c. Appropriately sized for wearer
 - 4. Wearable PFDs must be worn or readily accessible
 - 5. Throwable devices must be immediately accessible
 - 6. Some commercial fishing vessels have requirements for PFDs or immersion suits, depending on distance from shore and temperature of water
- B. State requirements
 - 1. Vary from state to state; check with your state boating regulators for specifics
 - 2. Many states require children to wear PFDs
 - a. Required age limit varies

- b. Required by Alaska law for children under age 13 in open boat or on deck

General Properties of PFDs

- PFDs are not toys!
- Inflatable beach toys and water wings are not PFDs!

Buoyancy

- A. Based on Archimedes Principle = a body is buoyed by force equal to weight of water it displaces
- B. Body will sink if weight of immersed body is greater than weight of water it displaces
- C. Body will float if weight of immersed body is less than weight of water it displaces
- D. Extra pounds of buoyancy needed to float a person
 1. People under 90 pounds require about seven extra pounds
 2. Most people over 90 pounds require about eleven extra pounds
 3. This keeps your face barely above water level
 4. In anything but calm water more flotation is essential

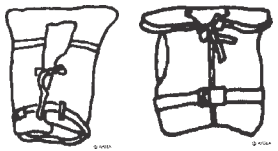
PFD Styles and Their Protection against Hypothermia

- If U.S. Coast Guard approved, approval number will be on tag on inside of garment-style PFDs or printed on throwable devices



© ANSEA
Type I PFDs

- A. U.S. Coast Guard approved Type I = Offshore Life Jacket
 1. Comes in several styles
 2. Minimum of 22 pounds buoyancy
 3. Most flotation is in chest area, so it will turn most (80%) unconscious victims face up in the water unless worn over coveralls, a float coat, or an immersion suit
 4. Offers minimal hypothermia protection
 5. Bulky



Type II PFDs

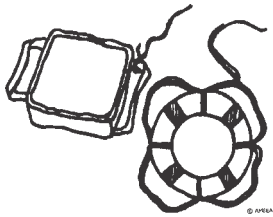
- B. U.S. Coast Guard approved Type II = Nearshore Buoyancy Vest
 1. Horse collar shaped device
 2. Minimum of 15.5 pounds buoyancy for persons over 90 pounds and 7 pounds buoyancy for persons under 90 pounds
 3. Tends to turn some (20%) unconscious victims face up in the water
 4. Offers minimal hypothermia protection
 5. Can look similar to Type I



Type III PFDs

- C. U.S. Coast Guard approved Type III = Flotation Aid
 1. Variety of styles, colors, and sizes
 2. Includes vests, float coats, and other special-use devices

3. Minimum of 15.5 pounds buoyancy for persons over 90 pounds and 7 pounds buoyancy for persons under 90 pounds
4. Little or no ability to turn unconscious victims face up in the water
5. Many provide increased hypothermia protection
 - a. Float coat with beaver tail and hood on protects all five high heat loss areas
 - b. Flotation coveralls (a Type III only if worn) with hood on protect all five high heat loss areas
6. Relatively comfortable and easily worn



Type IV PFDs

- D. U.S. Coast Guard approved Type IV = Throwable Device
 1. Throwable devices designed for rescue
 2. Include ring buoys and seat cushions
 3. Minimum of 16.5 pounds buoyancy
 4. In water, lie with chest on top of it with arms wrapped in straps
 5. Does **not** take place of Types I, II, III, or V PFDs (wearable PFDs)
 6. Should have a line attached for throwing and retrieving
 7. Should have light reflective tape on both sides



© AMSEA

Type V PFDs
(flotation coveralls)

- E. U.S. Coast Guard approved Type V = Special Use Devices
 1. Any U.S. Coast Guard approved PFD for restricted use such as flotation coveralls, sail board harness, commercial white water vest
 2. U.S. Coast Guard approved only when used in prescribed manner
 3. Minimum of 15.5 to 22 pounds of buoyancy
 4. Some provide good hypothermia protection

F. Inflatable PFDs

1. No inherent flotation
2. Can be inflated orally
3. Come in a variety of styles
4. Turn most unconscious wearers face up in the water
5. Offer minimal hypothermia protection
6. Require more maintenance than other PFDs
7. Some are U.S. Coast Guard approved
 - a. Type I inflatables
 - (1) Minimum of 33.7 pounds buoyancy when inflated
 - (2) Have both manual and water-activated CO₂ inflation
 - (3) Water-activated mechanisms required to have visual red and green markers to denote if properly armed with CO₂ cartridge
 - b. Type II inflatables
 - (1) Minimum of 33.7 pounds buoyancy when inflated
 - (2) Have only manual CO₂ inflation mechanism



© AMSEA

Type V PFDs
(inflatable)

c. Type III inflatables

- (1) Minimum of 22.5 pounds buoyancy when inflated
- (2) Have only manual CO₂ inflation

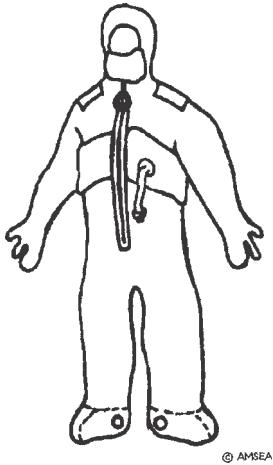
8. Some inflatables are not U.S. Coast Guard approved

- a. Come in a variety of styles including suspenders, jackets, and vests
- b. Most have minimum 15.5 pounds buoyancy when inflated; some have up to 40 pounds
- c. Manual CO₂ inflation
- d. Children's should be inflated completely before worn near the water

9. Inflatable beach toys and water wings are not PFDs

G. Immersion suits

1. Also called survival suits
2. Can be U.S. Coast Guard approved or not approved
3. Minimum of 22 pounds buoyancy for persons over 90 pounds, minimum of 11 pounds buoyancy for people under 90 pounds
4. Keep you dry if they fit, are well-maintained, and worn properly
5. Offer best hypothermia protection of any PFD
6. Not functional as a work PFD; designed to be worn when abandoning ship
7. Should be stored in accessible location



Immersion suit

Personal Considerations for PFDs

The best PFD is the one you wear!

- A. Cost—wide range
- B. Color—bright colors facilitate rescue
- C. Suitability for your activities and area of operation
- D. Add items to maximize safety
 1. Lights (PFDs worn at night should have functional, waterproof lights attached)
 2. Sound signals
 3. Personal survival kit (See Preparation for Outdoor Activities, Unit 1)
- E. Reflective tape should be above anticipated water line
- F. Read PFD information pamphlet **before** buying to get what you need

PFD Use

Sizing, fitting, and wearing

- A. PFDs come in infant to XXXL adult sizes
- B. Your PFD should fit securely (feel snug)—tie straps from chin down, zip all zippers, secure all straps and other closures

- C. Properly fitted PFD supports you and does not ride up around neck when worn in water
- D. Improperly fitted PFD can slide off in the water or ride up and cover airway
- E. PFD that is too large allows more water next to skin and does not keep wearer as warm as a properly fitted one
- F. PFD that is too small can restrict movement
- G. Accessible location is critical—wearing a PFD is best!

Entering the water while wearing a PFD

- A. Best to slip in slowly to minimize wetness and shock of cold water
- B. If you have to jump into the water
 1. Stand sideways to dock or facing bow or stern of boat
 2. With one hand, hold your nose and cover your mouth
 3. Cross your other arm over first arm, and grab opposite shoulder of your PFD
 4. Before jumping, check the water for debris and people
 5. Step far away from boat and cross your legs as you fall
 6. Be sure your head does not hit dock or boat
 7. Jumping practice not appropriate for children except in very controlled situations



HELP position

Use in the water

- A. HELP (Heat Escape Lessening Position) slows progression of hypothermia
 1. If not wearing a PFD, HELP cannot be maintained for more than a few minutes
 2. Float tipped on your back
 3. Protect your high heat loss areas
 - a. Hold arms tight against sides of your chest to protect underarms and sides
 - b. Bend your knees and pull up your legs as much as possible to protect groin
 4. Use head to help balance—difficult to maintain balance in rough water



The Huddle

- B. Huddle position
 1. Requires that most people in Huddle be wearing a PFD
 2. Assemble in groups of at least three people
 3. Form circular “huddles” with arms around each other’s waists
 4. Shoulders and sides close together slows down water movement within Huddle; bodies work together to protect high heat loss areas
 5. Small children or people with inadequate flotation can huddle inside circle of adults if held up
 6. Huddle works best in calm water

7. Larger group increases visibility
- C. Survival swimming to floating objects
1. On back
 2. Hold upper arms near sides of chest, swim with forearms to protect high heat loss areas
 3. Use small kicks
 4. Swimming increases heat loss by more than 30%, but you may need to swim short distances to reach life ring, overturned boat, floating debris, etc.

Immersion suits

A. Proper donning

1. On deck
 - a. Keep clothes and boots on (or put boots inside suit before zipping)
 - b. Lay suit on floor or deck, spread open
 - c. Sit down on inside of suit—boat movement makes donning while standing hazardous
 - d. Slide both legs into suit and work feet all the way to bottom (placing plastic bags over boots or shoes makes this step much easier)
 - e. Place nondominant arm in suit first
 - f. Pull hood on with dominant arm while it is still out of suit
 - g. Place dominant arm in suit
 - h. Grasp below zipper with one hand, grasp toggle attached to zipper with other hand, arch back, and fully zip suit with a long, smooth pull
 - i. Close face flap
2. In the water—difficult but possible; always better to don suit dry

B. Entering deep water in immersion suit

1. If possible, slip slowly into water, trying to keep face dry
2. From a height
 - a. To prevent neck injury and/or damage to zipper, **do not** inflate air bladder before jumping into the water
 - b. Open face flap, insert hand into suit to protect airway and allow air to escape
 - c. Stand sideways to dock or boat and protect head with arm nearest boat or dock
 - d. Check the water below for debris and people before jumping
 - e. Step away from boat or dock and cross legs as you descend into the water

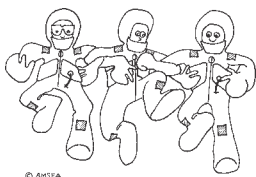
- C. In the water
 1. Float on back or in HELP; if float on front, water will almost certainly enter suit
 2. Inflate flotation pillow or bladder
 3. Zip up face flap if not done before entering water
 4. Activate light
 5. Immersion suits will float even if full of water, but this makes exit from the water more difficult and increases heat loss, thereby decreasing survival time

D. Swimming techniques

1. Individual swimming
 - a. On back is safest
 - b. Always protect airway, especially in rough seas
 - c. Most efficient propulsion is with arms; legs are less effective
2. Tandem or chain swimming
 - a. Line up with head on buddy's torso area, body between buddy's legs
 - b. Hold onto one another with pressure from legs and use arms like oars to swim
 - c. Is more effective than single swimming and keeps people together
 - d. May not be possible in rough seas
 - e. Use only in immersion suits; not appropriate for other PFD types
3. Elbow lock also helps people stay together in water
4. Putting small children on an adult helps children



Chain Swimming



Elbow Lock

Floating without a PFD or additional flotation devices

- A. Is difficult, especially in rough seas
- B. Trapped air in clothing aids flotation
 1. Secure clothing's wrists, ankles, and neck to trap as much air as possible
 2. Periodically blow additional air into neck or chest areas of shirt
- C. Stay as still as possible
- D. It's much better to have a PFD on

Heavy clothes or boots

- A. **Will not** cause you to sink
- B. Most clothing is "neutrally buoyant" in water
- C. Weight of wet clothing is a factor only when out of water or if you try to swim
- D. Belt waders so current doesn't catch them like a parachute

PFD Care and Maintenance

- PFD manufacturers can provide a list of factory-authorized repair stations
 - Sitting on PFDs can damage them
 - All PFDs should be checked for serviceability with every boat use
- A. Check for tears
 - B. Check straps, reflective tape, and zippers for operability and wear
 - C. Check fit for growing children
 - D. Check kapok PFDs frequently for leaks (kapok is a plant fiber used as an inexpensive filler in some PFDs)
 1. Kapok must be contained in watertight plastic to prevent absorption of water
 2. These PFDs feel heavy when kapok has absorbed water
 3. Squeeze and listen for sound of air; if air is forced out of bag, discard PFD
 - E. Check foam PFDs for compression; this decreases buoyancy
 - F. Keep PFDs clean and out of sun—ultraviolet light, dirt, oil, grease, and moisture degrade PFDs; wash with mild soap if dirty
 - G. If used in salt or pool water, rinse well with fresh water, dry inside out away from sun, then turn
 - H. Test attached lights and check battery dates; replace outdated lights and batteries and nonfunctioning lights

Inflatable PFDs

- A. Be especially careful with inflation mechanisms
- B. Follow manufacturer’s guidelines
- C. Manual CO₂ inflation mechanisms
 1. Replace “fired” cartridges (have hole in top) with same size cartridge
 2. Be sure cartridge is completely screwed into mechanism
- D. Water-activated CO₂ mechanism—replace white dissolving “pill” if pitted, or once a year if not pitted
- E. Check air bladder for leaks
 1. Leave inflated overnight
 2. Replace bladder if it leaks

Immersion suits

- A. Follow manufacturer’s maintenance guidelines
- B. Inspect monthly
 1. Look for holes, tears, and compression wrinkles
 2. Inspect zipper for smooth operation and corrosion (green)
 - a. If dirt or residue present, scrub with bare toothbrush

- b. Scrub corrosion off with toothbrush and paste of baking soda and water, then rinse with fresh water
 - c. Lubricate zipper **inside and out** with lubricant provided by manufacturer
3. Inspect seams, buoyancy rings, and foot valves for leaks
4. Inspect reflective tape—reglue loose edges, replace yellowed tape
5. Inspect valves and hoses attached to pillow/buoyancy ring
 - a. Inflate and leave overnight to check for leaks
 - b. Make sure locking ring of inflation hose is left in open position
6. Test attached lights and check battery dates; replace outdated lights and batteries, and nonfunctioning lights
- C. After use, rinse inside and out, then dry thoroughly away from sun
- D. Store unzipped
- E. Unless instructions state otherwise, roll suit from feet to head before putting in bag—avoid folding
- F. Put plastic bags in suit’s hood to ease donning with boots or shoes
- G. Check storage bag and its closures to ensure ease of suit removal

PFD Storage

- A. Store in a dry place on boat, readily accessible for wear or emergency use
- B. Store in a dry place at home during off-season
- C. Avoid storing where sharp or heavy objects might cause damage
- D. Mark bags so easily identifiable for wearer; most sizes fit in same color bags

Personal Flotation Devices (PFDs): Activities Guide

- Activities in this volume are sequential and each unit assumes some knowledge of the material in the preceding unit.
- Activities are arranged by topic in the same order as the Teacher Information.
- Detailed Alaska Content Standards are located at the end of each activity’s procedures.
- Times given for activities are approximate.
- In order to provide a choice of handouts for prereaders and readers, many activities have more than one handout that covers the same information.
- Many activities contain true stories; be sensitive to the possibility that they could be written about your students’ relatives or friends.
- **AMSEA** This symbol means the items are available to borrow from AMSEA.

Topics: Why Wear a Personal Flotation Device (PFD)?, PFDs Should Be Worn, PFD Requirements, General Properties of PFDs

Activity	Objectives	Standards
<p>1. PFDs Can Save Your Life! Discussion, worksheets, a story, and a walk introduce PFDs p. 113</p>	<ul style="list-style-type: none"> • Explain what a PFD is • List five places or situations where they should wear a PFD • Explain the importance of wearing a PFD when on or near the water 	<p>Language Arts Skills for a Healthy Life Arts</p>
<p>2. PFDs Help You Float Song, experiments, and a worksheet introduce the concept of floating p. 120</p>	<ul style="list-style-type: none"> • List three things that float and three things that don’t float • Demonstrate how something that can’t float by itself can be helped to float • State that a PFD can help a person float • List one reason why wearing a PFD can save your life 	<p>Language Arts Science Arts</p>
<p>3. Teddy Bear PFDs Art project to make toy PFDs for stuffed animals or dolls p. 124</p>	<ul style="list-style-type: none"> • Explain why it is important to wear a PFD near the water 	<p>Language Arts Science Skills for a Healthy Life Arts Library/Information Literacy</p>

Topics: PFD Styles and Their Protection against Hypothermia, Personal Considerations for PFDs, PFD Use

Activity	Objectives	Standards
<p>4. Kinds of PFDs Worksheets and paper dolls introduce different kinds of PFDs p. 127</p>	<ul style="list-style-type: none"> • Compare five kinds of PFDs for warmth 	<p>Language Arts Mathematics Skills for a Healthy Life Arts Library/Information Literacy</p>
<p>5. Comparing PFDs Sort PFDs in various ways p. 133</p>	<ul style="list-style-type: none"> • Compare three different PFDs for warmth, comfort, size, and color • Distinguish PFDs from beach toys • Select PFDs that are comfortable for them 	<p>Language Arts Mathematics Skills for a Healthy Life</p>
<p>6. Too Big, Too Small, or Just Right? Worksheets and cut outs explain how PFDs should fit p. 137</p>	<ul style="list-style-type: none"> • Select a PFD that fits 	<p>Language Arts Skills for a Healthy Life Arts</p>
<p>7. PFD Game Match cards with PFDs and then try them on p. 140</p>	<ul style="list-style-type: none"> • Explain what a PFD is • Explain what a PFD does • Recognize five different kinds of PFDs • Compare three different PFDs for size 	<p>Language Arts Skills for a Healthy Life</p>
<p>8. Donning and Using PFDs Worksheets and PFDs help students learn how to don and use PFDs p. 143</p>	<ul style="list-style-type: none"> • Demonstrate proper donning of a PFD • Demonstrate the HELP while wearing a PFD • Demonstrate the Huddle position while wearing a PFD • Demonstrate the elbow lock while wearing a PFD • Describe one safe way to enter the water while wearing a PFD 	<p>Language Arts Skills for a Healthy Life</p>

9. Donning and Using Immersion Suits

Worksheets and practice help students learn how to don and use an immersion suit
p. 148

- Demonstrate proper donning of an immersion suit
- Demonstrate the elbow lock while wearing an immersion suit
- Demonstrate the chain swim while wearing an immersion suit
- Describe one safe way to enter the water while wearing an immersion suit

Language Arts
Skills for a Healthy Life

Topic: PFD Care and Maintenance

Activity	Objectives	Standards
10. Caring for PFDs Students work with PFDs and do a worksheet to assess PFDs for damage p. 151	<ul style="list-style-type: none">• List four types of damage that can occur to PFDs• Demonstrate how to wax an immersion suit zipper• Demonstrate how to roll up an immersion suit	Language Arts Mathematics Skills for a Healthy Life

Topic: PFD Storage

Activity	Objectives	Standards
11. Storing PFDs Storytelling and handouts help students explore places to store PFDs p. 156	<ul style="list-style-type: none">• List three places to store a PFD• List three places they should not store an immersion suit• Demonstrate proper donning of an immersion suit	Language Arts Skills for a Healthy Life

Topic: Culminating Activities

Activity	Objectives	Standards
12. Let's Go Boating! A puppet play about dressing for a boat trip p. 162	<ul style="list-style-type: none">• Select clothing appropriate for a boat trip• Explain the importance of wearing a PFD when on or near the water	Language Arts Skills for a Healthy Life Arts

13. PFD Posters

Unit review by making posters to educate your school and community about PFDs
p. 164

- Explain why it is important to wear a PFD
- List five places where you should wear a PFD
- Explain how a PFD should fit
- Explain how to care for a PFD

Language Arts
Skills for a Healthy Life
Arts
Library/Information Literacy

PFDs Can Save Your Life!

Time: 45 minutes

Use with Teacher Information

Overview

Discussion, worksheets, a story, and a walk introduce PFDs.

Objectives

After completing this activity, students should be able to:

1. Explain what a PFD is.
2. List five places or situations where they should wear a PFD.
3. Explain the importance of wearing a PFD when on or near the water.

Materials

- *Whales Tales* video (14 minutes) [AMSEA](#)
- One per student, Student Handouts #1 **What Is a PFD?**, #2 **Wear That PFD!**, #3 **Where Do You Wear a PFD?**, and #4 **PFDs and Boating**
- *The System of Fishes* by Mike Jackson [AMSEA](#)
- Story #1, **A Rescue Story with a Happy Ending**
- **Flannel board pieces** (make from Template #1)
- Flannel board
- One per student and teacher, PFD [AMSEA](#)

Procedure

1. Show PFDs and read the definition from Student Handout #1.
2. Introduce the topic of where PFDs should be worn by showing *Whales Tales*, reading *The System of Fishes*, or Story #1.
3. Distribute and have students complete Student Handout #1.
4. Use the flannel board to show places and situations to wear PFDs.
 - Make up stories to emphasize the need to wear PFDs in these places.
 - Have students take turns explaining where they should wear a PFD.
5. Distribute and have students complete Student Handout #2.
6. Discuss the places in your community where students should wear a PFD, and places where everyone should wear a PFD. Explain the law for your state.
7. Distribute and have students complete Student Handouts #3 and #4.
8. Take a walk with your class to a place in your community where PFDs should be worn, with everyone—including teachers—wearing a PFD. Or take a pretend walk with everyone wearing PFDs and discuss local places children should wear PFDs.
9. Save students' work for Activity #13.

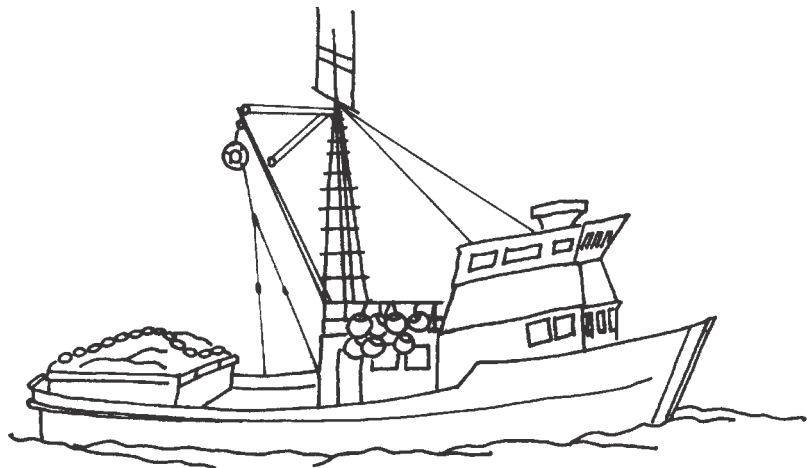
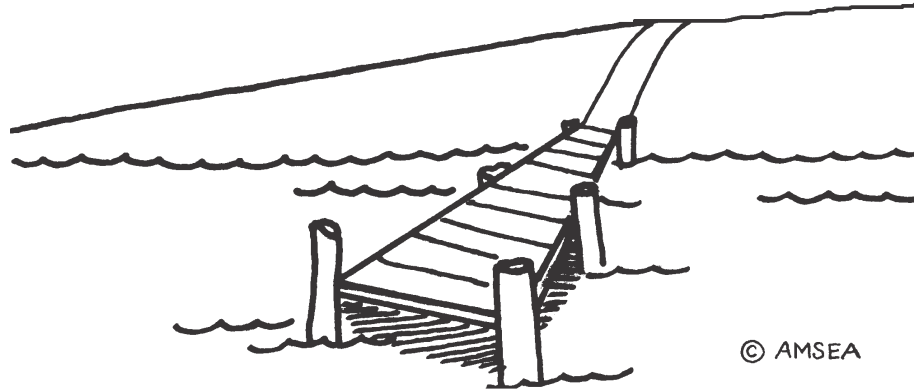
This activity addresses Alaska Content Standards:

Language Arts A-1 Effective writing, A-6 Using visual communication, B-1 Meaning from written, oral, and visual text, B-2 Investigations in written materials

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention

Arts A-1 Participate in the arts, A-3 Materials, tools, techniques, and processes

Wearing PFDs—Flannel Board Pieces



A Rescue Story with a Happy Ending

(Based on a true story from Saved by the Jacket)

Once upon a time in early spring, the Johnsons purchased their first boat. The mechanics in the shop adjusted the engine before they picked it up. Everyone was excited about the new boat, especially young Paul. They were eager to try it out.

Since the boat shop was near the water, Mr. Johnson launched the boat at the shop. Mrs. Johnson drove the car with the kids to the boat harbor, to meet her husband. At the harbor, Mrs. Johnson made sure all the kids wore their PFDs before getting in the boat. That's the family rule. Because it was cold out, the PFDs went over the children's heavy winter coats. Last, but not least, Mrs. Johnson put on her own PFD.

Mrs. Johnson and the kids headed for the dock. As soon as Paul saw his father, he ran as fast as he could down the ramp to the dock. The winds had blown water on the ramp and dock, making it very slippery. Paul was unable to stop himself, and he slid right into the icy water. He bobbed in the water in his bright orange PFD.

Fortunately, there was another boat at the dock, and its captain was able to hold Paul so he didn't float away in the current. Mrs. Johnson hurried down to the dock and picked Paul out of the freezing water. He was very cold, but felt better after changing out of his wet clothes, eating a bowl of hot soup, and drinking some hot chocolate. The boat ride had to wait for another day.

Name: _____

What Is a PFD?

P stands for PERSONAL. This means the PFD belongs to you and no one else can use it at the same time that you do.

F stands for FLOTATION. This means the PFD floats in the water and will keep you floating, too.

D stands for DEVICE. A device is a thing that helps you do something.

A PFD or personal flotation device is something that will keep you afloat on the water. Some types of PFDs are:

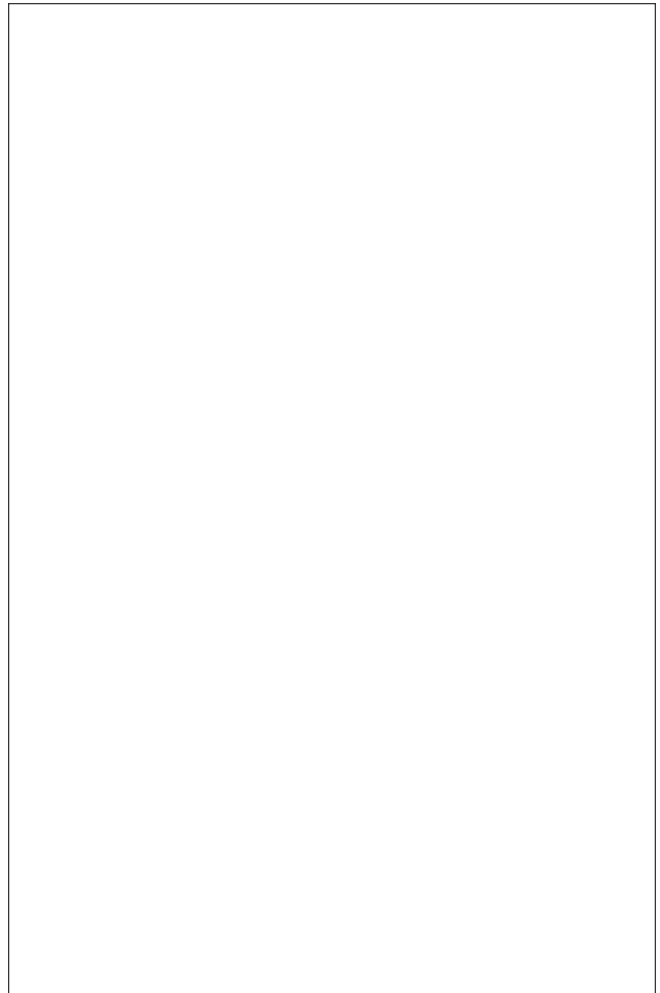
Life jackets

Immersion suits

Float coats

Life rings

Draw a picture of you wearing a PFD.

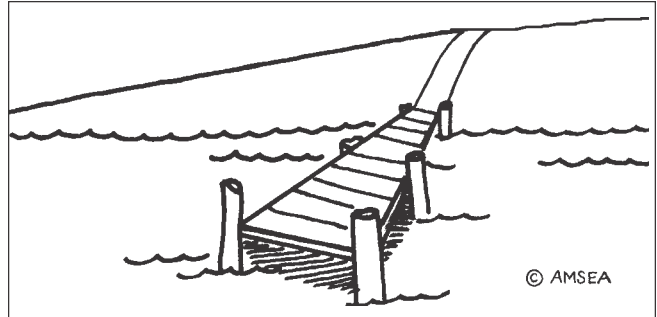


Name: _____

Wear That PFD!

A PFD can't help you unless you wear it. Draw a line to the picture of each place you should always wear your PFD. Color the pictures.

Fishing boat

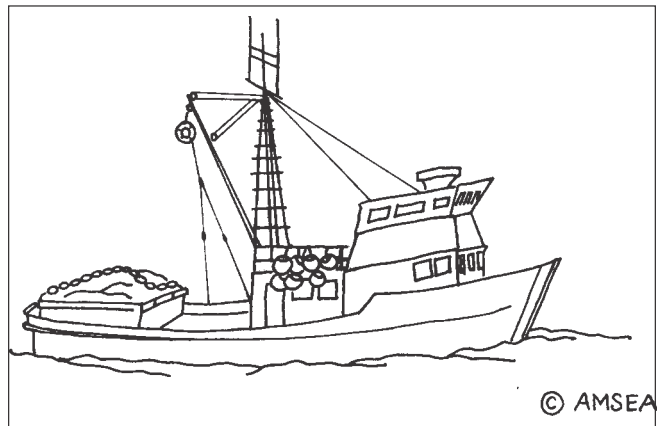


Dock



Small boat, skiff, or kayak

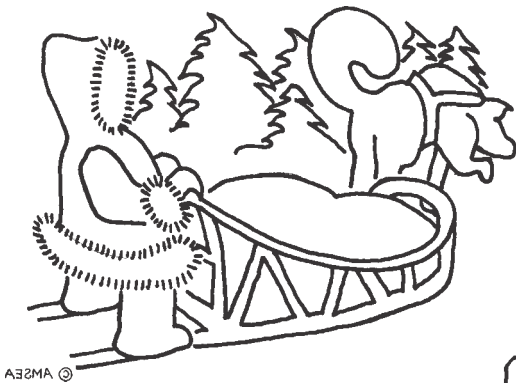
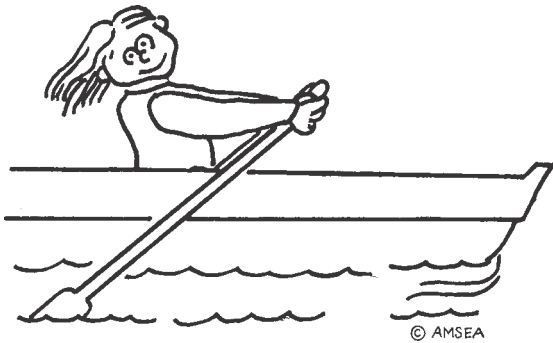
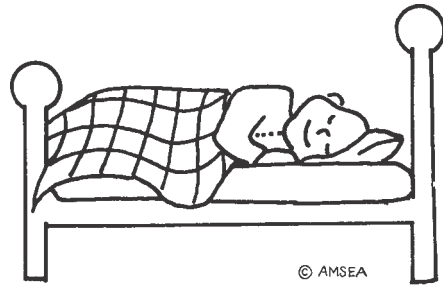
Near the water



Name: _____

Where Do You Wear a PFD?

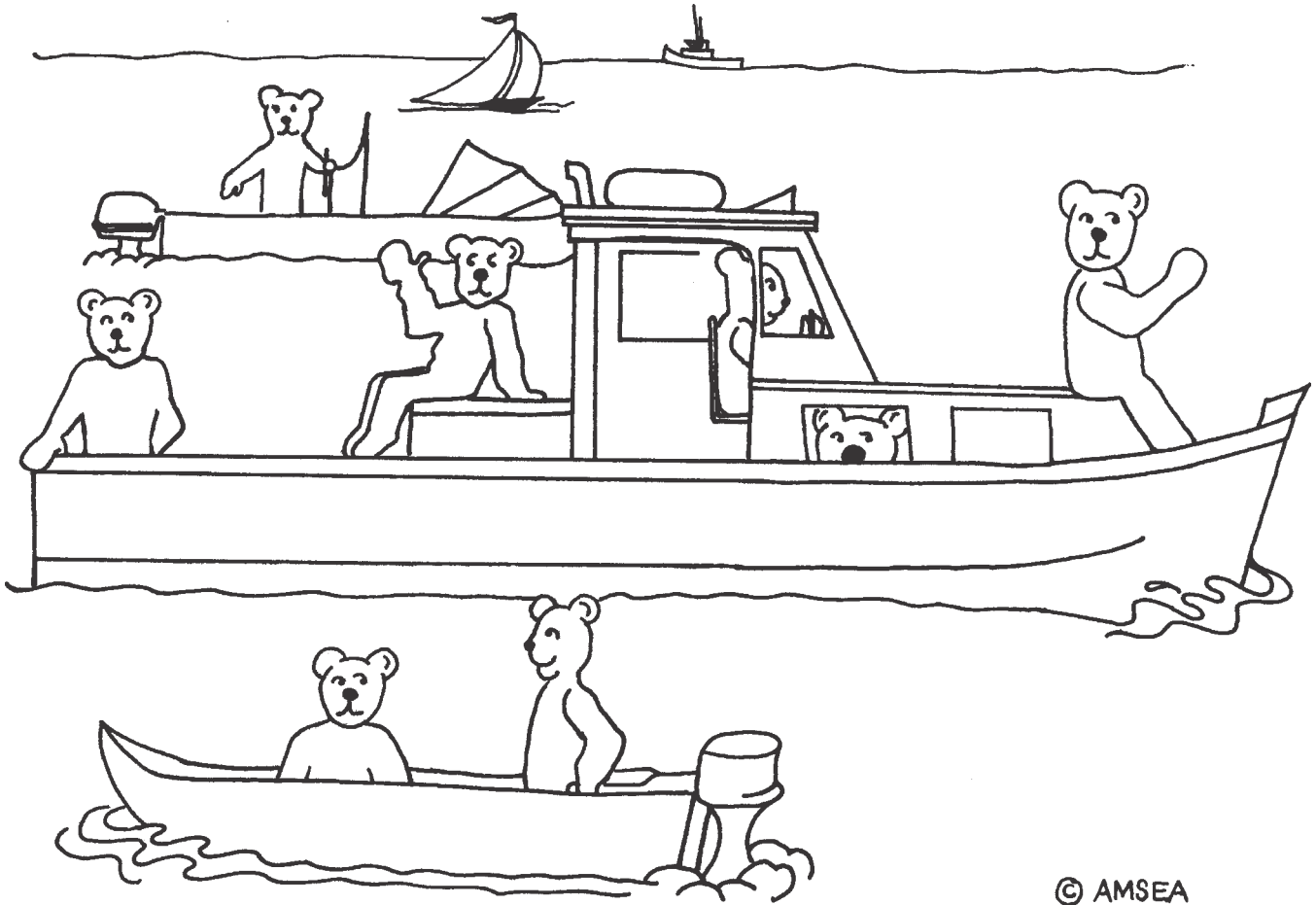
Color each picture below. Draw a circle around every person who should be wearing a PFD.



Name: _____

PFDs and Boating

Circle the bears that should be wearing PFDs.



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PFDs Help You Float

Time: 30 minutes

Use with Teacher Information

Overview


Song, experiments, and a worksheet introduce the concept of floating.

Objectives

After completing this activity, students should be able to:

1. List three things that float and three things that don't float.
2. Demonstrate how something that can't float by itself can be helped to float.
3. State that a PFD can help a person float.
4. List one reason why wearing a PFD can save your life.

Materials

- Song #1 **Mary Had a PFD**
- One per student, Student Handout #1 **PFDs Help You Float**
- Container large enough to float a small PFD
- Small PFD 

Station 1

- Large container with 3 to 5 inches of water in it
- Mixture of things that float and don't float, like a wooden block, plastic cap from a soft drink bottle, fork, pencil, rubber ball, rock, plastic cup, etc.

Station 2

- Unopened soft drink can, or unopened canned vegetable
- Several pieces of bubble wrap measuring 4 by 8 inches each
- Rubber bands
- Large container such as a pail or bucket with at least 6 inches of water in it

Procedure

Leave materials used in experiments in the water area of your room for several days before doing this activity.

1. Introduce the topic by singing **Mary Had a PFD**
2. Divide the class into two groups, and introduce each station.

Station 1

- Have students place items in the water to discover whether or not they float.
- Instruct students to push the items under water to see what happens to them.

Station 2

- Have students place the unopened can in the water to discover whether or not it floats.

- Instruct students to wrap the can in bubble wrap and secure it with rubber bands.
 - Have students test the wrapped can for changes in buoyancy.
 - Tell students to add more layers of bubble wrap and observe changes in buoyancy.
3. Have students rotate between stations.
 4. Summarize the class findings: that some things float and some things don't; that some things float higher than others; and that some things that cannot float by themselves can be helped to float. Ask students if people float all by themselves.
 5. Using the PFD and large container, demonstrate that a PFD floats high in the water. Explain that PFDs help people float.

Emphasize that this is one reason PFDs can save lives.

6. Distribute and have students complete Student Handout #1.

Extension

Have students test the buoyancy of different things in the classroom and determine what makes them float.

This activity addresses Alaska Content Standards:

Language Arts A-1 Effective writing

through experimentation, C-5 Collaboration, C-6 Scientific discovery, D-1, 3 Practical applications of scientific knowledge

Science A-4 Observable natural events, A-5 Forces of nature, B-1 Scientific processes, B-2 Tools of scientific investigation, C-2 Knowledge

Arts A-1 Participate in the arts

Mary Had a PFD

Sung to the tune of Mary Had a Little Lamb

Mary had a PFD, PFD, PFD,

Mary had a PFD, she wore it all the time.

She buckled, snapped, and zipped it up, zipped it up, zipped it up,

She buckled, snapped, and zipped it up, so it would fit just fine.

Thankfully she had it on, had it on, had it on,

Thankfully she had it on, when she fell into the drink.

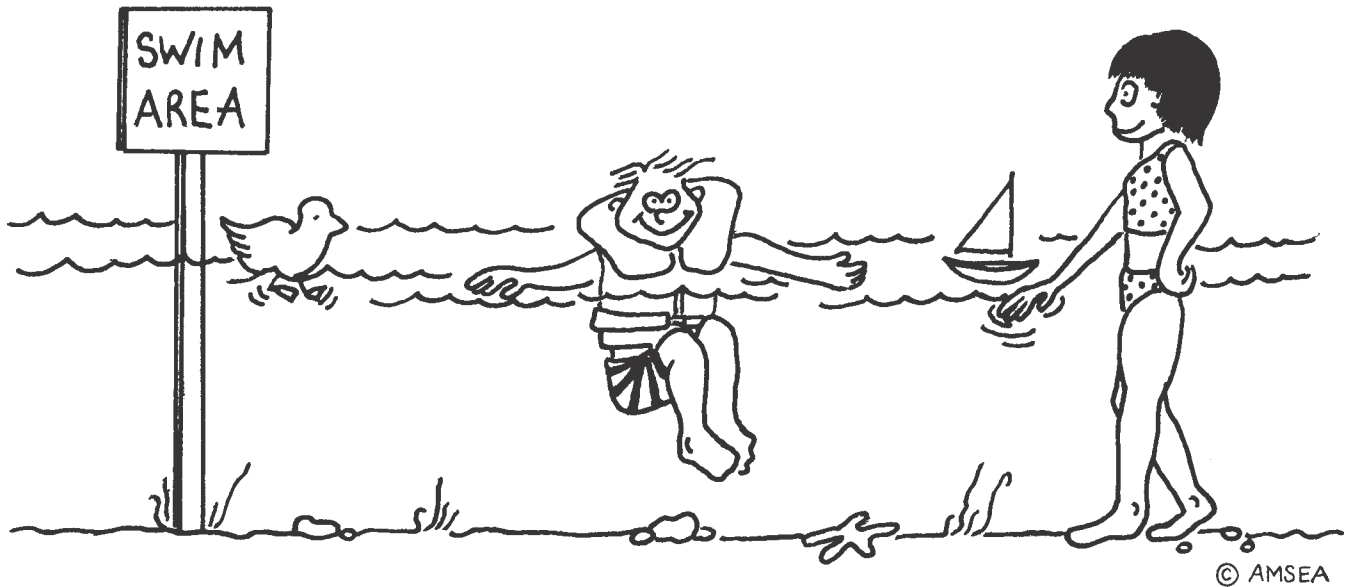
She floated like she learned in school, learned in school, learned in school,

She floated like she learned in school, stayed warm, and didn't sink.

Name: _____

PFDs Help You Float

Your PFD will float in the water and hold you up so you float too. Circle the things in the picture that are floating on the water. Put an "X" on the things that are not floating.



Name three things that will float in water:

Name three things that will not float in water:

Teddy Bear PFDs

Time: 60-90 minutes

Use with Teacher Information

Overview

Art project to make toy PFDs for stuffed animals or dolls.

Objective

After completing this activity, students should be able to explain why it is important to wear a PFD when near the water.

Materials

- Story #1 **Girl Learns That PFDs Float People**
- One per student, set of PFD pattern pieces cut from felt (make from Template #1)
- ½ yard per student, 1-inch wide ribbon
- Styrofoam peanuts or other stuffing material that floats when wet
- Glue gun or sewing machine
- One per student, student's own stuffed animals or dolls

Procedure

Before Class

1. Make PFD pattern pieces.
2. Partially assemble each PFD, if required, for your students.
3. Ask students to bring a stuffed animal or doll to school.

During Class

1. Read Story #1 to the class.
2. Provide students with instruction necessary to make or finish making PFDs.
3. Have students dress their stuffed animal or doll in its new PFD.

This activity addresses Alaska Content Standards:

Language Arts B-1 Meaning from written, oral, and visual text, C-1 Developing a project, C-2 Project organization, C-4 Project quality

Science A-4 Observable natural events, A-5 Forces of nature, A-15 Using local knowledge, B-1 Scientific processes, B-2 Tools of scientific investigation, C-2 Knowledge through experimentation

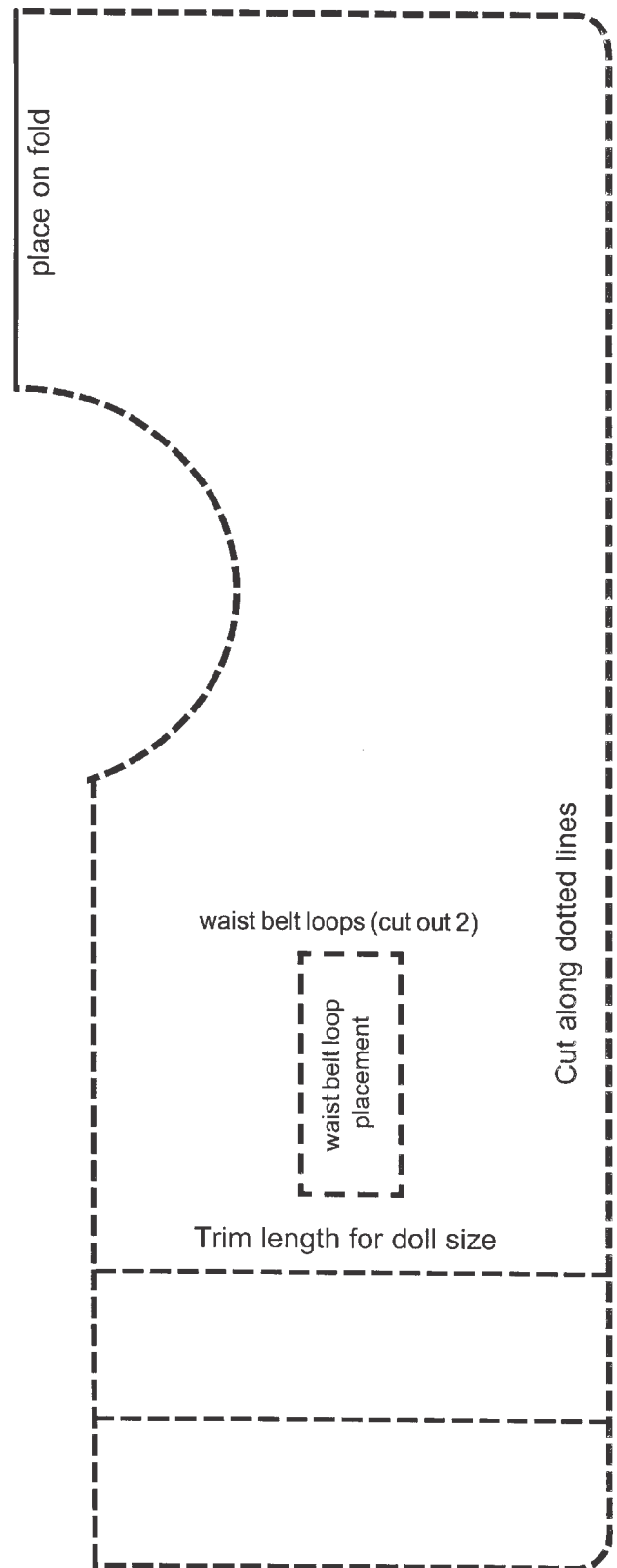
Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices, B-1 Risk and consequences

Arts A-1 Participate in the arts, A-3 Materials, tools, techniques, and processes

Library/Information Literacy A-4 Search for information and resources, B-3 Access information

PFD Patterns

1. Cut out paper half-pattern.
2. Position on felt, with fabric fold aligned with pattern's neck centerline.
3. Cut two felt pattern pieces for each PFD.
4. Make two belt loop pieces out of felt, put a spot of glue on each end of belt loop pieces, and secure loops to front of PFD.
5. Run a bead of glue along top seam of one piece; align both pieces along top seam; press together (or sew it.)
6. Repeat for side and neck seams.
7. After glue has set, stuff vest through openings in bottom.
8. Glue or sew bottom seams.
9. Thread 18 inches length of 1-inch wide ribbon through both belt loops.
10. Try it on the stuffed animal!



Girl Learns That PFDs Float People

Based on a true story from Saved by the Jacket

Once upon a time a little girl and her teddy bear walked along a beach. Her mother and Grandmother watched them from a distance while eating blueberries they had picked.

The little girl wore her PFD, as she always did when she played near the water, but her teddy bear had none. There were so many interesting shells in the sand! She picked up a few, showed them to her bear, and placed them in her pocket.

As she stood up to move on, Mother and Grandmother called frantically to her. At the same moment, she saw a huge wave curling toward her. Before she had time to move, it crashed and swept her first up the beach and then down into the cold ocean.

She floated, but her bear was nowhere to be seen. Floating was fun, but without her teddy bear, she was anxious.

Mother and Grandmother dashed into the waves and scooped her out of the water before she drifted farther from shore or got too cold.

Immediately she asked about her teddy bear. Everyone looked and looked. Bears are similar in color to beach sand and they couldn't see him floating.

The little girl was ready to cry. She was only wet from her shoulders to her toes and the day was warm, so the adults continued to look for her bear. They fed her blueberries and held her hand.

Just as they were beginning to think their search was in vain, Grandmother spotted something on the beach. There was teddy bear with his head and legs buried in the sand!

The little girl was so happy! Teddy looked and felt terrible, but he was loved back to health. Grandmother told the little girl, "If you hadn't been wearing your PFD, *you* would have looked like your teddy bear when we found you."

The little girl decided that when she took her teddy bear onto the beach again he would wear a PFD, too!

Kinds of PFDs

Time: 50-60 minutes

Use with Teacher Information

Overview

Worksheets and paper dolls introduce different kinds of PFDs.

Objective

After completing this activity, students should be able to compare five kinds of PFDs for warmth.

Materials

- One per student, Student Handouts #1 **Saved by a PFD**, #2 **Amazing PFDs**, and #3 **Many Kinds of PFDs**
- One each, Type I, Type II, Type III, Type IV, and Type V PFD **AMSEA**
- One per student, **Paper Dolls** (make from Template #1)
- One set per student, **PFDs for Paper Dolls** (make from Template #2)

Procedure

1. Ask students to tell a story about someone needing a PFD.
2. Distribute and have students complete Student Handout #1 and/or #2.
3. Have students count the number of different kinds of PFDs shown on Student Handout #1 or #2. This could be a whole group activity.
4. Hold up each type of PFD and explain where it might be worn. Reinforce that a PFD that covers many high heat loss areas will keep you the warmest.
5. Distribute and have students complete Student Handout #3.
6. Distribute one paper doll and one set of **PFDs for Paper Dolls** to each student. Have students dress the paper dolls in:
 - Their favorite PFD and hold it up.
 - The warmest PFD and hold it up.
 - The PFD they would want to wear on a summer day.
 - The PFD that looks like a coat.
7. Discuss their choices. Emphasize the importance of wearing a PFD.
8. Save students' work for Activity #13.

This activity addresses Alaska Content Standards:

Language Arts A-1 Effective writing, A-3 Demonstrate speaking skills, A-4 Writing and speaking with purpose, A-6 Using visual communication, B-1 Meaning from written, oral, and visual text

Mathematics A-1 Numeration

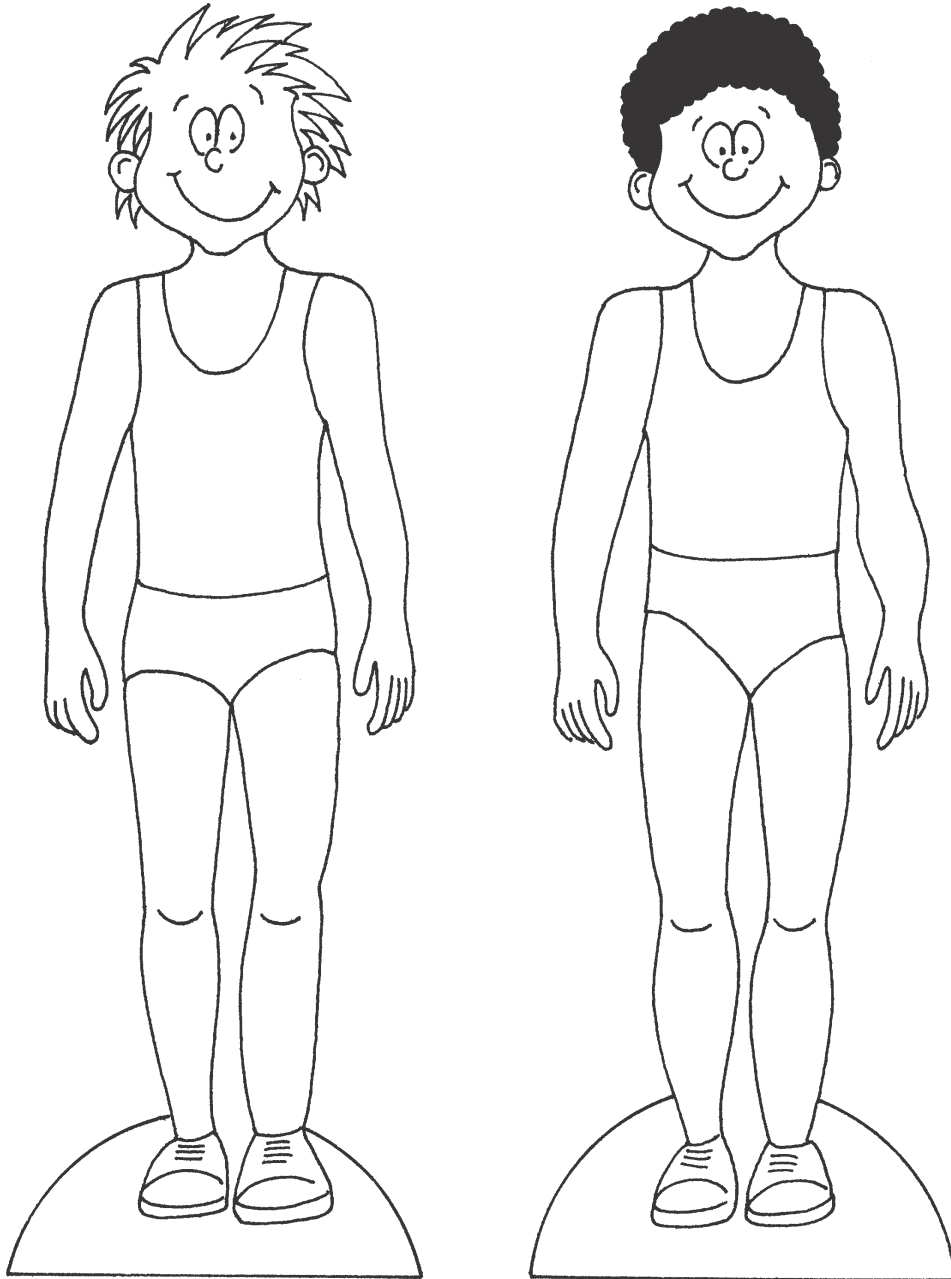
Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury

prevention, A-6 Making informed choices, B-2 Effective communication, D-1 Responsible decisions

Arts A-1 Participate in the arts

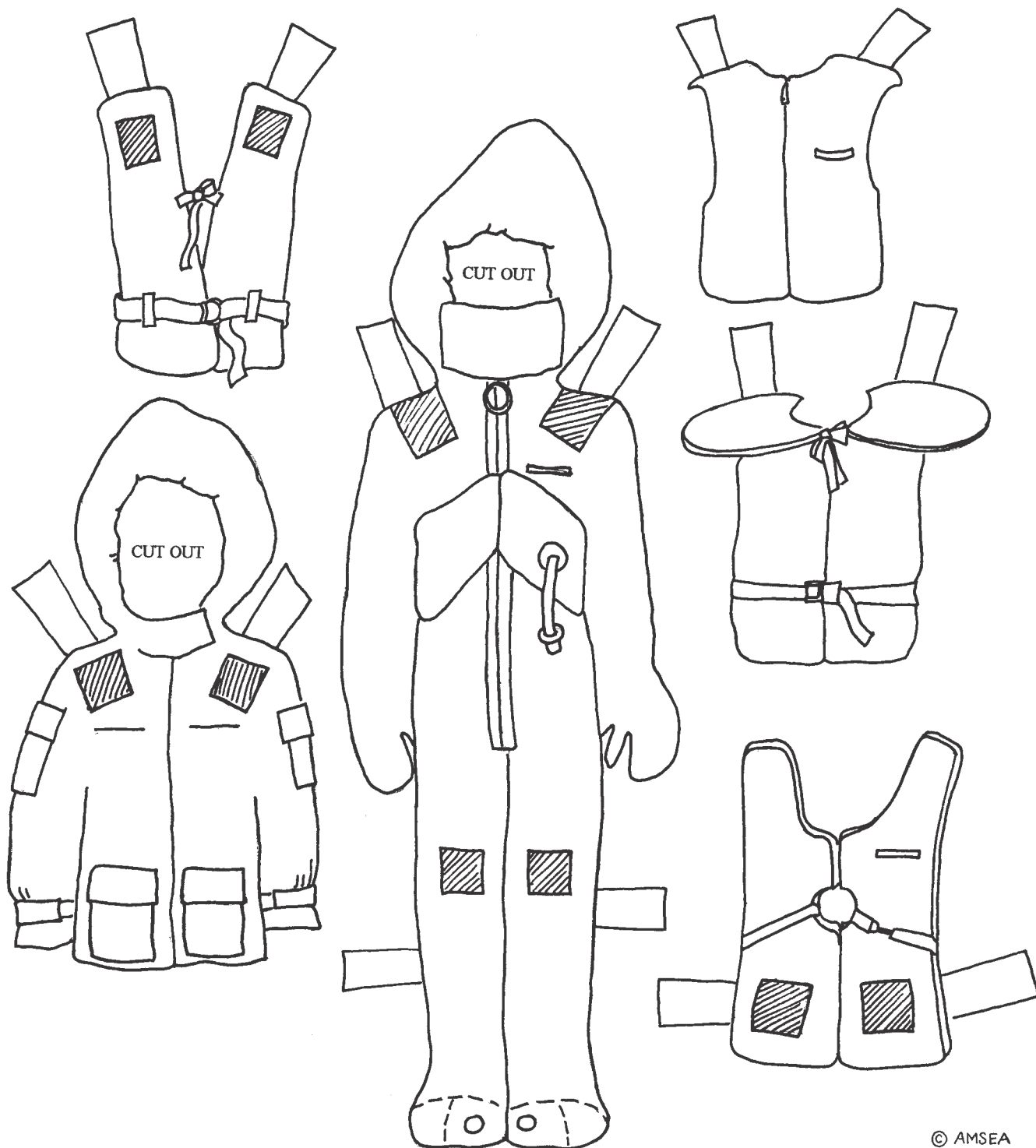
Library/Information Literacy A-4 Search for information and resources

Paper Dolls



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PFDs for Paper Dolls



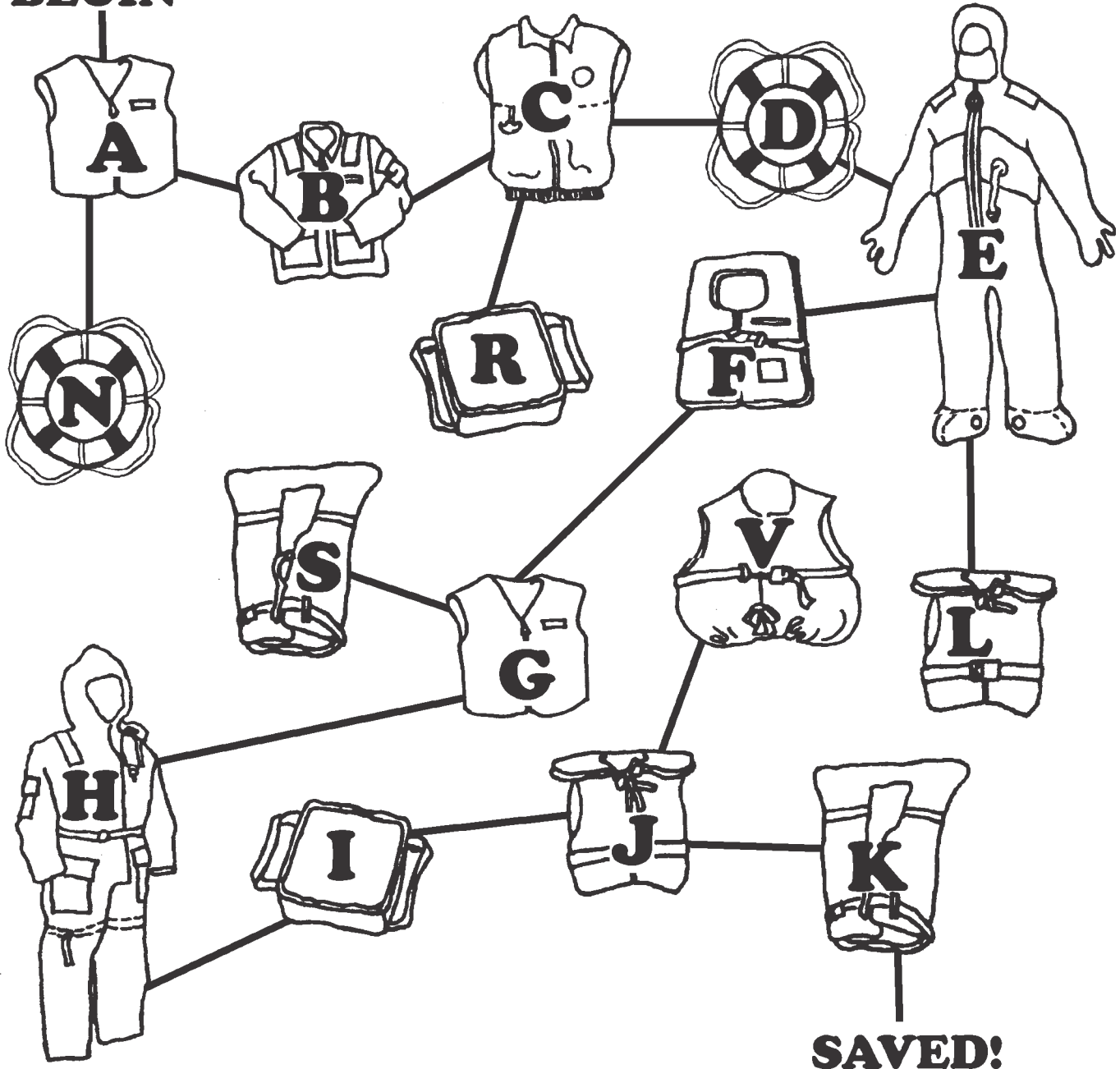
© AMSEA

Name: _____

Saved by a PFD

Find a path through the PFDs by following the alphabet.

BEGIN

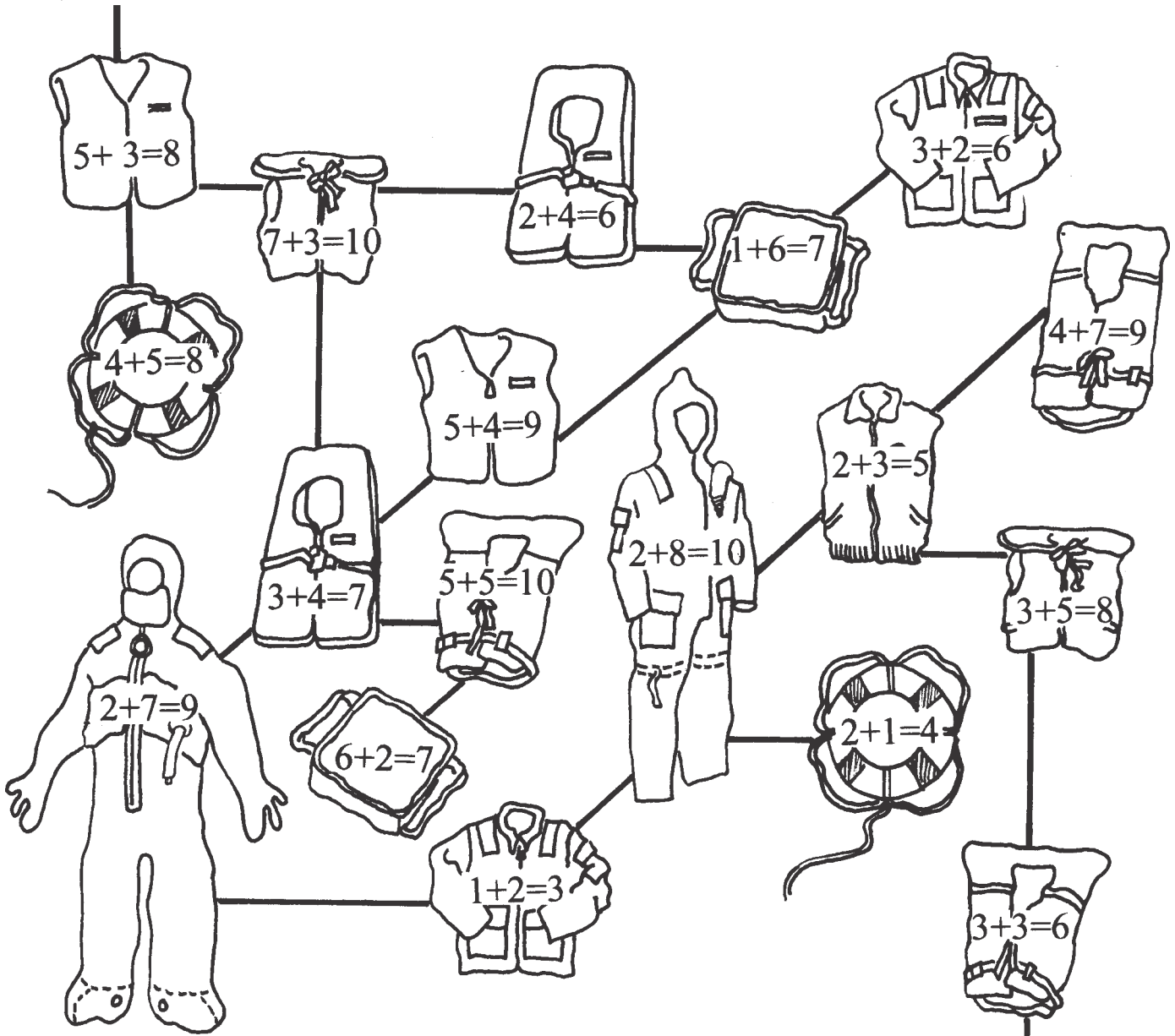


Name: _____

Amazing PFDs

Find a path through the PFDs by looking at each of the math problems. If the answer given is right, brightly color a path that way.

Begin here:



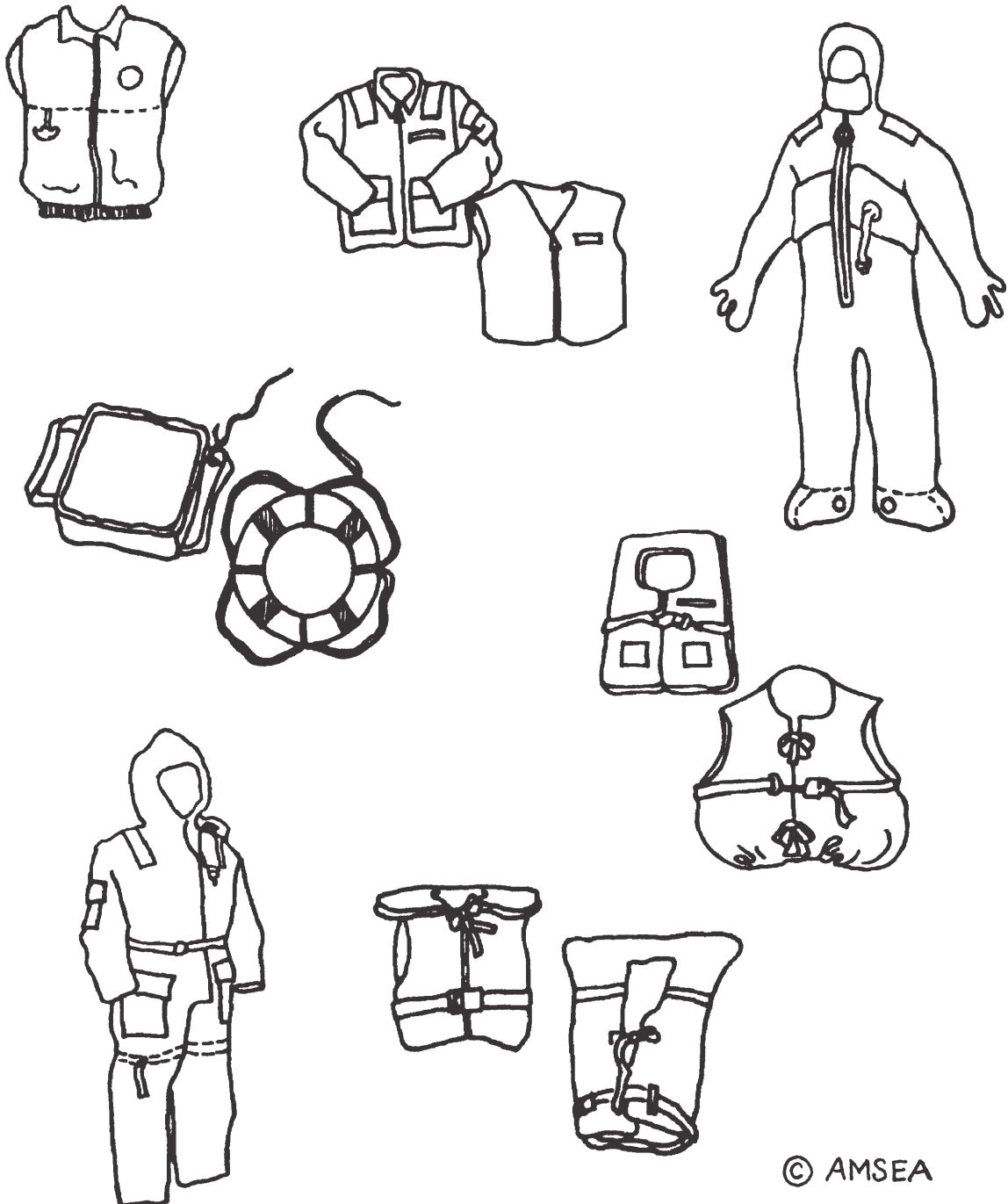
SAVED!

© AMSEA

Name: _____

Many Kinds of PFDs

Different types of PFDs come in different colors. Color these PFDs in bright colors. Circle the one most like your own PFD.



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Comparing PFDs

Time: 60 minutes

Use with Teacher Information

Overview

Students sort PFDs in various ways.

Objectives

After completing this activity, students should be able to:

1. Compare three different PFDs for warmth, comfort, size, and color.
2. Distinguish PFDs from beach toys.
3. Select PFDs that are comfortable for them.

Materials

- One set per class, **signs for boxes** (make from Template #1)
- One set per class, pictures of PFDs (make from Template #2)
- Two cardboard or plastic boxes to hold PFDs, clothes, and beach toys **or** six boxes to hold PFDs, clothes, and beach toys, if you sort all categories at once
- Collection of beach toys, PFDs **AMSEA**, snow suit, and other clothes large enough so each child can put something on
- Story #1 **That Bright PFD**

Procedure

Before Class

1. Leave PFDs in the dress-up area of your classroom for several days before you do this activity. Emphasize treating them with respect because they can save lives.
2. Prepare box signs and pictures of PFDs and attach to cardboard boxes.
3. Spread PFDs and other items around an open area in your room.

During Class

1. Explain to students that they will find a PFD, beach toy, or piece of clothing, and put it in the appropriate box.
2. For younger children use two boxes and sort the whole pile in steps by categories: PFD—Not a PFD, Very Warm PFD—Not Warm PFD, Comfortable PFD—Not Comfortable PFD. Change signs between categories.

3. From each box, pull an example and review:
 - Which items are PFDs and which are not.
 - Which are warmest and when it is appropriate to wear them.
 - Which are not as warm and when it is appropriate to wear them.
4. Read Story #1 to the class.
5. Direct students to sort and count the PFDs by color. Discuss which colors are easiest to see if someone is looking for them.
6. Instruct students to line up PFDs by size.
7. Have students try on various PFDs.
8. Discuss that comfort is a personal issue, but they are more likely to wear a PFD that is comfortable. Ask them which PFDs are most comfortable for them.

This activity addresses Alaska Content Standards:

Language Arts A-4 Writing and speaking with purpose, B-1 Meaning from written, oral, and visual text

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention

Mathematics A-1 Numeration

Six Signs for Boxes

PFD

NOT A PFD

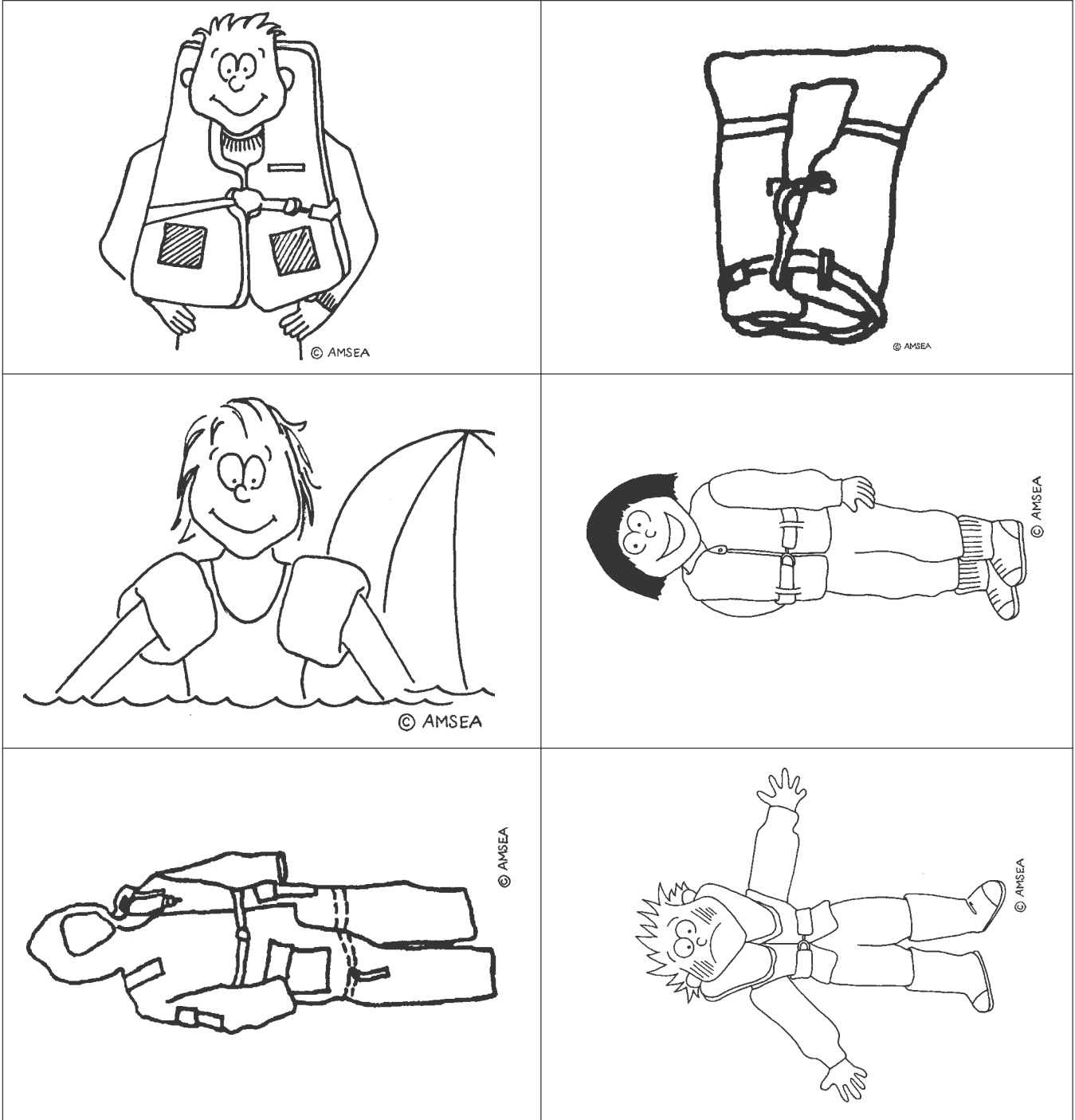
VERY WARM PFD

NOT WARM PFD

COMFORTABLE PFD

NOT COMFORTABLE PFD

Six Pictures of PFDs



That Bright PFD

Based on a true story from Saved by the Jacket

Once upon a time a young boy named Wally was on a boat trip with his parents. The family loved to take their boat to small islands near their home for picnics, to pick berries, fish, or just enjoy the summer sun.

At school Wally had learned how important it was to wear a PFD whenever he was near the water, so he *always* wore his. He had gone to the store with his dad to try some on before they bought one for him. The PFD he picked was bright yellow because yellow was his favorite color and he remembered what his teacher had said about bright colors being easier to see if you needed to be rescued.

Late one afternoon Wally and his dad were coming back to the island from a fishing expedition. Close to shore the boat hit a submerged tree. Wally flew out of the boat and into the water. His dad was caught under the boat, and very worried that Wally might be in trouble. He struggled to get out from under the overturned boat.

Fortunately, Wally's mom saw the boat flip over and immediately caught sight of Wally's bright

yellow PFD bobbing not far from shore. She ran down the beach, grabbed a branch lying there and reached to Wally. Wally, a bit dazed but glad to be floating, grabbed the branch. His mom pulled him to shore and helped him out of the water.

Meanwhile, Wally's dad had gotten himself from under the boat. His PFD floated him to the surface where he could see the bright yellow PFD that was on his son. Feeling relieved that Wally was almost out of the water, the dad climbed up on the boat.

After rescuing her son, Wally's mom moved quickly down the beach near her husband on the boat. After much discussion the two managed to get the boat to shore and turned it over. The family rowed back to the mainland with the oars that floated up.

The whole family was cold by the time they arrived home, but very glad they had been wearing their PFDs. And, Wally was especially happy that his favorite color had helped him out.

Too Big, Too Small, or Just Right?

Time: 15 minutes

Use with Teacher Information

Overview

Worksheets and cutouts explore how PFDs fit.

Objective

After completing this activity, students should be able to select a PFD that fits.

Materials

- One per student, Student Handouts #1 **Too Small, Too Big** and #2 **Just the Right Fit**
- Crayons
- Scissors
- Glue

Procedure

1. Review what a PFD is and does.
2. Explain the importance of wearing a PFD that fits properly.
3. Distribute and have students complete Student Handouts #1 and #2.
4. Save students' work for Activity #13.

Extension

Leave a selection of PFDs in the dress-up corner of your room for a week or two. Emphasize that students need to be gentle with them because they can help save lives.

This activity addresses Alaska Content Standards:

Language Arts A-6 Using visual communication, B-1 Meaning from written, oral, and visual text

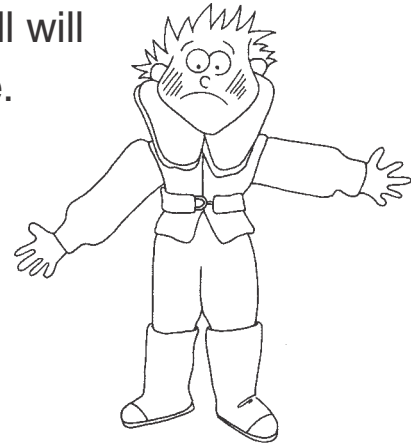
Arts A-1 Participate in the arts, A-3 Materials, tools, techniques, and processes

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices

Name: _____

Too Small, Too Big

A PFD that is too small will be very uncomfortable.

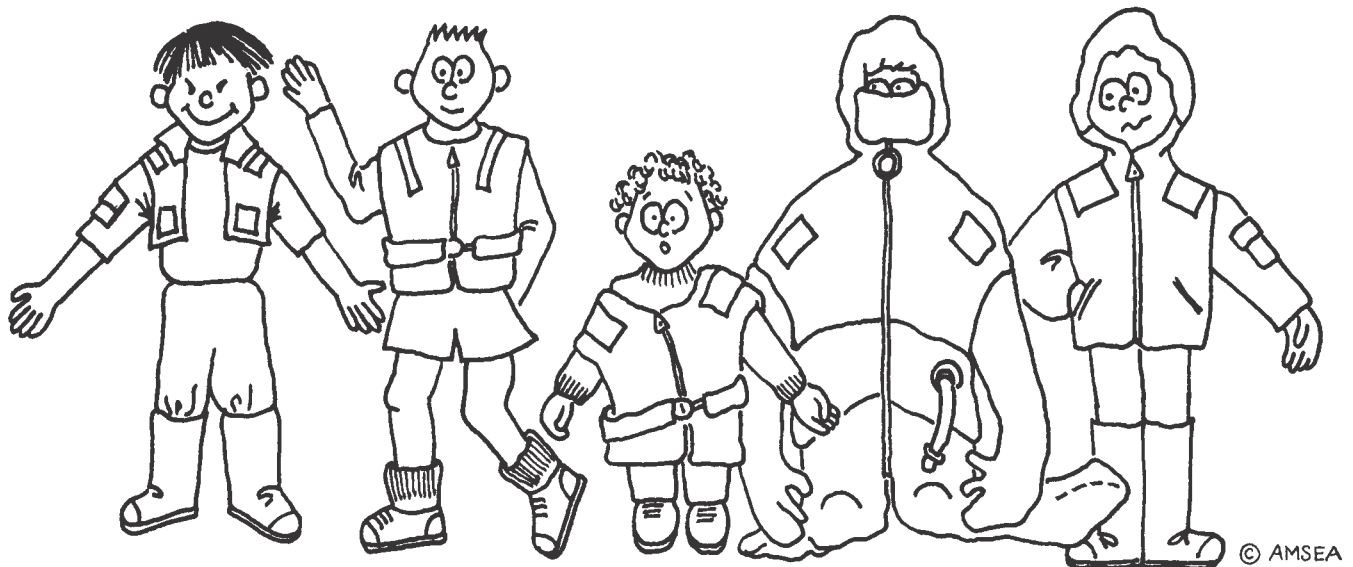


© AMSEA



© AMSEA

A PFD that is too big may fall off and will not keep you warm.

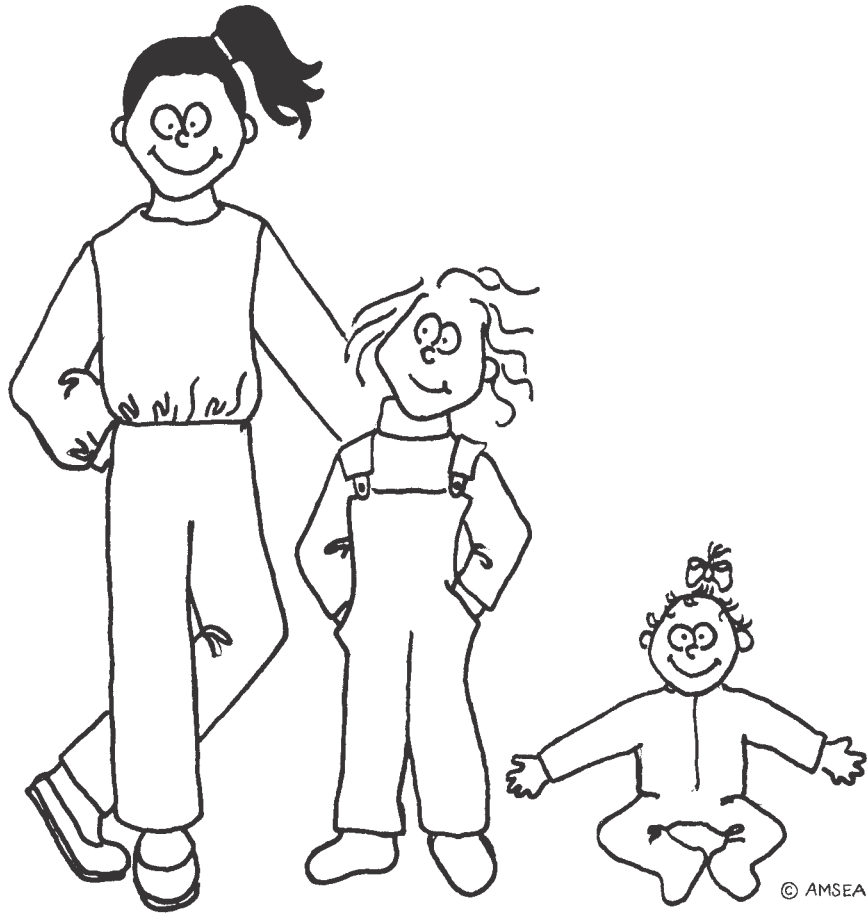


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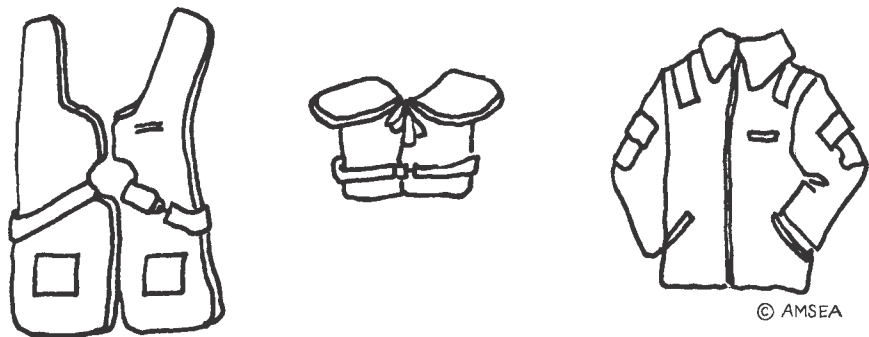
Circle the boys who are wearing PFDs that are just the right size for them.

Name: _____

Just the Right Fit



Color these PFDs with bright colors and cut them out. Give each of the girls above a PFD that is the right size for her. Glue them on.



PFD Game

Time: 30 minutes

Use with Teacher Information

Overview

Students match cards with PFDs and try them on.


Objectives

After completing this activity, students should be able to:

1. Explain what a PFD is.
2. Explain what a PFD does.

3. Recognize five different kinds of PFDs.
4. Compare three different PFDs for size.

Materials

- One per student, **PFD card** (make from Template #1)
- One set per student, **PFD Size cards** (make from Template #2)
- One per student playing the game, PFD 

Procedure

Before Class

1. Leave PFDs in the dress-up area of your classroom for several days before this activity. Emphasize treating them with respect because they can save lives.
2. Check that each PFD has a card that matches it.
3. Arrange PFDs and size cards for easy access.

During Class

1. Review what PFDs are and why they should be worn.
2. Distribute one PFD card to each student and explain that they should find the **best** match for their card.
3. Have students match their cards with the appropriate PFDs and put the PFDs on correctly.

4. Have each student pick the size card that describes the fit of the PFD he/she is wearing, and hold it up.
5. Play a few rounds of the game, allowing students to try on several different PFDs.

Extensions

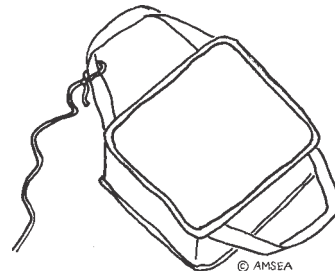
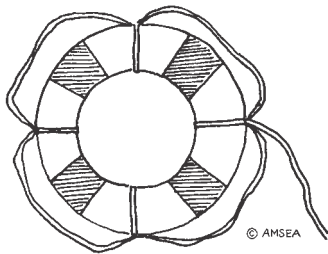
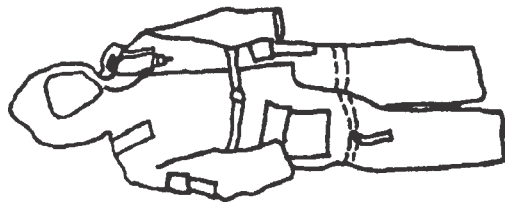
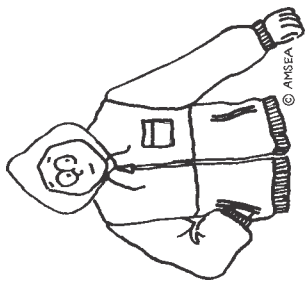
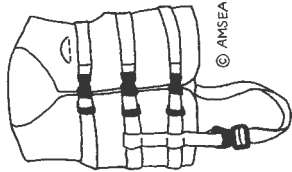
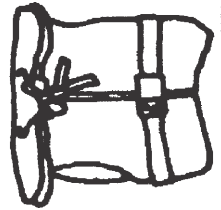
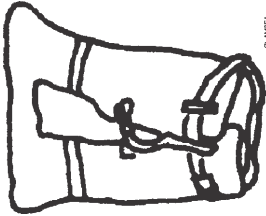
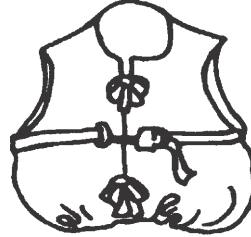
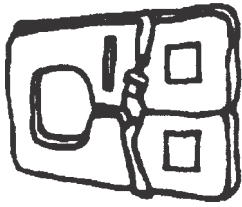
1. Review the high heat loss areas and why it is important to protect them (see Preparation for Outdoor Activities, Unit 1).
2. Have students group PFDs according to the number of high heat loss areas the PFD covers.
3. Have students group PFDs by color.

This activity addresses Alaska Content Standards:

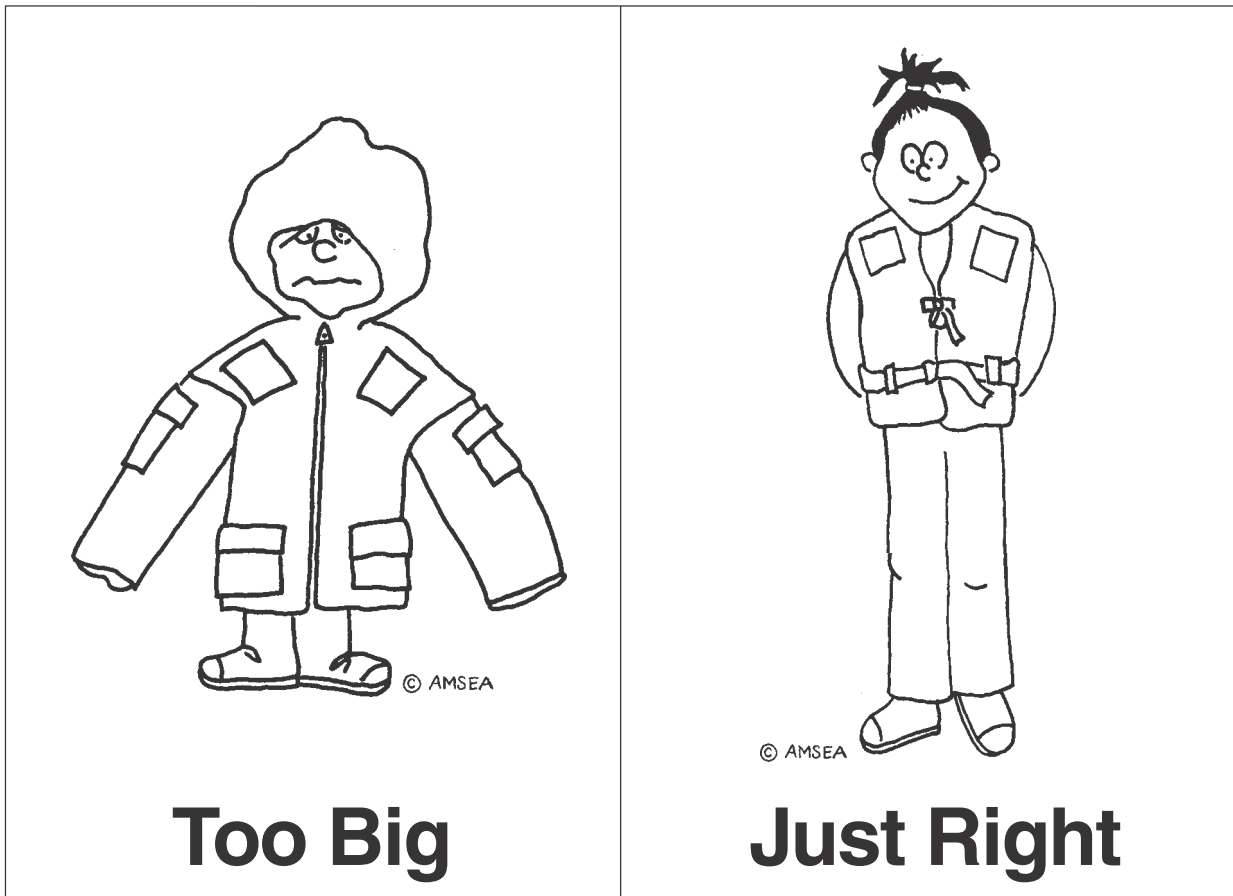
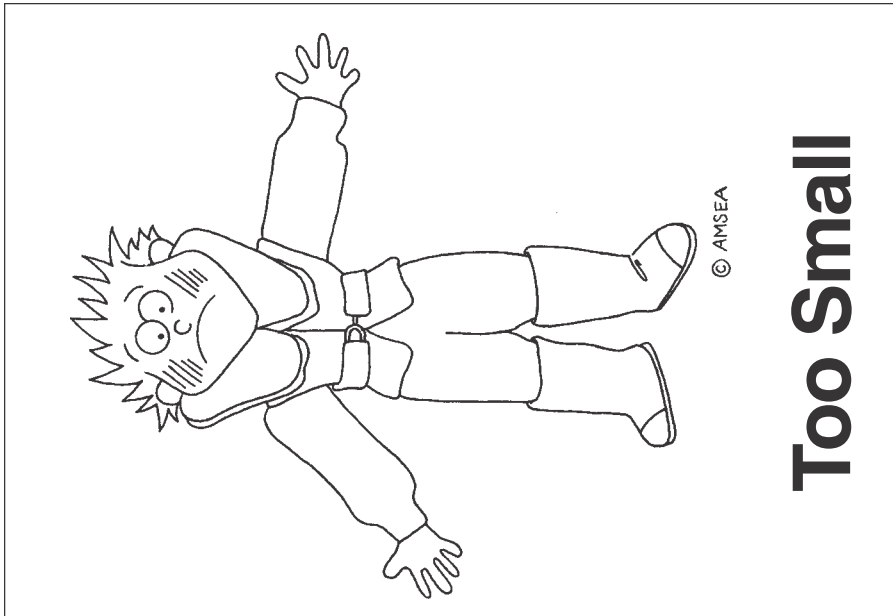
Language Arts A-4 Writing and speaking with purpose, B-1 Meaning from written, oral, and visual text

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices, B-1 Risk and consequences

PFD Cards



PFD Size Cards



Donning and Using PFDs

Time: 40-60 minutes

Use with Teacher Information

Overview

Worksheets and PFDs help students learn how to don and use PFDs.

Objectives

After completing this activity, students should be able to:

1. Demonstrate proper donning of a PFD.
2. Demonstrate the HELP while wearing a PFD.

3. Demonstrate the Huddle position while wearing a PFD.
4. Demonstrate the elbow lock while wearing a PFD.
5. Describe one safe way to enter the water while wearing a PFD.

Materials

- One per student, Student Handouts #1 **Putting on Your PFD** and #2 **HELP, Huddle Position, and Elbow Lock**
- One for every three students, wearable PFD (not immersion suits) **AMSEA**
- Song #1 **What Do We Do When We Fall in the Water?**

Procedure

Before Class

1. Leave PFDs in the dress-up area of your classroom for several days before you do this activity. Emphasize treating them with respect because they can save lives.

During Class

1. This activity can be done concurrently with Activity #9, dividing the class into groups and rotating groups through activity stations.
2. Review what a PFD is and why you need to wear one.
3. Review the high heat loss areas.
4. Distribute and have students complete Student Handout #1.
5. Break the class into groups of three and distribute one or two PFDs to each group.
6. Have students take turns within their groups trying on PFD(s). Those not donning a PFD at the time can help the one(s)

donning and check that the PFD is on correctly.

7. Have students switch PFDs until each group has tried on each type of PFD.
8. Distribute Student Handout #2. Demonstrate and have students practice positions while singing **What Do We Do When We Fall in the Water?** Emphasize how these positions help protect high heat loss areas plus how the elbow lock helps keep people together and makes them a bigger target.
9. Divide the class into groups of three, distribute PFDs to students, and have them practice the positions while wearing PFDs.
10. Have students practice “entering the water” safely.
11. Save students’ handouts for Activity #13.
12. See Cold Water Survival Skills, Unit 3 in this book, for a pool activity with PFDs.

This activity addresses Alaska Content Standards:

Language Arts A-6 Using visual communication, B-1 Meaning from written, oral, and visual text

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices

Name: _____

Putting on Your PFD

Your PFD will not be able to help you float unless you wear it properly.

Every time you are near the water, put your PFD on. Zip the zipper. Snap all the snaps. Buckle all the straps. Pull all the straps snug so your PFD fits well.

If your PFD has an air bladder, inflate it.



Circle the boys and girls who put on their PFDs correctly.

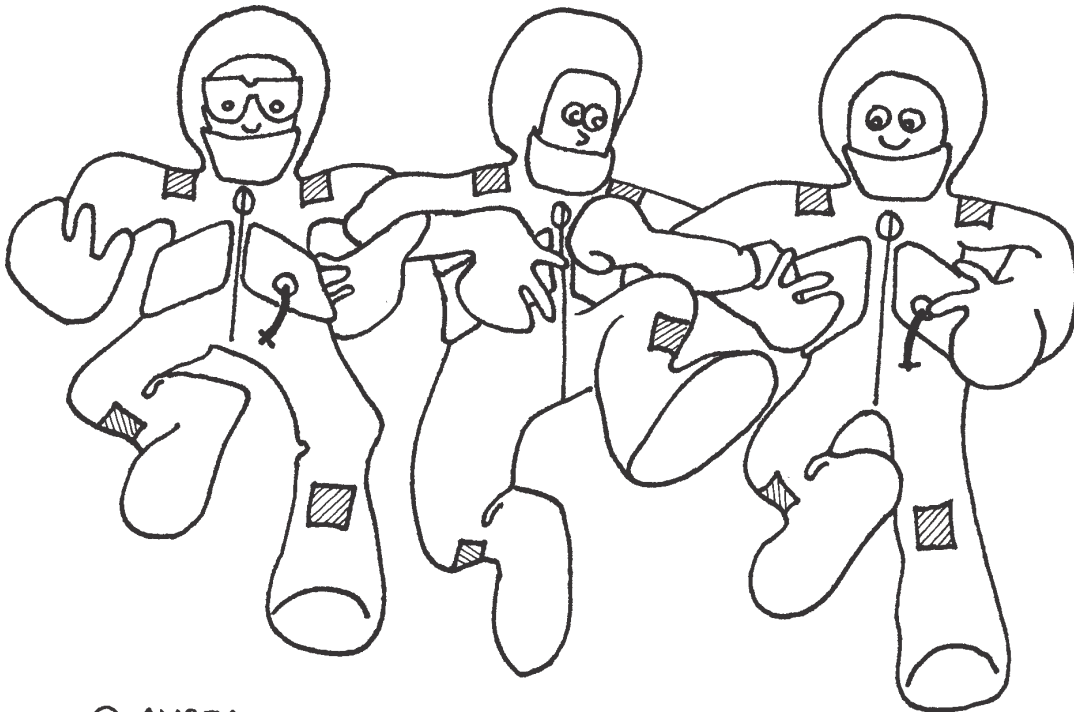
Name: _____

HELP, Huddle Position, and Elbow Lock



Heat Escape Lessening Position

Huddle Position



Elbow Lock

What Do We Do When We Fall in the Water?

*Sung to the tune of Here We Go 'Round the
Mulberry Bush*

What do we do when we fall in the
water?

Fall in the water?

Fall in the water?

What do we do when we fall in the
water

All by ourselves?

We go into the HELP position,
HELP position,
HELP position,

We go into the HELP position
All by ourselves.

What do we do when we fall in the
water?

Fall in the water?

Fall in the water?

What do we do when we fall in the
water

With other people near?

We go into the Huddle position,
Huddle position,
Huddle position,

We go into the Huddle position,
With everyone who's there.

What do we do when we fall in the
water?

Fall in the water?
Fall in the water?

What do we do when we fall in the
water
With other people, too?

We lock our elbows together,
Elbows together,
Elbows together,

We lock our elbows together,
With everyone who's there.

Donning and Using Immersion Suits

Time: 40-60 minutes

Use with Teacher Information

Overview

Worksheets and practice help students learn to don and use an immersion suit.

Objectives

After completing this activity, students should be able to:

1. Demonstrate proper donning of an immersion suit.

2. Demonstrate the elbow lock while wearing an immersion suit.
3. Demonstrate the chain swim while wearing an immersion suit.
4. Describe one safe way to enter the water while wearing an immersion suit.

Materials

- One per student, Student Handouts #1 **How to Put on an Immersion Suit** and #2 **Immersion Suit Elbow Lock and Chain Swim**
- One for every six students, appropriately sized immersion suits **AMSEA**
- Immersion suit for the teacher **AMSEA**

Procedure

Before Class

1. Leave immersion suits in the dress-up area of your classroom for several days before you do this activity. Emphasize treating them with respect because they can save lives.

During Class

1. Review what an immersion suit is and when students might need to wear one.
2. Distribute and discuss Student Handout #1.
3. Demonstrate the proper procedure for donning an immersion suit and entering the water.
4. Emphasize care when using suits. They are expensive pieces of equipment.
5. Distribute and discuss Student Handout #2. Have students help you demonstrate the chain swim before they get their suits on.

6. Break the class into groups of three and distribute one suit per group.
7. Have students take turns donning the suit while others in the group help.
8. Have students in the suits practice the elbow lock, chain swim (while lying on the floor), and entering “the water” safely. Rotate until all have demonstrated the skills.
9. Save students’ handouts for Activity #13.
10. See Cold Water Survival Skills, Unit 3 in this book, for a pool activity with immersion suits.

Extension

Time teams while they are donning immersion suits. Have one student don the suit while others help. The team with the quickest time wins.

This activity addresses Alaska Content Standards:

Language Arts A-6 Using visual communication, B-1 Meaning from written, oral, and visual text

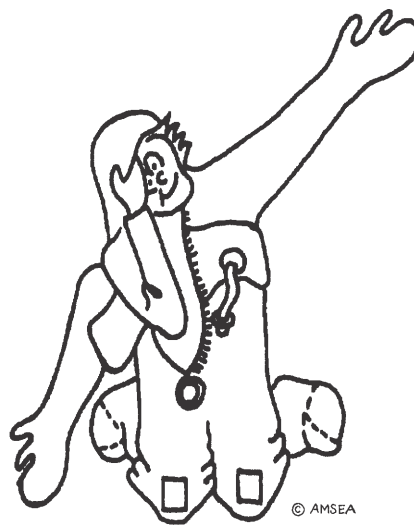
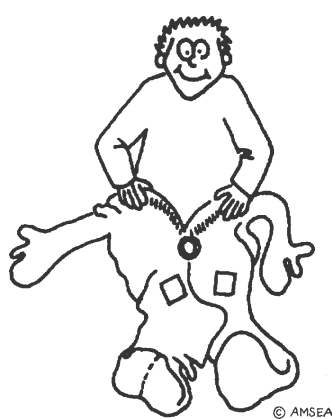
Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices

Name: _____

How to Put on an Immersion Suit

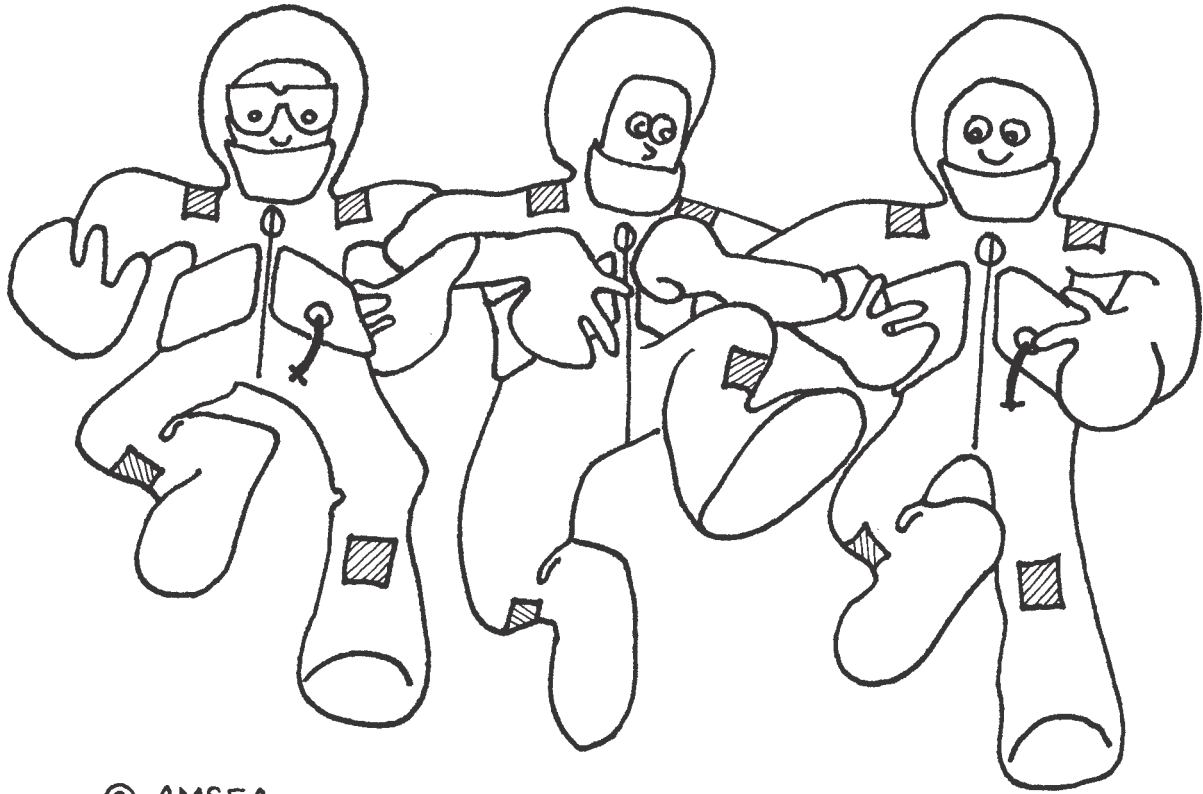
1. Lay suit face-up flat on floor or deck.
2. Sit down. Leave shoes or boots on. Put plastic bags over your shoes or boots.
3. Slide your feet and legs into the suit. Wiggle down until your feet are as far down as they can go.
4. Lie down or kneel. If you are right handed, put your left arm into the suit. If you are left handed, put your right arm into the suit.
5. Pull the hood up over your head with your other (free) hand.
6. Put your other arm into the suit.
7. Hold the fabric below the zipper with one hand, arch your back, and pull the zipper all the way up.
8. Fasten the face flap over your face.

Wait until you are in the water to inflate the air bladder. You can hurt your neck or back if you jump into the water with it inflated.



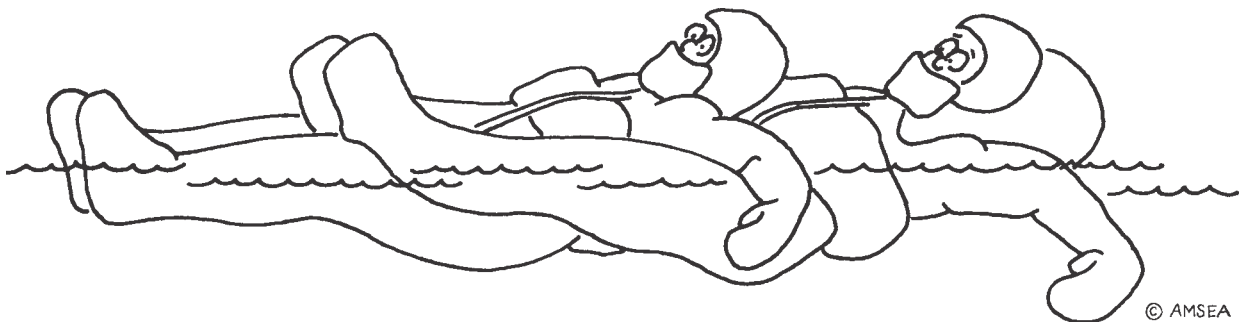
Name: _____

Immersion Suit Elbow Lock and Chain Swim



© AMSEA

Elbow Lock



© AMSEA

Chain Swim

Caring for PFDs

Time: 20-30 minutes

Use with Teacher Information

Overview

Students work with PFDs and do a worksheet to assess PFDs for damage.

Objectives

After completing this activity, students should be able to:

1. List four types of damage that can occur to PFDs.
2. Demonstrate how to wax an immersion suit zipper.

3. Demonstrate how to roll up an immersion suit.

Materials

- One per student, Student Handouts #1 **Find the Problem**, #2 **Take Care of Your PFD**, and #3 **Take Care of Your Immersion Suit**
- One per every three students, assorted PFDs **AMSEA**
- One per every three students, immersion suits **AMSEA**
- One per every three students, immersion suit zipper wax **AMSEA**
- One per every three students, toothbrush

Procedure

Part 1

Before Class

1. Leave the PFDs in the dress-up area of your classroom for several days before doing this activity.

During Class

1. Introduce the activity by modeling a PFD in poor condition and a PFD in good condition.
2. Discuss which one would be safer to wear, then discuss what damage PFDs can have and how that affects safety.
3. Distribute and have students complete Student Handout #1 and/or #2.
4. As a class, examine each PFD. Sort them into two categories: good condition or damaged.

5. Count the number of PFDs in each pile. Add the numbers. Check your answer by putting all the PFDs into one pile and counting them.
6. Save students' handouts for Activity #13.

Part 2

1. Distribute Student Handout #3.
2. Break the class into groups of three and distribute an immersion suit, toothbrush, and immersion suit zipper wax to each group.
3. Discuss proper care and maintenance of immersion suits while students follow along with Student Handout #3.
4. Have student groups practice waxing the suit zippers and rolling up the suit for storage.
5. Keep students' handouts for Activity #13.

This activity addresses Alaska Content Standards:

Language Arts A-6 Using visual communication, B-1 Meaning from written, oral, and visual text, C-3 Group decision making

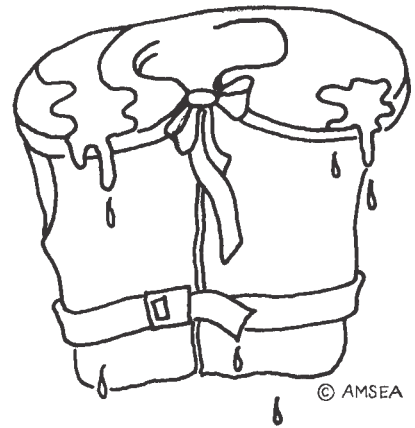
Mathematics A-1 Numeration, B-3 Using mathematics in real-life situations

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices

Name: _____

Find the Problem

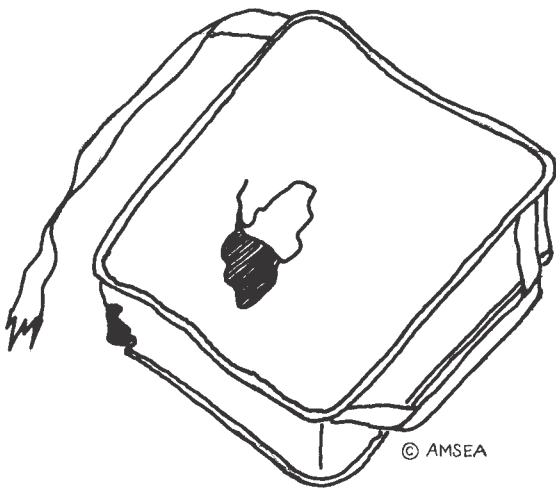
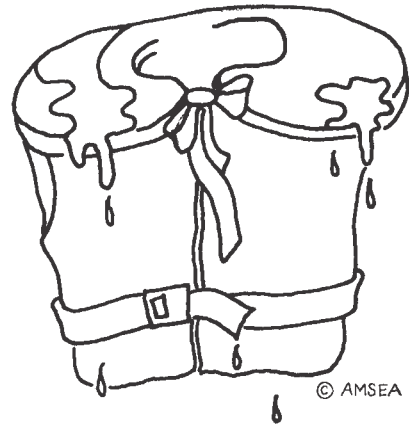
Circle the things that are wrong on these PFDs.



Name: _____

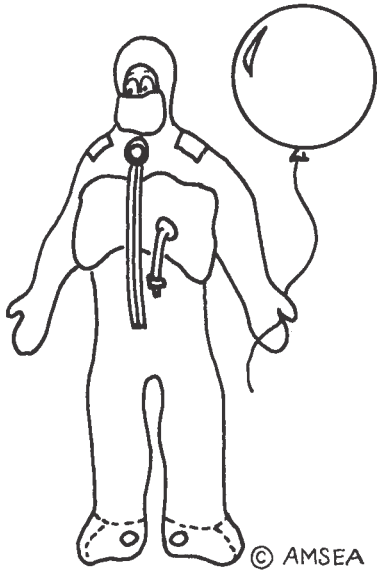
Take Care of Your PFD

What is wrong with these PFDs? Write your answers on the lines below each picture.

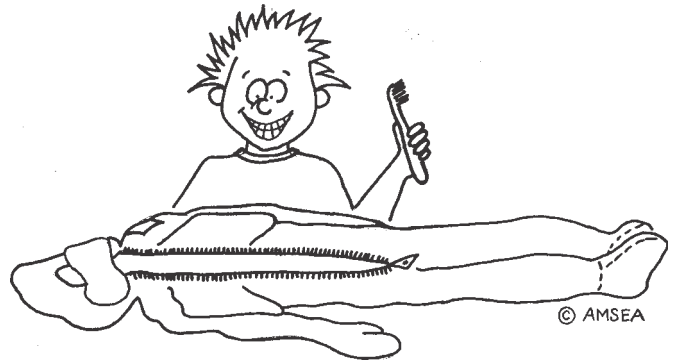


Name: _____

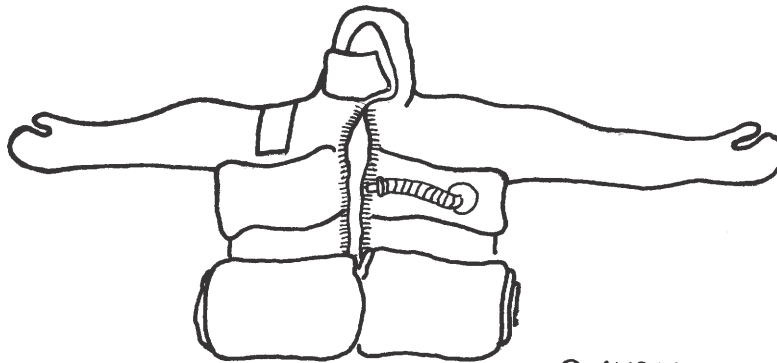
Take Care of Your Immersion Suit



1. Test the air bladder. Does it leak?



2. Make sure the zipper runs smoothly. Keep it clean and lubricated.



3. Roll up your dry immersion suit before putting it away.

Storing PFDs

Time: 60 minutes

Use with Teacher Information

Overview

Storytelling and handouts help students explore places to store PFDs.


Objectives

After completing this activity, students should be able to:


1. List three places to store a PFD.
2. List three places they should not store an immersion suit.
3. Demonstrate proper donning of an immersion suit.

Materials

Part 1

- *The Sailor Dog*, by Margaret Wise Brown 
- Story #1 **Wish I Had a PFD**
- Set of flannel board pieces (make from Template #1)
- One per student, Student Handouts #1 **Storing Your PFD** and #2 **Where's the PFD?**
- Flannel board

Part 2

- Pretend boat
- Several immersion suits 

Procedure

Part 1

1. Introduce the activity by reading *The Sailor Dog* by Margaret Wise Brown. Discuss the fact that the dog does not have a PFD, and focus on where he could store it if he did. Or read Story #1 and discuss the problem of not wearing a PFD and where to store immersion suits.
2. Remind class of situations where they might not wear their PFDs all the time.
3. Use the flannel board to discuss appropriate and inappropriate places to store a PFD. Have students take turns placing the “PFD” piece with the appropriate “storage place” piece on the flannel board.
4. Distribute and have students complete Student Handouts #1 and #2.
5. Save students’ work for Activity #13.

Part 2

1. Set up a pretend boat.
2. Review with students how to don an immersion suit. Let them practice a few times, being sure they are careful with the suits.

3. Discuss with students and list places inside the “boat” to store immersion suits.
4. Have students pretend they are passengers and crew on the boat.
5. Place the immersion suits in one of the storage places listed in step 3.
6. Explain what it means to abandon ship, then give the call to abandon ship and time how long it takes students to get and don their immersion suits. Try another location. Experiment until students understand that some storage places are better than others.
7. Allow different groups to experiment with locations.

Extension

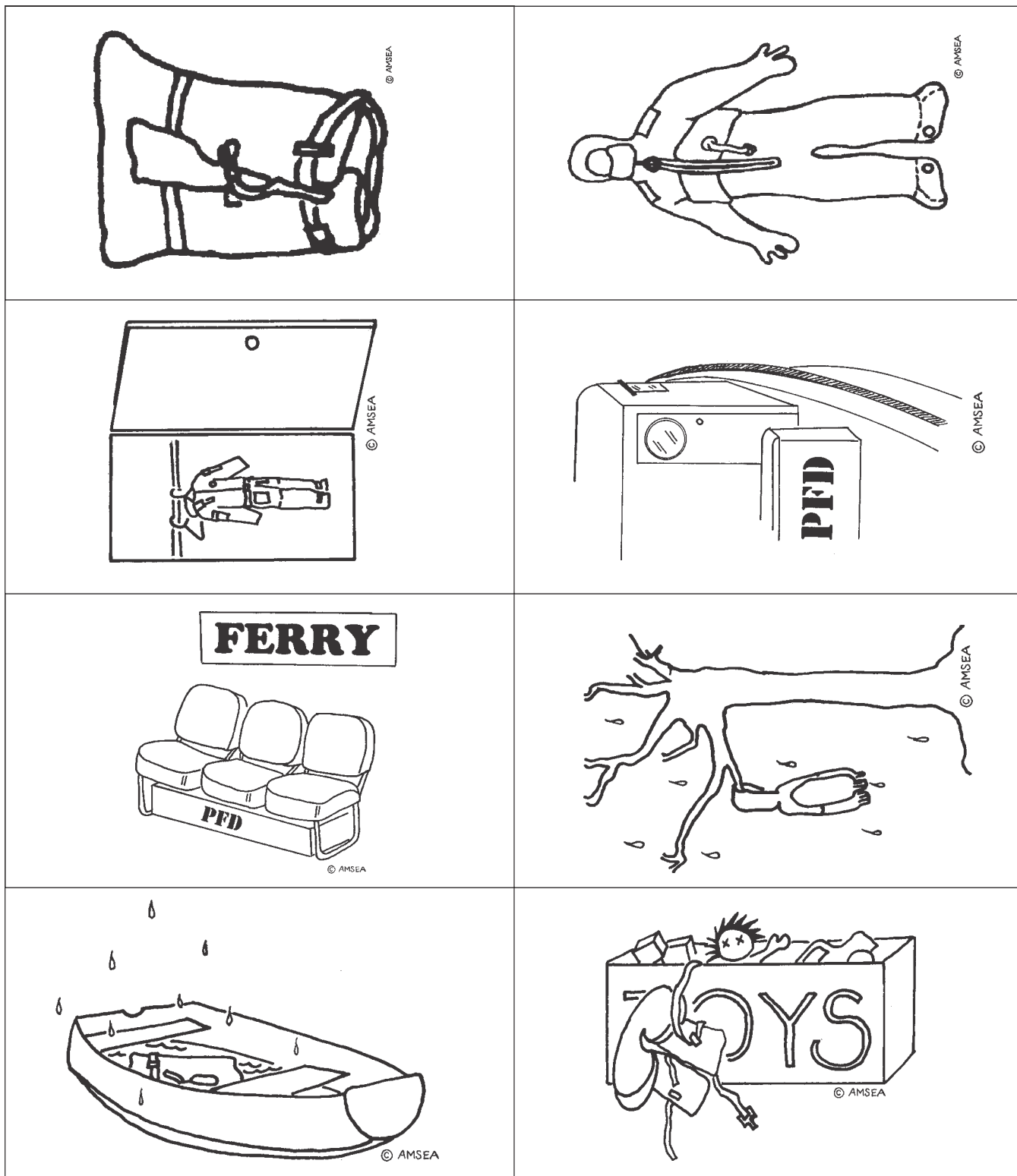
Leave the boat in your classroom for a week and allow students to work with the immersion suits on their own. Emphasize the importance of treating the suits carefully.

This activity addresses Alaska Content Standards:

Language Arts A-3 Demonstrate speaking skills, B-1 Meaning from written, oral, and visual text

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices

Places to Store PFDs—Flannel Board Pieces



Wish I Had a PFD

Based on a true story from Ketchikan, Alaska.

Once upon a time on the ocean outside Ketchikan, Alaska, the Friendly family went fishing. They hoped to catch salmon for their dinner.

Father Friendly liked his fishing boat. It had a cabin with a stove to keep the family warm. Sometimes they even spent the night on their boat. Daughter Janie especially liked to do that. She had a small bunk tucked up in the very front where she listened to water lapping against the boat as she fell asleep.

Mother Friendly liked any excuse to be on the water. She just loved to fish! In fact, the Friendlys all loved to fish so much that none of them noticed one day when the wind changed direction and storm clouds started to move in.

Before they realized it, waves were breaking against their boat. Mother told Janie to put on her PFD, and Janie began looking for it. Just then, a very big wave crashed right over the back of their boat! The boat filled with water. Father grabbed the VHF radio and called a Mayday to get help.

Janie still looked for her PFD while Mother tried to find all of their immersion suits. Neither of them knew where to look. They were very scared because they had not yet found them when suddenly the boat rolled over and sank. The Friendlys found themselves in the water without their PFDs.

Thankfully, a fuel tank and a large hatch cover bobbed to the surface. All were trying to keep their heads out of the water. Mother and Father were frantically trying to locate Janie. Janie was dazed and very cold. She thought she couldn't breathe anymore, her body felt so cold. Then she saw the hatch cover and climbed up on it, getting out of the water. After her parents saw where she was, they clung to the fuel tank.

Fortunately, the U.S. Coast Guard had heard the Mayday and were on their way. Soon the family was plucked out of the water and taken to the hospital where they were treated for hypothermia.

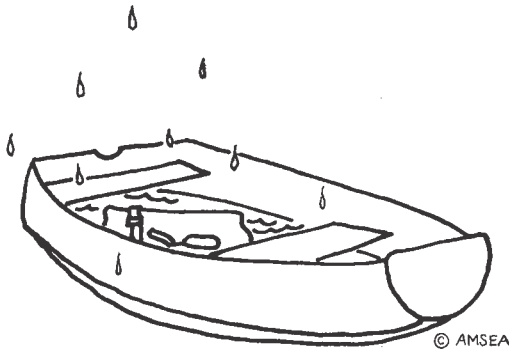
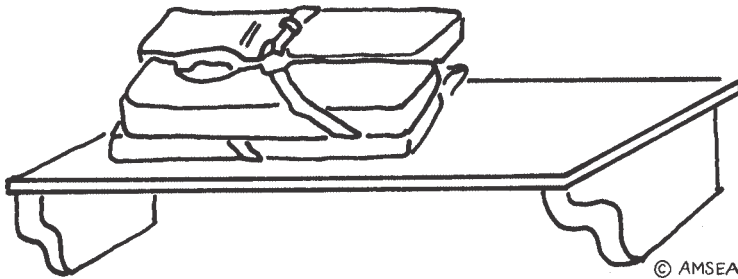
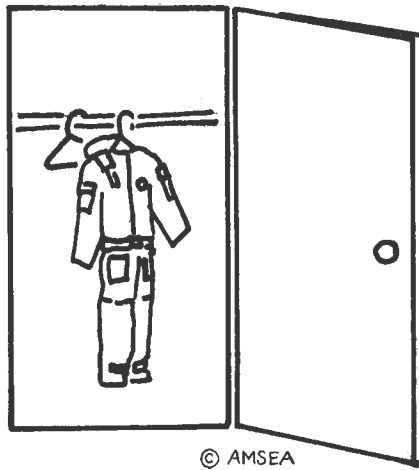
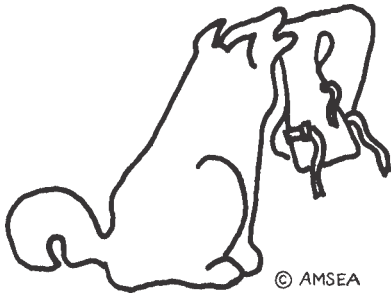
How much easier their situation would have been if they been wearing PFDs and quickly found and put on their immersion suits.

Name: _____

Storing Your PFD

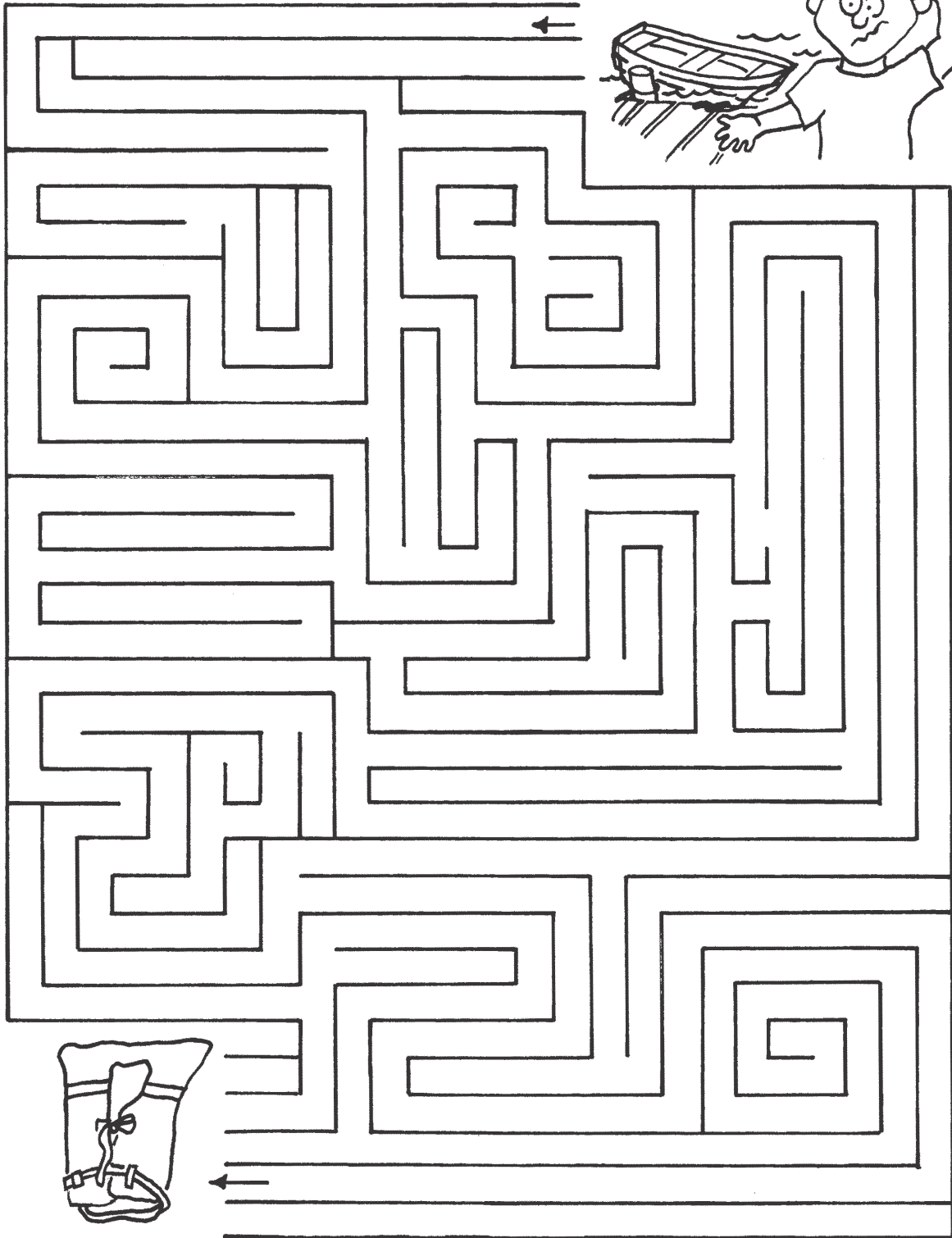
When you are not wearing your PFD, store it in a safe place. Do not leave it where it can get wet. Keep it dry and away from pets. Do not use it as a toy.

Put an X in the pictures that show PFDs that are not in the right places.



Name: _____

Where's the PFD?



© AMSEA

Let's Go Boating!

Time: 10 minutes

Use with Teacher Information

Overview

A puppet play about dressing for a boat trip.

Objectives

After completing this activity, students should be able to:

1. Select clothing appropriate for a boat trip.
2. Explain the importance of wearing a PFD when on or near the water.

Materials

- Script **Dad and Popsicle Go for a Boat Ride**
- Two puppets **AMSEA**
- Clothes for puppets **AMSEA**
- Puppet theater (can be a big box)
- Cardboard boat on a dowel
- Assortment of PFDs for children and adults **AMSEA**
- Doll large enough to fit into the smallest infant PFD
- Assortment of clothes for doll **AMSEA**
- Small boat or inflatable dinghy **AMSEA** or plastic boat
- Inflator (if you use an inflatable dinghy) **AMSEA**

Procedure

1. Perform the puppet play.
2. Have students practice the HELP and Huddle position.
3. Dress the doll.
 - Have students tell you what to put on the doll. Emphasize the importance of wearing the right clothes.
 - When the doll is ready for a boat trip, put on your own PFD and climb into boat.
4. Allow your students to play in the boat using the PFDs and doll.
 - Everyone, including the doll, must wear a PFD when in the boat.
 - Anyone who falls out of the boat must do the HELP.

This activity addresses Alaska Content Standards:

Language Arts A-3 Demonstrate speaking skills, A-6 Using visual communication, B-1 Meaning from written, oral, and visual text

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices

Arts A-1 Participate in the arts, A-3 Materials, tools, techniques, and processes

Dad and Popsicle Go for a Boat Ride

DAD: *(Comes in.)* Hi everybody! I'm home!

POPSICLE: Daddy, Daddy!

DAD: It's a nice day. Let's go for a boat ride.

POPSICLE: Yea, Yea! Let's go. *(Moves toward door.)*

DAD: OK. But you need to get dressed for it.

POPSICLE: *(Runs off, gets dressed and reappears, saying)* I'm ready. I have plenty of warm clothes and my boots on.

DAD: *(Looks Popsicle over and comments.)* You're wearing the right clothes for a boat trip, but where is your PFD?

POPSICLE: I don't know. I can never find it. Besides I always get hot in it.

DAD: No PFD—no boating. If you fall in the water you have to be able to float!

POPSICLE: All right. I'll find it. *(Goes off.)*

DAD: I'll just put together some other things we should have. *(Grabs a survival kit for each of them, a comfort kit, and raingear.)*

POPSICLE: *(Reappears.)* I have my PFD and I put it on myself!

DAD: Let me check it to see if you have it on correctly. *(Checks it.)*

POPSICLE: Where's your PFD Dad?

DAD: It's on the boat. Let's go there now that we are ready.

(They walk out and the boat comes up. Dad gets his PFD on.)

DAD: Now I have my PFD on too. If I fall in the water I will float, and if we both are in the water I can help you. OK, we're almost ready to go, but first let's practice what we would do if we DID fall in the water. Let's do the Huddle position.

POPSICLE: Yea! I want to huddle! *(Runs and hugs Dad.)*

DAD: Great! Let's do the HELP.

POPSICLE: Let's see. I pull my arms in to cover my sides and underarms, and I pull my legs up to protect my groin. Hey, I can't pull my legs up. Why can't I do that? *(Asks audience.)*

We're puppets!

(They get in the boat. Dad starts the engine and they move away waving goodbye.)

PFD Posters

Time: 60 minutes

Use with Teacher Information

Overview

Unit review by making posters to educate your school and community about PFDs.

Objectives

After completing this activity, students should be able to:

1. Explain why it is important to wear a PFD.

2. List five places where you should wear a PFD.
3. Explain how a PFD should fit.
4. Explain how to care for a PFD.

Materials

- Poster board
- Marking pens, crayons, or other art supplies for creating posters
- Tacks, tape, or other means of holding posters on walls
- Students' work from Activities #1, #3, #4, #6, #8, #10, and #11

Procedure

1. Divide class into groups of two and assign each group a topic for a poster. Topics are:
 - What PFDs are and how they work.
 - Where to wear PFDs.
 - Why wear PFDs.
 - Different kinds of PFDs.
 - How a PFD should fit.
 - How to use different kinds of PFDs.
 - How to care for a PFD.
2. Student Handouts from Activities #1, #3, #4, #6, #8, #10, and #11 can provide background information.
3. Have students create posters and hang them around your school and community.

This activity addresses Alaska Content Standards:

Language Arts A-4 Writing and speaking with purpose, B-1 Meaning from written, oral, and visual text, C-1 Developing a project, C-2 Project organization, C-3 Group decision making, C-4 Project quality, C-5 Project collaboration

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-5 Well-being of family,

A-6 Making informed choices, B -1 Risk and consequences

Arts A-1 Participate in the arts, A-3 Materials, tools, techniques, and processes

Library/Information Literacy A-4 Search for information and resources, B-2 Consider and determine useful strategies, B-3 Access information, B-5 Organize and use information to create a product



Unit 3: Cold Water Survival Skills

Unit Rationale

Every state in the United States has water less than 91 °F, which is cold enough to cause hypothermia. Immersion hypothermia often leads to drowning, and drowning is the second leading cause of injury death to youth nationwide. In the 1990s, Alaska's drowning rate was ten times the national average and the leading cause of death in rural Alaska.

You can increase your survival time in cold water if you know the right things to do in a cold water emergency. Familiarity with various types of survival equipment and realistic practice in a safe, controlled environment will help you survive an emergency. While prevention is one of the keys to survival, this unit teaches what to do in the event of a cold water emergency.

Unit Goal

Children will learn and practice basic cold water survival skills in a safe, controlled environment.

Cold Water Survival Skills: Teacher Information

The information in this section gives you, the teacher, a background in the topic. Use judgment when presenting this material. Many concepts are not suitable for young children.

Note: The cold water near-drowning signs, symptoms, and treatment described here are based on guidelines developed by the State of Alaska and revised in 1996. Consult your state Emergency Medical Services office for current recognition and treatment guidelines. It is important to keep current with new developments in this field.

Physiological Effects of Cold Water Immersion

Sudden immersion in cold water may produce cold water shock

- A. Signs and symptoms include
 - 1. Pain
 - 2. Uncontrollable gasping, including aspiration of water—may cause drowning
 - 3. Hyperventilation—can lead to unconsciousness and drowning
 - 4. Rise in blood pressure—can cause heart problems and stroke
 - 5. Increased heart rate
 - 6. Loss of sense of direction due to cold water entering ear and affecting equilibrium
- B. This may explain why some people suddenly disappear in the water (Sudden Disappearance Syndrome)

Immersion hypothermia—hypothermia caused by immersion in cold water

- A. Accidental immersion in cold water endangers both swimmers and nonswimmers
- B. Water conducts heat 25 times faster than air of same temperature so hypothermia begins to develop quickly
- C. Due to cold, lack of muscle coordination begins to develop within minutes, making it difficult to self-rescue or respond to assistance
- D. Hypothermia can cause death in the water or contribute to drowning if victim loses consciousness—about 50% of drownings are a result of hypothermia

Survival Factors in Cold Water Emergencies

Will to live

- A. Very important in all survival situations
- B. Thinking about loved ones and things important to you helps focus on living
- C. Some people have a stronger will to live than others
- D. In identical situations, a strong will to live can make the difference between life and death

Body

- A. Body fat—in general, people with more body fat lose body heat more slowly
- B. Cardiovascular fitness—a high level of cardiovascular fitness increases likelihood of survival
- C. Health—in general, sick and injured people have a more difficult time staying warm

Environment

- A. Water temperature—cooler temperatures cool you faster
- B. Water movement—moving water cools you faster than still water
- C. Air temperature—cooler air temperatures cool you faster
- D. Air movement—higher wind speeds cool you faster

Try to protect the five high heat loss areas (high blood circulation areas close to skin surface)

- 1. Head—50% of body heat lost through head
- 2. Neck
- 3. Underarms
- 4. Sides of chest
- 5. Groin

Stay Rules—help increase survival time in cold water

- A. Stay with the Boat
 - 1. Don't abandon ship until it abandons you
 - 2. Get on top of overturned boat if possible
 - a. Keeps you dry
 - b. Increases chance of being spotted
 - 3. To swim or not to swim
 - a. Swimming cools your core up to 30% faster than staying still, depending on clothing
 - b. Many people become hypothermic and drown while trying to swim to shore
 - c. Whether or not to swim to shore is a difficult decision, there are many factors to consider
 - (1) Tides
 - (2) Currents
 - (3) Wind/wave action
 - (4) Visibility
 - (5) Other boats in area—availability of help
 - (6) Distance to shore
 - (7) Swimming ability
 - (8) Clothing you are wearing, including type of PFD
- B. Stay Afloat
 - 1. Wear a PFD—if possible, don an immersion suit

- a. Must be able to float in order to breathe
 - b. PFD helps in recovery from shock of cold water
- 2. Trapped air in clothes and boots assists flotation, but panicky movements remove air trapped in clothing
- 3. Holding onto floating debris or objects offers additional flotation
- 4. If overboard in a river
 - a. Keep feet up and pointed downstream to help prevent entanglement and protect head from injury
 - b. Approach riverbank at an angle, let current help take you to safety
- C. Stay Dry
 - 1. Wear a PFD—if possible, don an immersion suit
 - 2. If there is any warning, immerse slowly, keeping head dry
 - 3. Get out of the water as soon as possible
 - a. Climb into liferaft, or onto bottom of capsized boat or floating debris
 - b. Water conducts heat 25 times faster than air of the same temperature—it is better to get out of the water, even if it is windy
 - 4. If it is impossible to get completely out of the water, get as many high heat loss areas out as possible
 - 5. Keep head dry and out of the water as much as possible
 - 6. Do not “drownproof” (face-down floating survival technique)—it increases heat loss by 80% compared to staying still with head out of the water
- D. Stay Still
 - 1. Wear a PFD—it is difficult to stay still without one
 - 2. Movement
 - a. Increases circulation in extremities
 - b. Results in more cooled blood returning more quickly to core than staying still
 - c. Results in a more rapidly reduced core temperature
 - 3. Swimming cools core up to 30% faster than staying still, depending on clothing
 - 4. Use HELP and Huddle to Stay Still
 - a. These positions cannot be maintained without flotation aids
 - b. These positions double survival time compared to swimming or treading water by reducing cooling effects of conduction and convection
 - c. In rough water modify HELP by dropping legs and crossing ankles to keep face out of the water
- E. Stay Warm
 - 1. Protect high heat loss areas before boat sinks, if possible
 - a. If available, don an immersion suit
 - b. If immersion suit not available, choose a PFD that provides the most insulation

2. Get as much of your body out of the water as possible, especially high heat loss areas—use liferaft, skiff, boat, or floating objects
 3. If getting out of the water is impossible, assume HELP or Huddle position
- F. Stay Together
1. Share body heat by assuming Huddle position
 2. Help each other
 3. You are a bigger target for rescuers to see
 4. It is easier to keep morale up
 5. If free of vessel and safe from entanglement, tie yourselves together
 6. If in immersion suits, do elbow lock or chain swim if necessary to swim
- G. Stay Sober
1. Using alcohol or drugs increases chances of ending up in the water due to loss of judgment, reduced reaction time, and decreased coordination
 2. Alcohol is a vasodilator (it makes blood vessels bigger), making you lose heat faster and actually speeds up hypothermia onset
 3. Impaired judgment in water can cause more problems and prevent self-help
 4. Alcohol increases risk of cold water shock
 5. See Boating Safety, Unit 5 in this book, for more information on alcohol

Water Rescue Techniques

Cautions for young children

- A. Quickly getting help should be first response whenever adults or older children are nearby unless doing so puts them at risk of getting lost or injured
- B. Reach techniques should not be taught to young children because of high risk of being pulled into the water by bigger victim

Throw, Don't Go! to rescue

- A. Note to teachers: this rescue technique is more completely called Reach, Throw, Don't Go! We have chosen to not teach the Reach portion in this volume because of the potential danger of victims pulling young children into the water.
- B. Throw
 1. Anything that floats with long line attached
 2. Tie other end of line to a nearby object
 3. Do **not** attach line to yourself
 4. Make eye contact with victim
 5. Throw device beyond victim (do not hit victim with device) then pull to victim
 6. Pull victim to land or boat
 7. Small children should **not** assist victim out of the water
 - a. Good chance they will end up in the water
 - b. Exception: when victim is at waterline on shallow beach

C. Don't Go

1. People in need of water rescue often overpower rescuer, creating two victims
2. Would-be rescuers who enter water put themselves at risk for hypothermia and drowning
3. Trained rescuers should attempt only when no other method of recovery is available.

Cold Water Survival Skills: Activities Guide

- Activities in this volume are sequential and each unit assumes some knowledge of the material in the preceding unit.
- Activities are arranged by topic in the same order as the Teacher Information.
- Detailed Alaska Content Standards are located at the end of each activity’s procedures.
- Times given for activities are approximate.
- In order to provide a choice of handouts for prereaders and readers, many activities have more than one handout that covers the same information.
- Many activities contain true stories; be sensitive to the possibility that they could be written about your students’ relatives or friends.
- **AMSEA** This symbol means the items are available to borrow from AMSEA.

Topics: Physiological Effects of Cold Water Immersion, Survival Factors in Cold Water Emergencies

Activity	Objectives	Standards
1. Stay Rules A “secret” code worksheet and picture game p. 175	<ul style="list-style-type: none"> • List the seven Stay Rules 	Language Arts Mathematics Skills for a Healthy Life
2. Stay Still, Stay Together A demonstration using cold water p. 179	<ul style="list-style-type: none"> • Demonstrate and explain Stay Still • Demonstrate and explain Stay Together • Demonstrate the Huddle position 	Language Arts Science Skills for a Healthy Life

Topic: Water Rescue Techniques

Activity	Objective	Standards
3. Throw, Don’t Go! Rescue practice game p. 180	<ul style="list-style-type: none"> • Demonstrate the Throw, Don’t Go! rescue technique 	Language Arts Skills for a Healthy Life

Topic: Culminating Activities

Activity	Objectives	Standards
<p>4. Pool Activity Practice cold water survival skills in the pool p. 182</p>	<ul style="list-style-type: none"> • Don a PFD • Demonstrate the HELP in the water while wearing a PFD • Demonstrate the Huddle position in the water while wearing a PFD • Don an immersion suit • Float on his/her back in the water while wearing an immersion suit • Demonstrate the elbow lock in the water while wearing an immersion suit • Demonstrate the Throw, Don't Go! rescue technique 	<p>Science Skills for a Healthy Life</p>
<p>5. Post-Pool Activity Review skills learned during pool activity p. 188</p>	<ul style="list-style-type: none"> • Describe three skills learned at the pool • List two safety rules learned at the pool • Express appreciation for help received at the pool 	<p>Language Arts Skills for a Healthy Life Arts</p>
<p>6. Unit Review Review of cold water survival skills p. 189</p>	<ul style="list-style-type: none"> • List the seven Stay Rules • Demonstrate the HELP • Demonstrate the Huddle position • Demonstrate the elbow lock • Describe the Throw, Don't Go! rescue technique 	<p>Language Arts Skills for a Healthy Life Arts</p>

Stay Rules

Time: 30-40 minutes

Use with Teacher Information

Overview

A “secret” code worksheet and picture game.

Objective

After completing this activity, students should be able to list the seven Stay Rules.

Materials

- Flannel board **Stay Rules pieces** and/or pictures for **Stay Rules signs** (make from Template #1)
- One per student, Student Handout #1 **Break the Code!**
- Flannel board
- Glue or tape
- Popsicle sticks

Procedure

1. Have students discuss how they feel in cold water and what they can do to help themselves in that situation. Focus on the Stay Rules.
 - Use the flannel board to present the Stay Rules.
 - Write each rule on the board as it is mentioned.
2. Distribute and have students complete Student Handout #1.
3. Play **The Stay Rules Game** by distributing one Stay Rule picture on a popsicle stick to each student. State a Stay

Rule or hold up a **Stay Rules sign**.

Students who have a sign that illustrates that rule lift it up. Call on someone to explain how that Stay Rule helps them in cold water. Play continues until all the Stay Rules have been covered.

4. In conclusion, have everyone recite the Stay Rules together.

This activity addresses Alaska Content Standards:

Language Arts A-3 Demonstrate speaking skills, A-4 Writing and speaking with purpose, A-6 Using visual communication

Mathematics A-1 Numeration

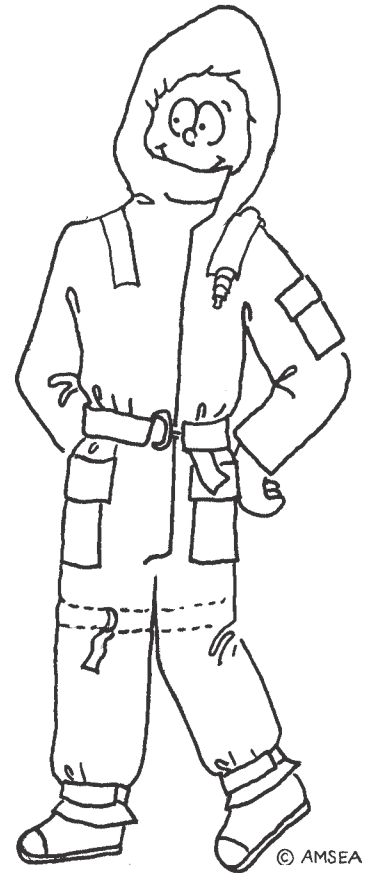
Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices, B-1 Risk and consequences

Stay Rules

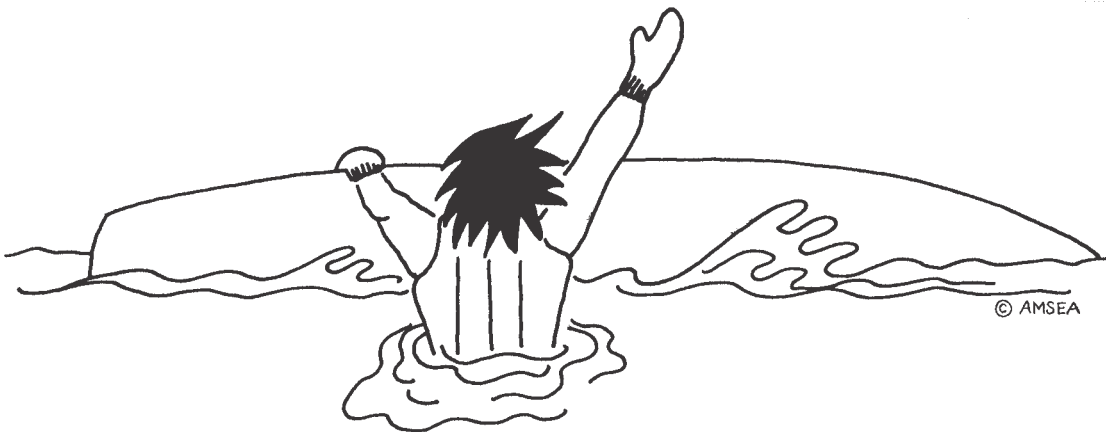
Use these pictures for flannel board pieces or pictures to glue or tape to popsicle sticks.



Stay Sober



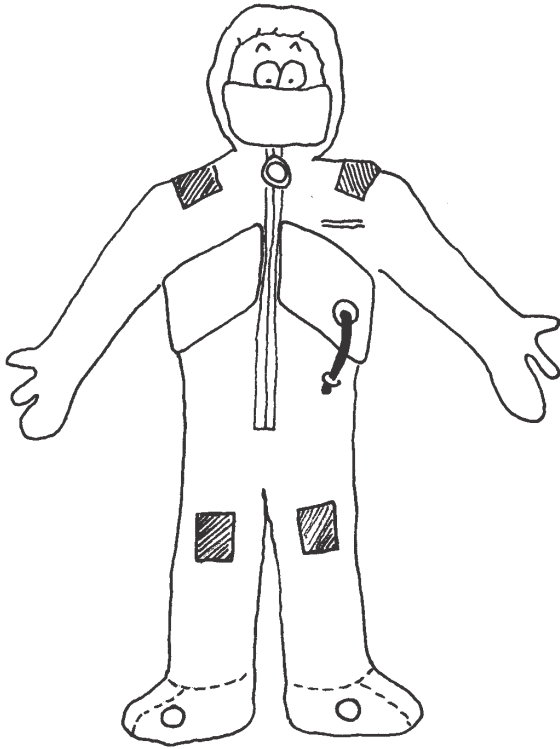
Stay Warm



Stay with the Boat

Stay Rules

Use these pictures for flannel board pieces or pictures to glue or tape to popsicle sticks.



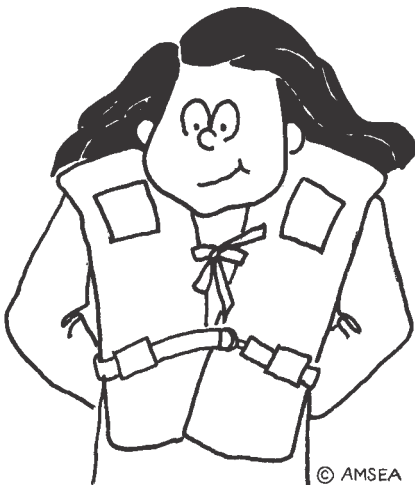
© AMSEA

Stay Dry



© AMSEA

Stay Still



© AMSEA

Stay Afloat



© AMSEA

Stay Together

Name: _____

Break the Code!

Use the code at the bottom of the page to decode the rules for being in cold water.

19	20	1	25	1	6	12	15	1	20
19	20	1	25	23	1	18	13		
19	20	1	25	4	18	25			
19	20	1	25	19	20	9	12	12	
19	20	1	25	23	9	20	8		
20	8	5	2	15	1	20			
19	20	1	25						
20	15	7	5	20	8	5	18		
19	20	1	25	19	15	2	5	18	

1 = A	6 = F	11 = K	16 = P	21 = U
2 = B	7 = G	12 = L	17 = Q	22 = V
3 = C	8 = H	13 = M	18 = R	23 = W
4 = D	9 = I	14 = N	19 = S	24 = X
5 = E	10 = J	15 = O	20 = T	25 = Y
				26 = Z

Stay Still, Stay Together

Time: 30 minutes

Use with Teacher Information

Overview

A demonstration using cold water.

Objectives

After completing this activity, students should be able to:

1. Demonstrate and explain Stay Still.
2. Demonstrate and explain Stay Together.
3. Demonstrate the Huddle position.

Materials

- One per four students, containers holding several inches of cold water

Procedure

Part 1

1. Discuss the importance of staying still in cold water.
2. Explain that students will test if staying still keeps them warmer than moving about in cold water.
3. Divide the class into groups of four.
4. Distribute the containers of cold water.
5. Have students take turns holding their left index fingers very still in the water at one end of a container. At the same time, have them rapidly wiggle their right index fingers in the water at the other end of the container to simulate swimming.
6. Continue for 3 to 5 seconds.
7. Have students remove fingers and note which feels colder.
8. Discuss how this relates to people staying still in the water.

Part 2

1. Explain that students will test if holding their fingers together in cold water keeps them warmer than holding them apart.
2. Have students put their left index fingers in the water and hold them still, and at the same time put three fingers of their right hand in the water. The fingers should be “huddled” together so they all touch each other.
3. Continue for 10 seconds.
4. Have students remove fingers and notice which finger(s) feel(s) colder.
5. Discuss how this demonstration is similar to people doing the Huddle position.
6. Close by doing the Huddle position and staying still for a few minutes in the classroom.

This activity addresses Alaska Content Standards:

Language Arts D-1-A Personal experience and prior knowledge

Science A-4 Observable natural events, A-5 Forces of nature, B-1 Scientific processes

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices, B-1 Risk and consequences

Throw, Don't Go!

Time: 45 minutes

Use with Teacher Information

Overview

Rescue practice game.

Objective

After completing this activity, students should be able to demonstrate the Throw, Don't Go! rescue technique.

Materials

- *Whale's Tales* video (14 minutes) [AMSEA](#)
- Type IV throwable PFD or other soft object suitable to be thrown [AMSEA](#)
- One per student, throwable object brought from home
- Several 20-foot pieces of line
- Chalk, tape, or other marking device

Procedure

Part 1

Before Class

1. Draw or tape a line on the floor or pavement and an "X" 10 to 15 feet away.

During Class

1. Introduce the activity by showing *Whale's Tales*.
2. Discuss the rescue techniques shown in the video. Stress the following:
 - Children should always run for help if an adult is nearby.
 - Children should **never** try to help someone out of the water unless they are on a gentle beach.
3. Have students practice Throw, Don't Go! rescues.
 - Students line up behind the line.
 - The first person in line moves to the X and stands there. He/she is the "victim."
 - The second person in line is the "rescuer." The rescuer ties one end of the line to a throwable object and the other to something stationary (do this step for groups unable to tie knots).
 - Stress that the rescuer should never attach the line to himself/herself.
 - Have the rescuers toss the throwable object beyond the X, **not** at the victim.

- Stress that the rescuer must remain behind the line and "Don't Go!" to the victim.
- The rescuer pulls the object back toward the victim. The victim cannot leave the X while reaching for the object.
- When the victim grasps the object, the rescuer gently pulls the victim toward the line.
- The rescuer then takes a turn as the next victim.
- Follow this procedure until all have taken a turn as both victim and rescuer.

Part 2

1. Read the following sentences and discuss with the class the correct rescue technique in each situation:
 - You are standing on the dock and someone falls off a boat tied to the dock.
 - You are standing on a boat and your friend falls overboard. Your parents are in the cabin of the boat.
 - You are at a cabin far from anyone else with your uncle. He falls in the water.
2. Discuss the items students brought from home.
 - Could they be used for a Throw, Don't Go! rescue?

- Where on the object could the line be attached?
3. Use the items students brought to class.
 - Have students practice tying lines to the objects.
 - Have students throw the objects with the lines attached to a stationary object.
 4. Discuss places in your town where water rescue devices are found (usually Type IV rings). Discuss places where they might be needed. List things that can be used for a Throw, Don't Go! rescue in each place, if needed.

Extensions

1. Take your class on a field trip to places in your town where water rescue devices are found. Discuss how they could be used. Have students look for other items that could be used, if needed.
2. If rescue devices are needed in a location and not available, have the class write letters to appropriate officials, the newspaper, etc., to ask that they be installed. Read the letters to your class and have your students sign their names.

This activity addresses Alaska Content Standards:

Language Arts A-6 Using visual communication, A-7 Using electronic communications, B-1 Meaning from written, oral, and visual

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices, D-1 Responsible decisions

Pool Activity

Time: At least 65 minutes at the pool, including locker room time

Use with Teacher Information

Overview

Practice cold water survival skills in the pool.

Note: This activity draws together many skills learned in this and the PFDs units and provides practice that can save lives. Suggested time for each station is 15 to 20 minutes. Acclimation to the water and equipment may be the extent of the learning for some students. Each of the three stations in this activity is explained on a separate station card. Laminating the cards is strongly suggested.

Materials

Student

- Towel
- Clean clothing to be worn in the pool (shirt and pants)
- Dry clothing to change into after the pool session

- Signed permission or waiver with identified health risks and identification of swimming abilities
- Personal PFD (optional)

Instructor

- Towel
- Clean clothing to be worn in the pool (shirt and pants)
- Personal PFD (optional)

Each Station

- **Pool Hazards and Safety Protocols** (make from Template #1), laminated back-to-back with **Station card**
- **Station card** (make from Templates #2, #3, and #4), laminated back-to-back with **Pool Hazards and Safety Protocols**
- One lead instructor and at least one adult helper, good swimmers and able to perform skills at station
- Whistle
- Watch
- Additional materials listed for each station (see Templates #2, #3, and #4)
- Optional—One parent or adult group supervisor who moves from station to station with group

Procedure

Before the Pool Session

1. Reserve pool and lifeguard.
 - Allow at least 45 minutes in the pool plus locker room time of 10 minutes both before and after the pool session.
 - Ask if clean clothing is permitted in the pool.
 - Determine fees for pool and lifeguard.
2. Arrange transportation to the pool.
3. Arrange for materials needed for activity, and provide any necessary training for assistants.
4. Send out permission slips or waivers, being sure to ask about health risks and

nonswimmers. Also send out a list of what students need to bring for the activity.

In Class

1. Complete PFDs Unit Activities #8 and #9, and Cold Water Survival Skills Unit Activities #1, #2, and #3 before doing this activity.
2. Explain the pool and safety rules to the students:
 - All pool rules must be followed, especially no running or rough play.
 - Students should not enter the pool until directed to do so by the instructor.

- No jumping into the pool unless it is part of a lesson.
 - No diving.
 - All students **and instructors** (model what you teach) must wear a PFD or immersion suit at all times when in the water. This is simulated cold water survival skills practice.
 - You may not use pool equipment specifically intended for safety or actual rescue at the pool.
 - If the whistle blows, stop and look at the instructor.
 - If someone is in danger, call for help immediately.
 - Students must have a buddy with them when in the water.
 - It may be difficult to hear directions because of the noise level and immersion suit hoods. Listen carefully!
3. Have students take home a permission slip or waiver and a list of items they must bring for the pool activity.
 4. Divide the students into three groups, being sure each group has a mix of physical sizes. Within each group, have students buddy up in pairs or trios, and explain that buddies are to help and watch out for each other.
 5. Remind students to leave valuables home on the day of the pool exercise.

Preactivity at the Pool

1. Arrange equipment at each station.
2. Distribute and review Pool Hazards and Safety Protocols, and station procedures with instructors/adult helpers. Identify health risks and nonswimmers. Remind instructors that it is difficult to talk at the pool due to high noise levels and that discussion needs to be done in close proximity.

3. Designate one person as timekeeper to keep the station rotation smooth. Tell instructors they will have a two-minute whistle warning to allow instructors time to bring their activities to a close.
4. Brief the lifeguard on the activity and general safety protocols, and identify nonswimmers and students with health risks.

During the Pool Activity

1. Review the pool rules with students.
2. Have them divide into their three groups and then stand next to their buddy. Remind them that buddies should remain together and watch out for each other during the entire pool session.
3. Assign adult helpers to escort each group to its initial station. If available, assign an adult helper to rotate with each group.
4. Follow procedures on instruction cards for each of the three stations.
5. If time allows, the last group at each station helps rinse the gear from that station in fresh water.

After Pool Activity

1. Account for all gear.
2. Rinse all gear in fresh water and turn inside-out to dry out of direct sunlight.
3. Turn again in a day or two and dry the outsides.
4. Lubricate immersion suit zippers with nonparaffin wax before storing or returning the equipment.
5. Return borrowed gear to owner(s.)

This activity addresses Alaska Content Standards:

Science D-1, 3 Practical applications of scientific knowledge

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed decisions, B-1 Risk and consequences, D-1 Responsible decisions, D-2 Safe and healthy environments

Pool Hazards and Safety Protocols

Pool Hazards

All Stations

- Students may become cold when wet.
- The pool area is noisy. It may be difficult to hear directions or calls for help.
- Watch nonswimmers closely. Maintain one-to-one instructor/student ratio.

PFD Station

- Students may inadvertently submerge each other under water when doing the elbow lock and Huddle position.

Immersion Suit Station

- Students cannot hear well with hoods on.
- Students can fall when removing suits, injuring themselves or others.
- Water-filled suits are very heavy and awkward on the pool deck.
- Students may inadvertently submerge each other when doing the elbow lock and chain swim.

Throw, Don't Go! Rescue Station

- Students can be injured by thrown objects.
- Watch that students' limbs do not become entangled in lines.

Safety Protocols

1. The lifeguard is **not** to be involved in teaching any part of the class.
2. Recommended student-to-teacher ratio is 4:1, 2:1 for kindergarten, and 1:1 for nonswimmers.
3. Note nonswimmers and students with preidentified health risks, and provide appropriate support.
4. Insist that students stay with and watch out for their buddies at all times.
5. Encourage but do not force students to participate.
6. Do not rush students. Allow plenty of time to complete activities.
7. Follow, and make sure students follow, all pool rules.
8. Students may not jump or dive into the pool.
9. All students **and instructors** must wear a PFD when in the water.
10. Students in immersion suits should pace themselves to avoid overheating.
11. Do not allow students to use equipment that is intended for safety or actual rescue.
12. If a whistle blows, all must stop and look at the instructor.
13. If necessary, contact emergency response personnel at: _____.

PFD Station Card

Time: 15-20 minutes

Objectives

After completing this activity, students should be able to:

1. Don a PFD.
2. Demonstrate the HELP in the water while wearing a PFD.

3. Demonstrate the Huddle position in the water while wearing a PFD.

Additional Materials

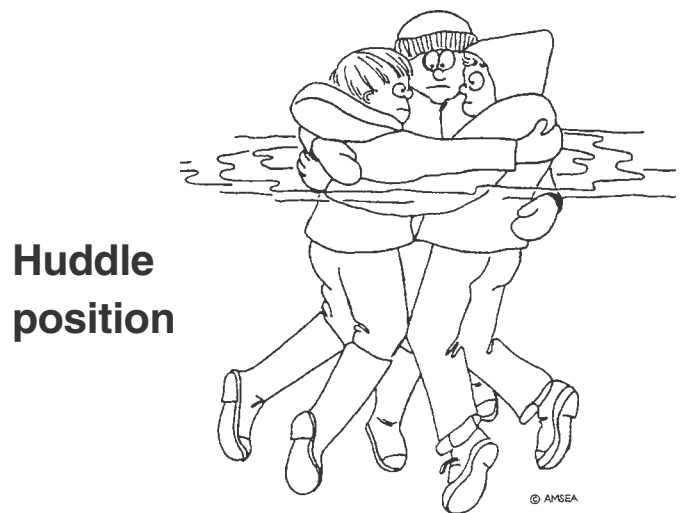
- One per student, PFD of various types and sizes **AMSEA**
- One per instructor/adult helper, PFD **AMSEA**

Procedure

1. Instruct students that they should:
 - Not enter the water until directed.
 - When entering the water, enter slowly, keeping their heads dry.
 - Always wear a PFD while in the water.
2. Have each student don a PFD that fits and stand next to their buddy.
3. Have students enter the water slowly while wearing PFDs.
4. Have students practice the HELP.
5. Have students practice the Huddle position. Be alert for any students who accidentally get pushed under water while in the Huddle position.
6. Have students note temperature changes when they move out of the HELP and Huddle position.
7. Have students exit the water and change into another PFD.
8. Repeat steps 2-7 as many times as time allows.
9. If time allows, have last group of students help rinse PFDs.

Extension

Have students who feel comfortable check to see if their PFD will turn them face up when they pretend to be unconscious, face down in the water.



Immersion Suit Station Card

Time: 15-20 minutes

Objectives

After completing this activity, students should be able to:

1. Don an immersion suit.
2. Float on their backs in the water while wearing an immersion suit.
3. Demonstrate the elbow lock in the water while wearing an immersion suit.

Additional Materials

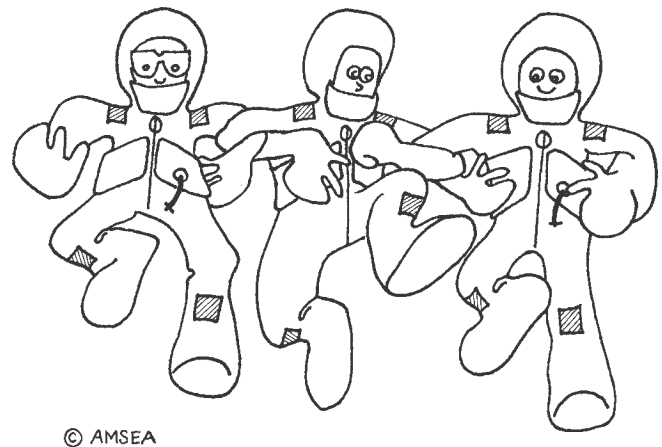
- One per student, immersion suits in sizes to fit all students **AMSEA**
- One per instructor/adult helper, PFD **AMSEA**
- Immersion suit zipper wax **AMSEA**

Procedure

1. Instruct students that they should:
 - Not enter the water until directed.
 - Always wear an immersion suit in the water.
 - Enter the water slowly, keeping their heads dry.
 - Stay on their backs in the water.
 - Pace themselves to avoid overheating.
2. Assign each student a suit of appropriate size. Wax zippers as needed.
3. Have students put on immersion suits on the pool deck, with adult and buddy assistance, then stand next to their buddy.
4. Have students enter the water slowly with immersion suits on.
5. Allow students time to get used to being in the water with the suits on.
6. If time allows, have students practice the elbow lock.
7. After students exit the pool, have adult helpers help students take off suits, empty water from suits as needed, and wax zippers.
8. If time allows the last group can help rinse suits.

Extension

If students feel comfortable in their suits in the water, have them practice the chain swim.



Elbow Lock




Throw, Don't Go! Rescue Technique Station Card

Time: 15 minutes

Objective

After completing this activity, students should be able to demonstrate the Throw, Don't Go! rescue technique.

Additional Materials

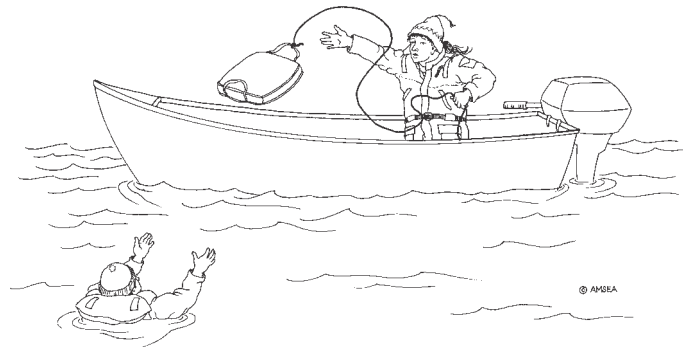
- One per student, PFD in sizes to fit all students 
- One per instructor/adult helper, PFD 
- Several Type IV throwable PFDs with lines attached 

Procedure

1. Instruct students that they should:
 - Not enter the water until directed.
 - Always wear a PFD in the water.
 - Enter the water slowly, keeping their heads dry.
 - When rescuing, make eye contact with the victim before throwing, throw beyond the victim, pull Type IV PFD toward the victim, then gently to the pool edge. Remind them that they should not help the victim out of the pool.
2. Have students don PFDs and stand next to their buddy.
3. Direct students to line up on deck.
4. Attach the line on the throwable PFD to a stationary object.
5. Tell the first person in line (the “victim”) to enter the water slowly, keeping his/her head dry, and move away from the side of the pool.
6. Instruct the next person in line (the “rescuer”) to make eye contact with the victim and to throw a throwable PFD beyond the victim.
7. Have the rescuer pull the PFD toward the victim.
8. When the victim grasps the PFD, have the rescuer gently pull the victim to the edge of the pool.
9. Do not allow the rescuer to help the victim out of the water.
10. After the victim climbs out of the water and walks to the end of the line, have the

thrower enter the water as a victim, and the next person in line throw.

11. Follow this procedure until all have taken a turn as both victim and rescuer.
12. If time allows, the last group can help rinse PFDs and gear.



Throw, Don't Go!

Post-Pool Activity

Time: 30 minutes

Use with Teacher Information

Overview

Review skills learned during pool activity.

Objectives

After completing this activity, students should be able to:

1. Describe three skills learned at the pool.
2. List two safety rules learned at the pool.

3. Express appreciation for help received at the pool.

Materials

- Five-foot length of paper
- Writing paper, envelopes, and stamps
- Pen, pencils, and other art supplies

Procedure

1. Review skills and safety rules learned at the pool.
2. Discuss things that went well and things that didn't go well.
3. Talk about the helpers at the pool and how they were valuable.
4. Do one of the following:
 - Have students write and illustrate thank-you notes to pool helpers.
 - Trace or draw the outline of an immersion suit on 5-foot paper. Have students write thank-you notes and glue them onto the suit.
 - Have students draw pictures illustrating what they learned at the pool.
5. Send the notes or pictures to those who helped with the pool activity.

This activity addresses Alaska Content Standards:

Language Arts A-1 Effective writing, A-2 Writing conventions, A-4 Writing and speaking with purpose, A-6 Using visual communication, C-1 Developing a project, C-2 Project organization, C-3 Group decision making, C-4 Project quality, C-5 Project collaboration, D-1-A Personal experience and prior knowledge

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices

Arts A-1 Participate in the arts

Unit Review

Time: 30 minutes

Use with Teacher Information

Overview

Review of cold water survival skills

Objectives

After completing this activity, students should be able to:

1. List the seven Stay Rules.
2. Demonstrate the HELP.

3. Demonstrate the Huddle position.
4. Demonstrate the elbow lock.
5. Describe the Throw, Don't Go! rescue technique.

Materials

- One set per class, Cold Water Survival Skills Pictures (make from Template #1)

Procedure

1. Divide class into small groups.
2. Have one student from each group select, without looking, one of the pictures. You will need to help students identify what their picture shows since some graphics depict more than one thing. For example, the graphic of three children huddled together illustrates both Stay Together and Huddle.
3. Explain that they will act out the skill shown on the picture. Allow each group a few minutes to discuss the picture and decide how to act it out.
4. Have each group take turns acting out the survival skill depicted in the picture.
5. Continue until all the pictures have been discussed.

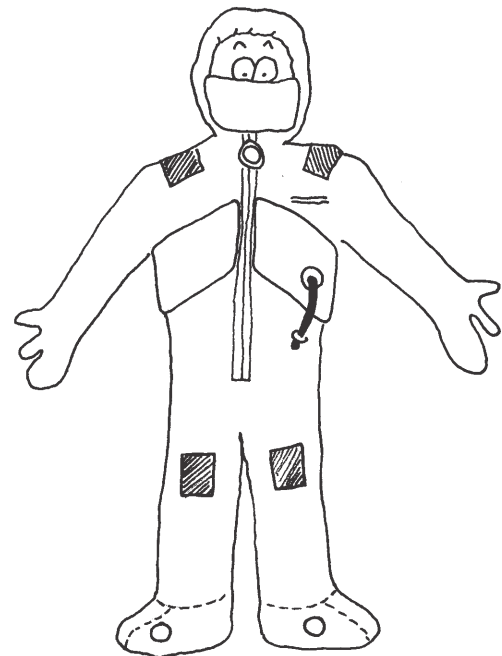
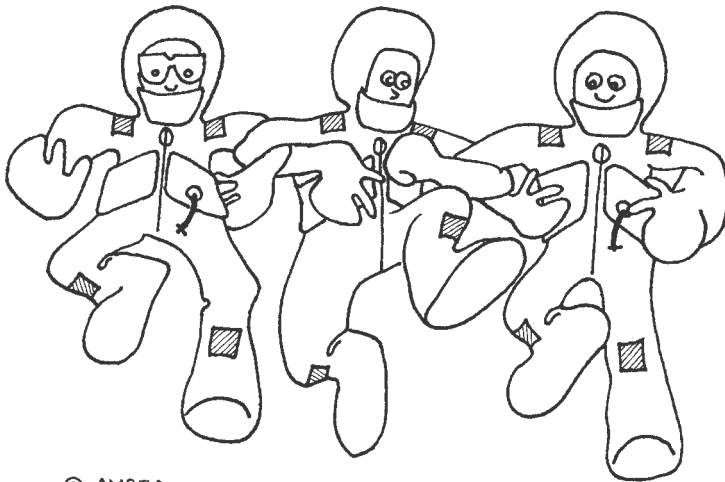
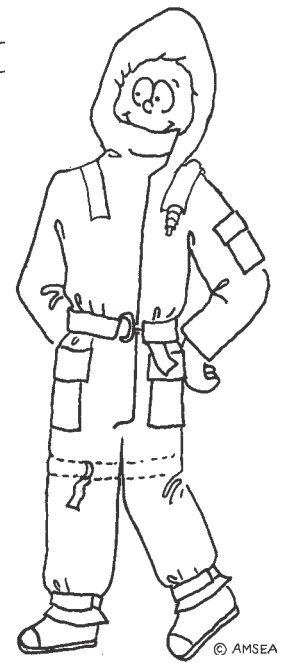
This activity addresses Alaska Content Standards:

Language Arts A-3 Demonstrate speaking skills, A-4 Writing and speaking with purpose, A-6 Using visual communication, B-1 Meaning from written, oral, and visual

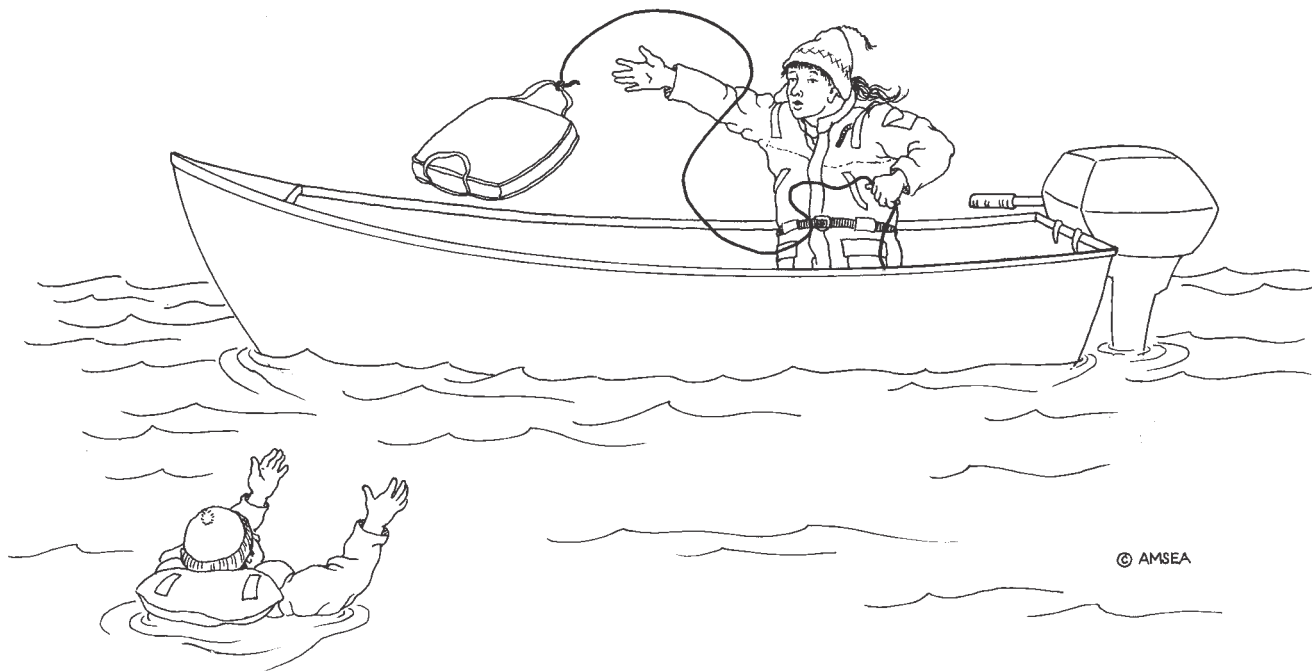
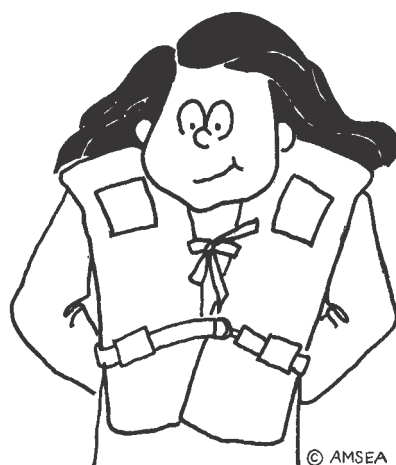
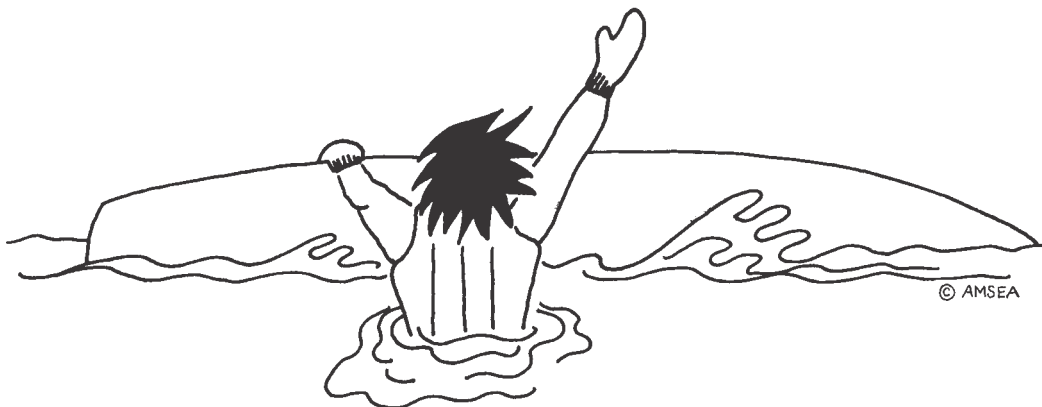
Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices

Arts A-1 Participate in the arts

Cold Water Survival Skills Pictures



Cold Water Survival Skills Pictures





Unit 4: Ice Safety

Unit Rationale

People of all ages enjoy spending time on ice—skating, fishing, hunting, and traveling with skis, dog sleds, and snow machines. But every year many people fall through thin ice, and many drown or die of hypothermia.

Young children are particularly susceptible to the attraction of frozen water and vulnerable to the danger of thin ice. Early training provides children with information on ice safety, and useful survival and rescue skills if they fall through ice. It also instills habits that will last a lifetime. Proper training and equipment can make the difference between life and death.

Unit Goal

Children will recognize the dangers of ice, and learn some basic safety rules for activities on ice and rescue skills for ice emergencies.

Ice Safety: Teacher Information

The information in this section gives you, the teacher, a background in the topic. Use judgment when presenting this material. Many concepts are not suitable for young children.

Definitions

Ice is frozen water—often floating on liquid water, making it dangerous

- A. Fresh water freezes at 32°F
- B. Salt water freezes at 29°F

Ice is found year-round

- A. At high elevations throughout the world, even at equator
- B. Near north and south poles

Seven million cubic miles of fresh water is stored as ice in glaciers and ice caps

Ice terms

- A. Breakup = when ice in rivers and lakes melts and breaks up in spring
- B. Cloudy/milky ice = color of ice made from snow saturated with water and refrozen
- C. Cracks and sinking—occur due to falling water levels in rivers, streams, and lakes
- D. Freeze-up = when ice begins to form on rivers, lakes, and seas
- E. Ice jams = ice chunks that catch in narrow or shallow areas
- F. Lead = any fracture or passageway through sea ice that is navigable by surface vessel (pronounced “leed”)
- G. Marsh ice = ice that forms on marshes
- H. Overflow = water that flows over ice from cracks, sinking ice, or pressure ridges
- I. Pack ice = any area of sea ice not attached to shore
- J. Pressure ridge = ice pushed up from pressure
- K. River ice = ice that forms on rivers
- L. Sea ice = ice that forms on sea or ocean

How People Use Ice

- Ice skating and ice hockey
- Fishing through holes cut in ice
- In Arctic: hunting bears, whales, and seals
- Serves as roads and trails
- A. Frozen rivers, lakes, oceans, and seas often provide a more direct route than over land

- B. Frozen tundra opens up areas to travel that are difficult in summer
- C. Snowmachines, dog teams, and skis are used for travel and transport

Dangers of Falling through Ice

Drowning

- A. Cold water immersion leads to hypothermia and loss of ability to self-rescue
- B. Currents can overpower a person in the water and prevent rescue
- C. A leading cause of snowmachine-related death

Hypothermia following rescue is life-threatening if not quickly treated

Ice Is Complex and Changeable

- Children should not be expected to accurately assess ice safety
 - What is true at one time of season may not be true at another
 - What is true one year may not be true the next
 - Knowing a lake or river in all seasons helps predict ice stability
- A. Watch how and when freeze-up occurs
 - B. Observe waterfowl—they keep water open and once they leave, ice may be thin in that area
 - C. Constant cold temperatures create the most stable ice

Rules for Traveling on Ice

- Be suspicious of ice stability at all times
 - Young children should always travel with an adult who knows the ice
 - Wear a PFD—float coats or flotation coveralls work best
 - Carry rescue gear—awls or picks, a stick or line
 - Safe travel on ice requires specialized training and local knowledge—use extreme caution and always check ahead with a pole when suspicious
 - Check ice conditions just prior to departure
- A. Conditions change quickly
 1. Melting and refreezing can occur rapidly
 2. Refrozen ice may not be as strong as original
 - B. Previous travelers' tracks do not mean area is safe
 - Stay on safe ice—clear ice is the strongest ice
 - Avoid dangerous ice
 - A. Near lake inlets and outlets, and on main channels of rivers
 - B. Over areas of vegetation
 - C. Under cut banks of rivers and creeks

- D. During breakup—ice can be very unstable
- E. Chemicals and pollutants weaken ice
- F. Cloudy/milky ice not as strong as clear ice
- G. Cracked and sinking ice is very unstable
- H. Variable temperatures during freeze-up cause very unstable conditions
- I. Ice jams can cause flooding when they dam and when they break; are very unstable
- J. The larger the body of water, the slower it is to cool and freeze
- K. Lead—open water or weak ice presents obvious dangers
- L. Marsh ice—always unstable
- M. Overflow
 - 1. Can be present on land around springs and seeps
 - 2. Can be a hazard on rivers, lakes, and wet hillsides
 - 3. Presence may or may not be obvious—may be hidden in snow pack
 - 4. Increased incidence of overflow during certain times
 - a. Extreme cold—rivers can freeze to bottom, forcing groundwater up through cracks
 - b. Rapid temperature changes cause changes in water flow under ice, forcing water to surface
 - c. Air pressure changes can force water to surface
 - d. Check with local experts—some overflow locations are well known
- N. Pressure ridges
- O. River ice
 - 1. Most dangerous in areas of fast-moving water—ice strength can be decreased by 15%
 - 2. May form in chunks pushed up and jumbled together with weak ice in between
- P. Rocks and tree trunks absorb heat, weakening ice
- Q. Sea ice—one of most dangerous kinds of ice
 - 1. Salt water takes longer to freeze than fresh water
 - 2. Stability affected by different levels of salinity, tidal action, and constant motion; a layer of fresh-water ice or snow can make sea ice even more unpredictable
- R. Slush may indicate overflow or melting from above or below, and may refreeze from top down, making it hazardous
- S. Snow on ice can hide weak ice or hazardous overflow; watch for irregularity in snow cover that may indicate overflow or presence of water
- T. Water on ice may indicate melting, open area, crack, or overflow

Factors That Can Help If You Fall through Ice

- Wearing a PFD will keep you afloat
- Air trapped in clothes provides some flotation

- Carry items that can help you and others—ice awls, sheath knife, metal picks, ski poles, etc.

Ice Rescue Techniques

Self-rescue from cracked ice

- Lie down immediately
- Distribute weight evenly by spreading arms and legs
- Crawl or roll to safety—go back the way you came, if possible
- Stand only when you are sure you are safe

Self-rescue from a fall through ice

- Swim to edge of ice
- Reach forward onto unbroken ice surface
- Do not push down on ice
- Use a strong flutter kick to push yourself up onto ice
- Use ice awls, a sheath knife, metal picks, or ski poles to provide traction to pull yourself onto ice
- If no traction aids, try swimming stroke on either stomach or back
- If ice edge breaks, keep trying until thicker ice is reached
- Roll out of water and roll or crawl away from edge of ice until safe ice or shore is reached
- Stand only when you are sure you are safe
- Begin immediate treatment for hypothermia

Rescuing a victim

- Young children should run for adult help if it is near and they will not endanger themselves doing it
- Don't become a victim!
- Use Throw, Don't Go! rescue technique, if possible
 - Note to teachers: this rescue technique is more completely called Reach, Throw, Don't Go! We have chosen to not teach the Reach portion in this volume because of the potential danger of victims pulling young children into the water.
 - Stay on land, if possible
 - Throw to victim something with line attached—same kind of items used for water rescue
 - Pull victim to safety
 - Immediately treat for hypothermia

Ice Safety: Activities Guide

- Activities in this volume are sequential, and each unit assumes some knowledge of the material in the preceding unit.
- Activities are arranged by topic in the same order as the Teacher Information.
- Detailed Alaska Content Standards are located at the end of each activity's procedures.
- Times given for activities are approximate.
- In order to provide a choice of handouts for prereaders and readers, many activities have more than one handout that covers the same information.
- Many activities contain true stories; be sensitive to the possibility that they could be written about your students' relatives or friends.
- **AMSEA** This symbol means the items are available to borrow from AMSEA.

Topic: Definitions

Activity	Objective	Standards
1. What Is Ice? An experiment and worksheets explain what ice is p. 201	<ul style="list-style-type: none"> • Define ice 	Language Arts Mathematics Science

Topics: How People Use Ice, Dangers of Falling through Ice, Ice Is Complex and Changeable, Rules for Traveling on Ice

Activity	Objectives	Standards
2. Uses and Dangers of Ice Ice dangers highlighted with a story, a field trip, and an art project p. 204	<ul style="list-style-type: none"> • List four ways people use ice • List two dangers of ice • Identify places on a local lake or river where ice is dangerous 	Language Arts Mathematics Science Skills for a Healthy Life Arts
3. Safety for Activities on the Ice Worksheets, an art project, and stories teach ice safety rules p. 207	<ul style="list-style-type: none"> • State that an adult should be with them when they are on the ice • State why thin ice is dangerous • State what can happen if they fall through the ice 	Language Arts Mathematics Science Skills for a Healthy Life Arts

Topics: Factors That Can Help If You Fall through Ice, Ice Rescue Techniques

Activity	Objectives	Standards
<p>4. Ice Self-Rescue Practice ice self-rescue techniques in the classroom p. 216</p>	<ul style="list-style-type: none"> • Demonstrate one technique for self-rescue from cracked ice • Demonstrate two techniques for self-rescue from a hole in the ice 	Skills for a Healthy Life
<p>5. Throw, Don't Go on the Ice! In the classroom, practice rescuing others from a fall through the ice p. 221</p>	<ul style="list-style-type: none"> • Demonstrate the Throw, Don't Go! technique for ice rescue 	Skills for a Healthy Life

Topic: Culminating Activities

Activity	Objectives	Standards
<p>6. Ice Safety Mural Students create a mural to review ice dangers and safety rules p. 224</p>	<ul style="list-style-type: none"> • List four ways people use ice • List two dangers of ice • State that they should have an adult with them when on the ice • Draw one technique for self-rescue from cracked ice • Draw two techniques for self-rescue from a hole in the ice • Draw the Throw, Don't Go! technique for rescuing someone who has fallen through the ice 	Language Arts Skills for a Healthy Life Arts Library/Information Literacy
<p>7. Ice Choices Card game to review unit objectives p. 225</p>	<ul style="list-style-type: none"> • List four ways people use ice • List two dangers of ice • State that they should have an adult with them when on the ice • Describe one technique for self-rescue from cracked ice • Describe two techniques for self-rescue from a hole in the ice • Describe the Throw, Don't Go! technique for rescuing someone who has fallen through the ice 	Language Arts Skills for a Healthy Life

What Is Ice?

Time: 10 minutes one day, 15 minutes the next

Use with Teacher Information


Overview

An experiment and worksheets explain what ice is.

Objective

After completing this activity, students should be able to define ice.

Materials

- *This Place Is Cold* by Vicki Cobb 
- One per student, Student Handouts #1 **What Is Ice?** and #2 **Water Turns into Ice**
- Two shallow containers filled with water
- Freezer

Extensions

- Two identical containers, one filled with fresh water, one with salt water
- Bucket or other large container
- Can
- Rocks
- Candle

Procedure

1. Read *This Place Is Cold*.
2. Have students place one container in the freezer and the other in a warm place.
3. Leave for 24 hours.
4. Discuss the differences between the two containers.
5. Have students note the color of the ice.
6. Distribute and have students complete Student Handouts #1 and #2.

Extensions

1. Compare the freezing rates of fresh water and salt water by timing how long each takes

to freeze. Be sure to use identical containers and equal quantities of water.

2. Make an ice candle:
 - Fill a large container with water.
 - Place small rocks in a tin can and float the can low in the water.
 - Freeze the whole thing.
 - Pour hot water into the can to dislodge it from the ice. Remove the can.
 - Place a candle in the hole left by the can.
 - Light candle and have students observe melting ice.

This activity addresses Alaska Content Standards:

Language Arts A-1 Effective writing, A-2 Writing conventions, B-1 Meaning from written, oral, and visual text

Mathematics A-1 Numeration, A-2 Measurement, A-6 Statistics and data analysis, B-4 Developing problem solving strategies, B-5 Checking results, C-1 Developing a project,

D-1 Developing a logical position, E -2 Practical applications of mathematics

Science A-4 Observable natural events, A-5 Forces of nature, A-15 Using local knowledge, B-1 Scientific processes, B-2 Tools of scientific investigation, C-1 Earth's physical systems, C-2 Knowledge through experimentation, C-5 Collaboration, C-6 Scientific discovery

Name: _____

What Is Ice?

Ice is water! When water is cold enough it becomes hard and freezes, and is called ice.

Name three other things that are very cold:

Name some other things that are hard:

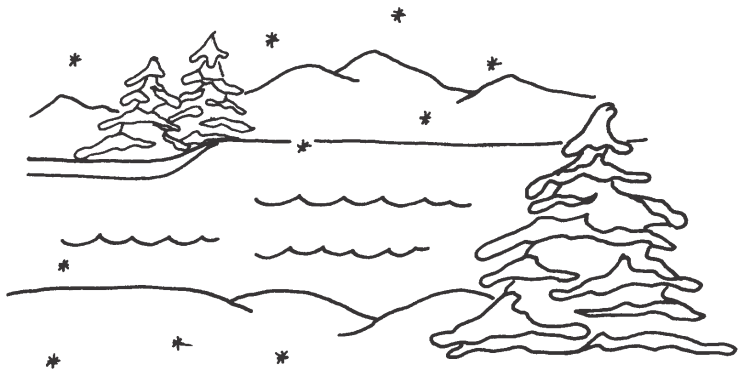
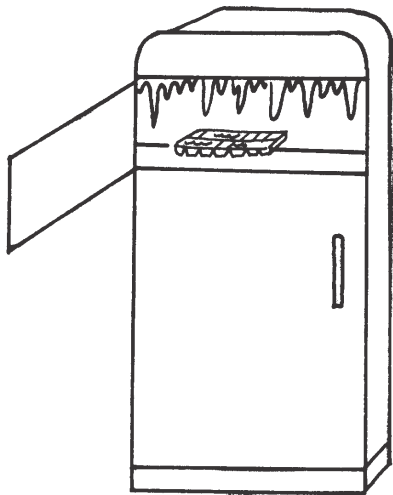
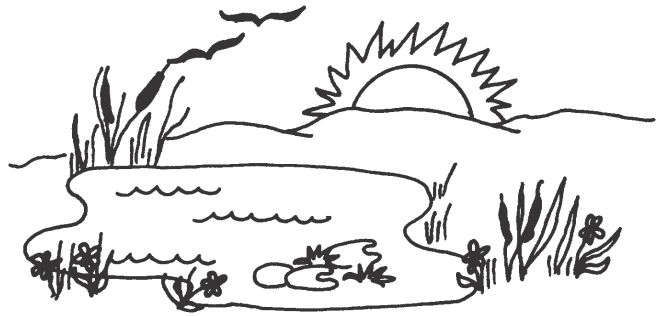
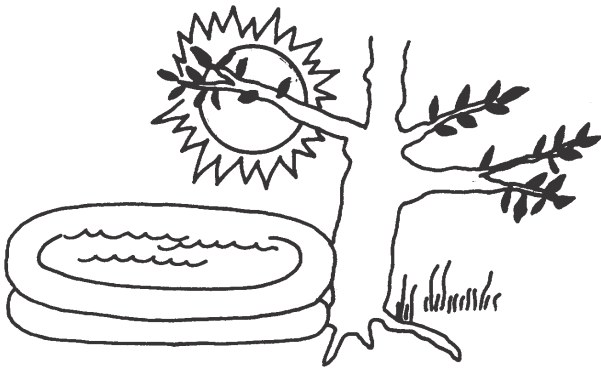
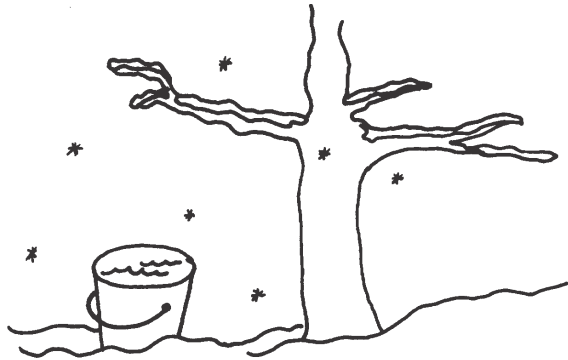
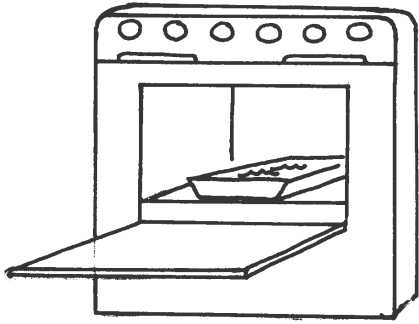
Some ice is clear and has no color.

What other things are clear and have no color?

Name: _____

Water Turns into Ice

Any water can turn into ice if it is left in a cold place.
Color the places where water could turn into ice.



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Uses and Dangers of Ice

Time: 60-90 minutes, including field trip

Use with Teacher Information

Overview

Ice dangers highlighted with a story, a field trip, and an art project.

Objectives

After completing this activity, students should be able to:

1. List four ways people use ice.

2. List two dangers of ice.

3. Identify places on a local lake or river where ice is dangerous.

Materials

- *Let's Go Fishing on the Ice* by George Travis, *Tobias Goes Ice Fishing* by Ole Hertz, or *Arctic Son* by Jean Craighead George **AMSEA**
- One per student, Student Handouts #1 **Water under Ice** and #2 **Dangerous Ice**
- One per student and teacher, PFD (if you walk on the ice or stand close to it) **AMSEA**
- One per student, ruler

Procedure

Part 1

1. Read *Let's Go Fishing on the Ice*, *Tobias Goes Ice Fishing*, or *Arctic Son*.
2. Have students draw pictures of themselves using ice in their favorite ways.
3. Have students write stories about their pictures. For kindergarten, have students talk about their pictures.

Part 2

1. Take a field trip to a frozen lake or river.
 - Make sure all students and adults wear PFDs on or near the ice.
 - Have students identify places where people use ice.

- Point out places where ice may be dangerous and look at the color of the ice.
 - Discuss how different the frozen water is from summertime.
2. Back in class, review what was learned at the frozen lake or river.
 3. Have students list dangers they observed.
 4. Distribute and have students complete Student Handout #1 and/or #2.
 5. Have students do one of the following:
 - Draw a picture about ice.
 - Write a poem about ice.
 - Write a story about a frozen river or lake.
 6. Save students' work for Activity #6.

This activity addresses Alaska Content Standards:

Language Arts A-1 Effective writing, A-2 Writing conventions, A-3 Demonstrate speaking skills, B-1 Meaning from written, oral, and visual text, D-1-A Personal experience and prior knowledge

Mathematics A-1 Numeration, A-2 Measurement, A-3 Arithmetic and computation, B-3 Using mathematics in real-life situations

Science A-4 Observable natural events, A-5 Forces of nature, A-15 Using local knowledge

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices

Arts A-1 Participate in the arts, A-3 Materials, tools, techniques, and processes

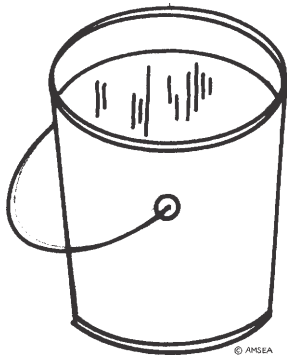
Name: _____

Water under Ice

When water freezes it may only turn to ice on top.

There may be cold, unfrozen water under the ice.

This bucket had 10 inches of water in it.



The 2 inches on top froze.

How many inches of water are left under the ice?

$$\begin{array}{r} 10 \\ -2 \\ \hline \end{array}$$

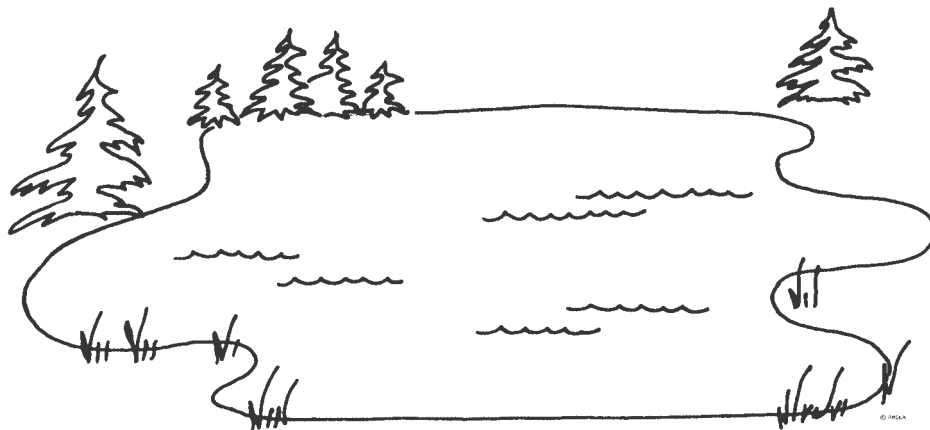
Use your ruler to find something in the room that is 10 inches tall. Measure 2 inches off its top. Look at how long those distances are.

This lake is 60 inches deep.

$$\begin{array}{r} 60 \\ -5 \\ \hline \end{array}$$

If the top 5 inches freeze, how many inches of water will be under the ice?

Use your ruler to find something that is 60 inches tall. Measure 5 inches down from the top. Look at how long those distances are.



Name: _____

Dangerous Ice

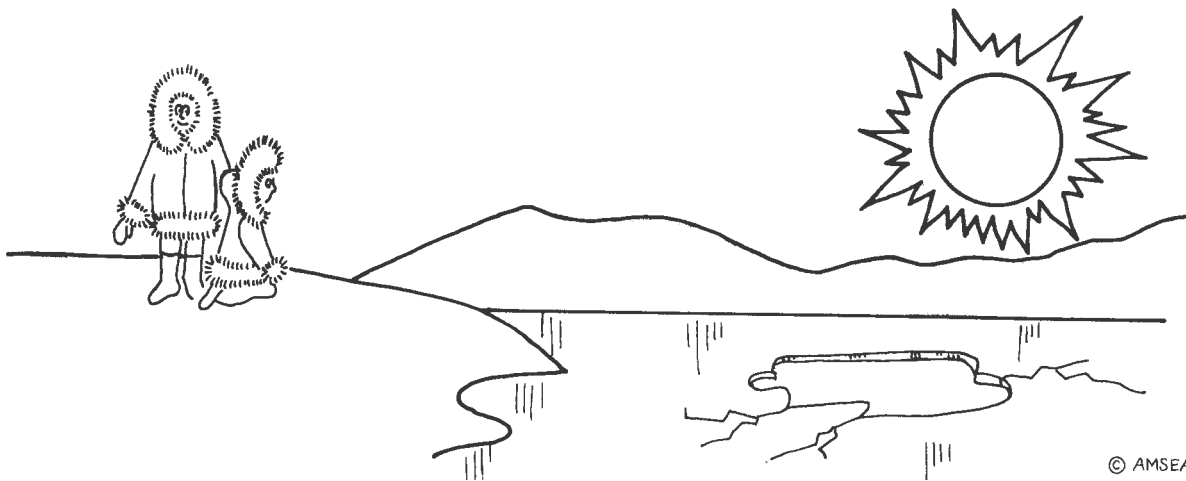
Weak ice is dangerous ice.

When things like rocks stick out of the ice, the ice can be weak.

Name some things that could stick out of ice.

Ice can be weak if the weather changes from cold to warm.

What might happen if ice gets warm?



Safety for Activities on the Ice

Time: 30 minutes

Use with Teacher Information

Overview

Worksheets, an art project, and stories teach ice safety rules.

Objectives

After completing this activity, students should be able to:

1. State that an adult should be with them when they are on the ice.
2. State why thin ice is dangerous.
3. State what can happen if they fall through the ice.

Materials

- **Flannel board pieces** (make from Template #1)
- Flannel board
- One per student, Student Handouts #1 **Secret Ice Messages**, #2 **Ice Safety Equipment**, and #3 **A Trip on the Ice**
- Puppets (optional) [AMSEA](#)

Extension

- Collection of appropriate and inappropriate equipment for ice activities

Procedure

1. State and discuss rules for traveling on ice.
2. Use flannel board to discuss the dangers of ice.
 - Review ways people use ice.
 - Discuss who should go with students if they take a trip on the ice.
 - Discuss appropriate clothing to wear on the ice.
 - List equipment to take.
 - Discuss dangerous places on the ice.
 - Have students select appropriate clothing, equipment, and people for activities on ice.
3. Distribute and have students complete Student Handouts #1, #2, and #3.
4. Discuss handout answers and list other ice dangers.
5. Have students draw pictures of themselves on ice.
6. Have students tell or write a story about the picture.
7. Save students' work for Activity #6.

Variation

Use puppets to tell a story about being safe on ice.

Extensions

1. Have students sort a collection of equipment into appropriate and inappropriate categories for use on the ice.
2. Set up an Ice Learning Center for a week.
 - Mark “unsafe” and “safe” areas on the floor with tape.
 - Have students use stuffed animals to act out activities on the ice.
 - Include ice safety equipment, warm winter clothes, and PFDs.
 - Designate a doll or animal to be the adult.

This activity addresses Alaska Content Standards:

Language Arts A-1 Effective writing, A-2 Writing conventions, A-3 Demonstrate speaking skills, A-4 Writing and speaking with purpose, A-6 Using visual communication, B-1 Meaning from written, oral, and visual text

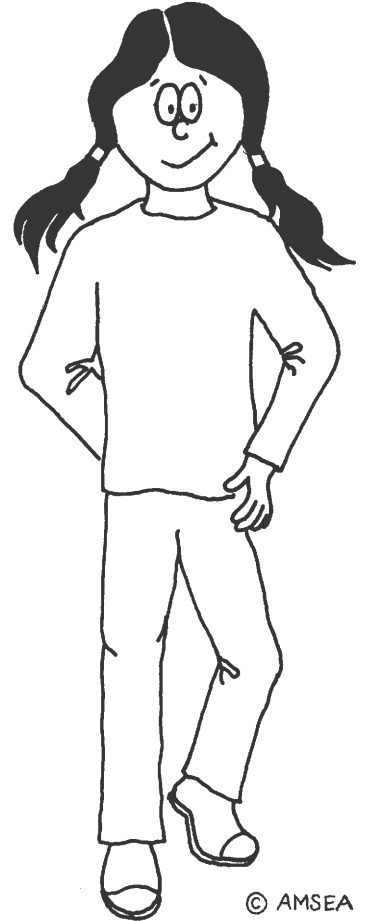
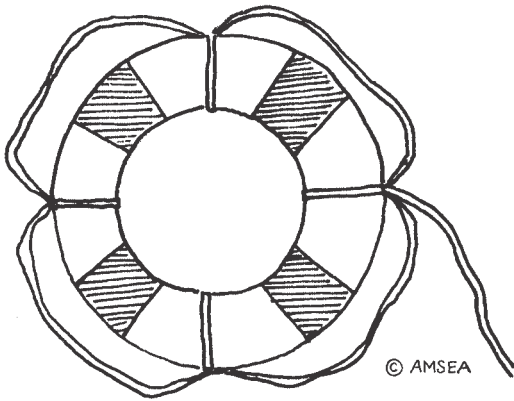
Mathematics A-1 Numeration

Science A-15 Using local knowledge

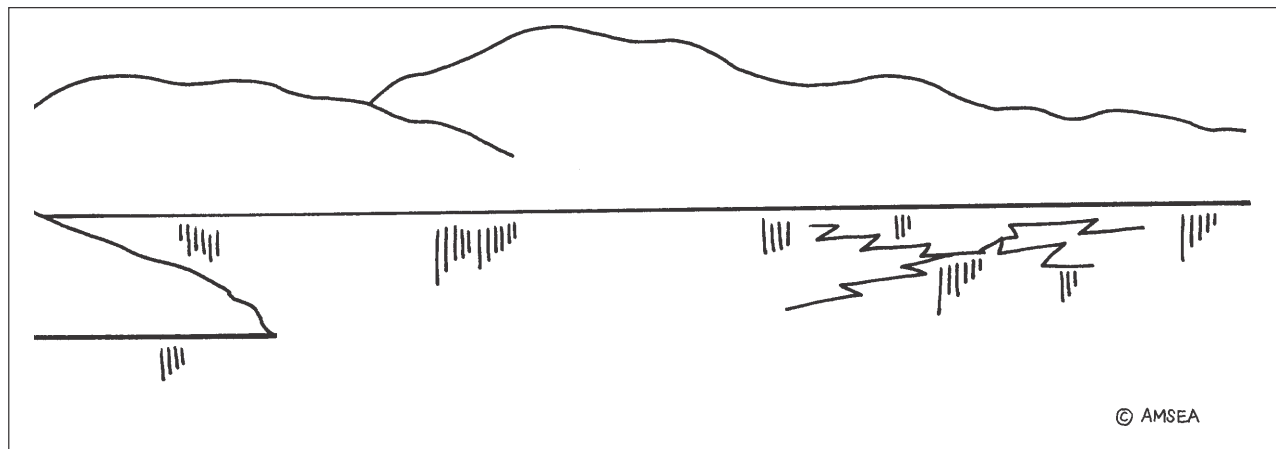
Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices, B-1 Risk and consequences

Arts A-1 Participate in the arts, A-3 Materials, tools, techniques, and processes

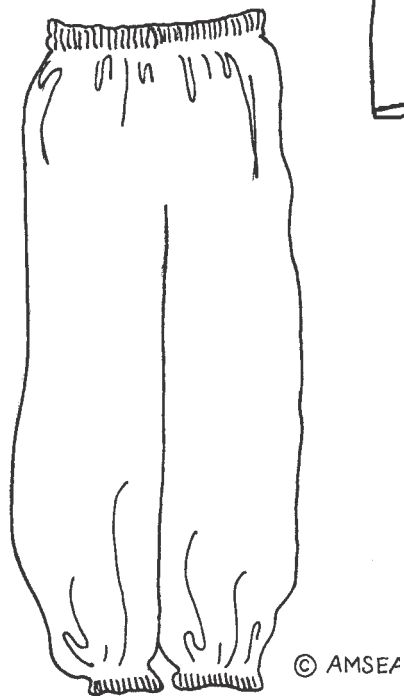
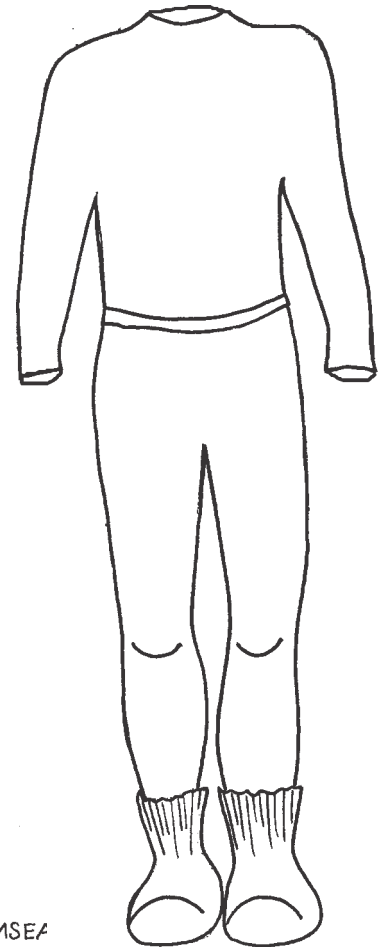
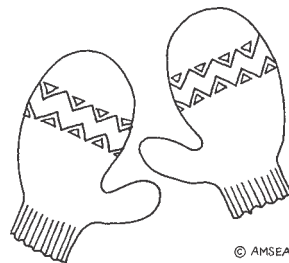
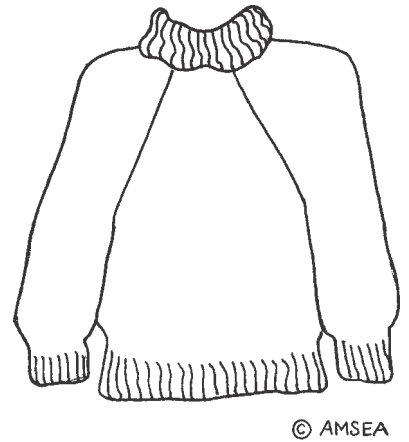
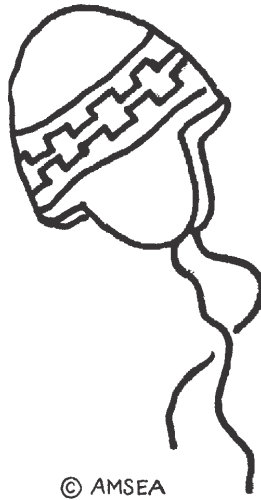
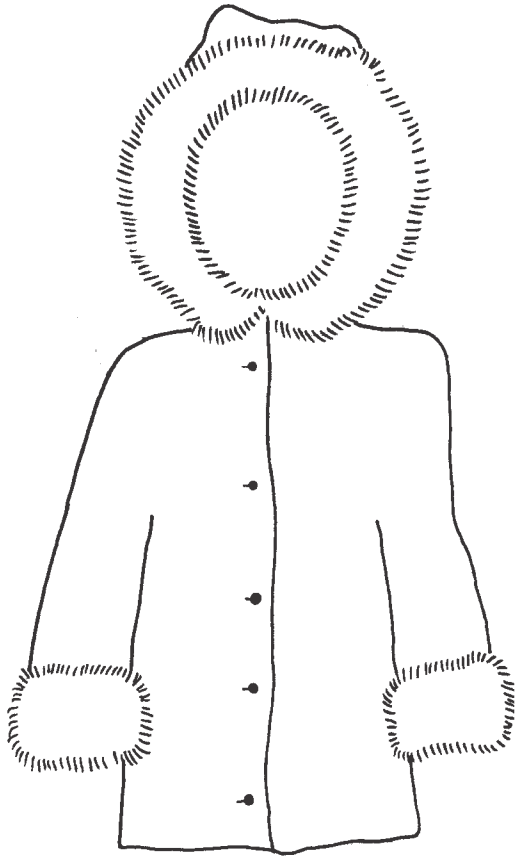
Ice Safety—Flannel Board Pieces



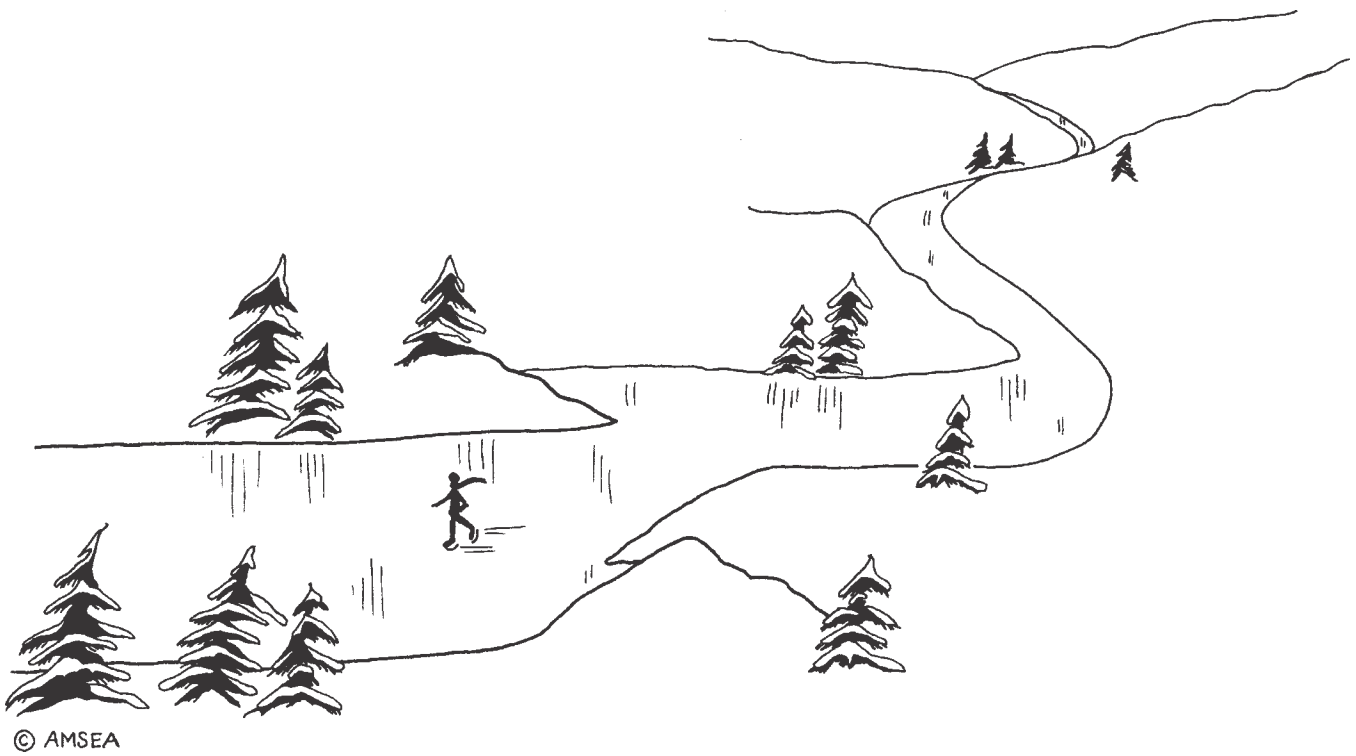
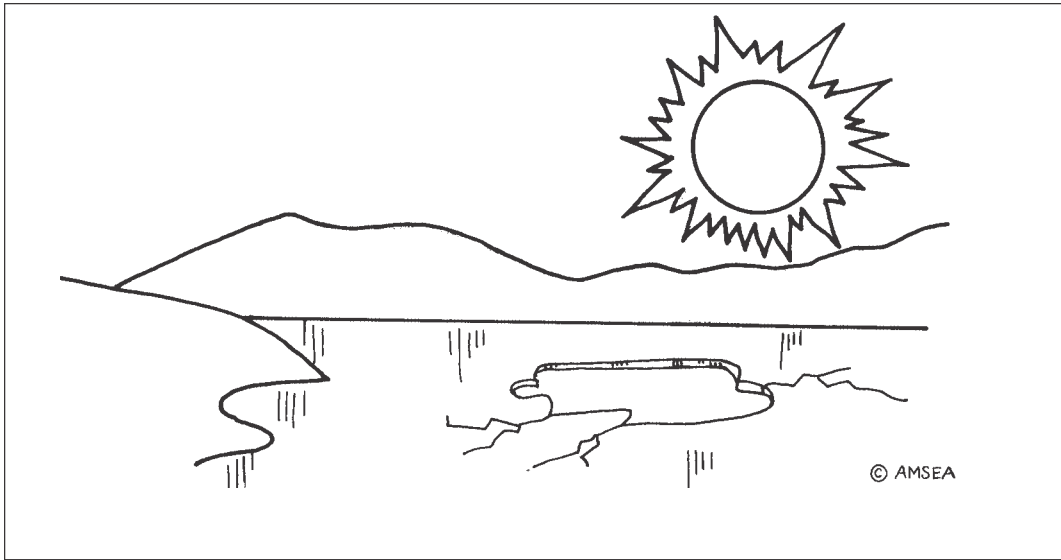
Ice Safety—Flannel Board Pieces



Ice Safety—Flannel Board Pieces



Ice Safety—Flannel Board Pieces



Name: _____

Secret Ice Messages

Ice can be very dangerous. Using the code below, decode the messages about ice.

9 20 9 19 4 1 14 7 5 18 15 21 19

20 15

6 1 12 12 20 8 18 15 21 7 8 9 3 5

20 8 9 14 9 3 5 3 1 14 2 18 5 1 11

23 1 20 5 18 21 14 4 5 18 9 3 5 9 19

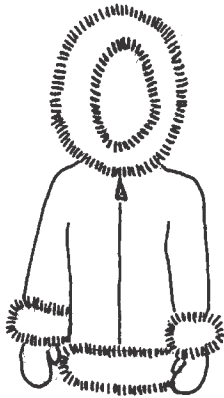
22 5 18 25 3 15 12 4

1 = A	6 = F	11 = K	16 = P	21 = U
2 = B	7 = G	12 = L	17 = Q	22 = V
3 = C	8 = H	13 = M	18 = R	23 = W
4 = D	9 = I	14 = N	19 = S	24 = X
5 = E	10 = J	15 = O	20 = T	25 = Y
				26 = Z

Name: _____

Ice Safety Equipment

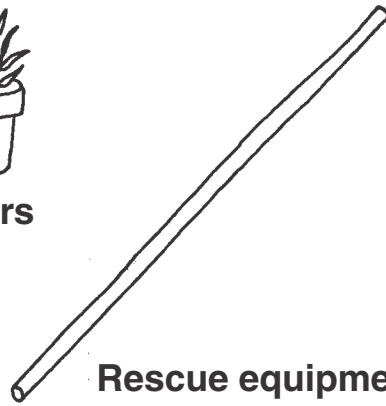
Draw a line from the girl to the things she will need when she takes a trip on the ice.



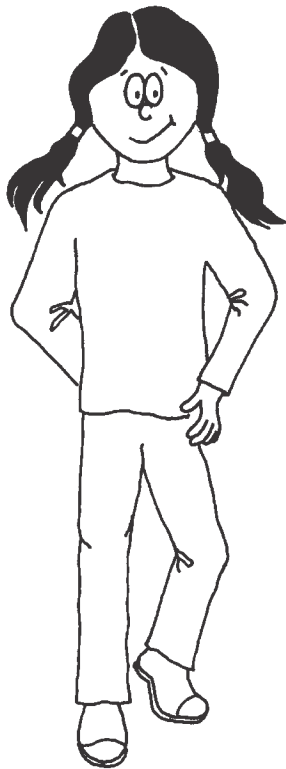
Warm clothes



Flowers



Rescue equipment



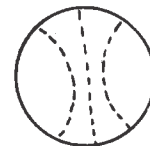
PFD



Survival kit

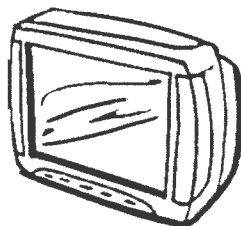


Ice cream



Basketball

Television

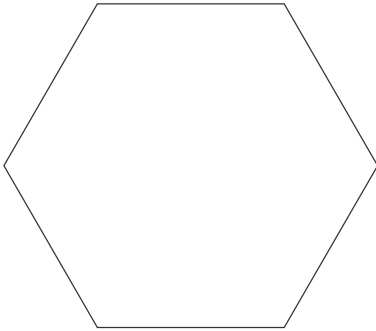


Adult

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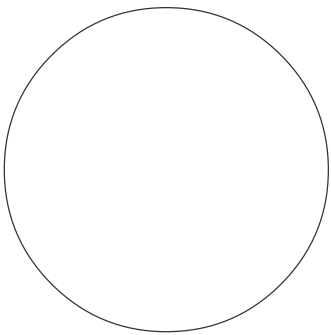
Name: _____

A Trip on the Ice



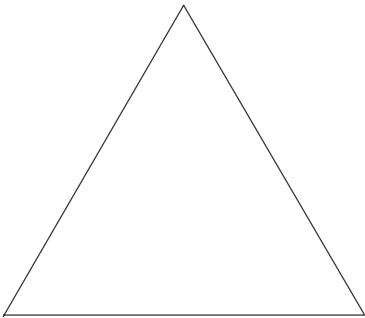
Color this sign red.

Do not go out on ice that has not been tested.



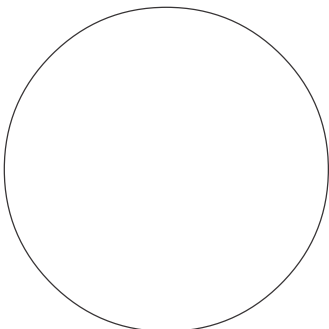
Color this sign green.

Always go on the ice with an adult who knows about ice.



Color this sign yellow.

Walk only where an adult tells you it is safe.



Color this sign your favorite color.

Draw your own face here.

Ice Self-Rescue

Time: 30 minutes

Use with Teacher Information

Overview

Practice ice self-rescue techniques in the classroom.

Objectives

After completing this activity, students should be able to:

1. Demonstrate one technique for self-rescue from cracked ice.

2. Demonstrate two techniques for self-rescue from a hole in the ice.

Materials

- *Danger: Thin Ice* video (10 minutes) [AMSEA](#)
- One per student, Student Handouts #1 **Cracked Ice!**, #2 **Rescue Tool**, #3 **You Can Rescue Yourself**, and #4 **Another Way to Rescue Yourself**
- Assortment of ice rescue tools: ice pick, large nail or spike, screw driver, ski pole, etc.
- Tape to mark floor

Procedure

Before Class

1. Cue video about five minutes from the beginning, to right after the shot of the submerged car.
2. Use tape to mark out several “cracked ice” areas, “hole in the ice” areas, and “safe” areas on the floor.

During Class

Part 1

1. Introduce ice rescue by recounting a story you know or watching *Danger: Thin Ice*. Stress that prevention is better than being in a dangerous situation.
2. Discuss the proper technique to safely get off cracked ice.
3. Demonstrate the technique, or guide a volunteer through the steps.
4. Distribute and have students complete Student Handout #1.
5. Review the technique.

6. Break the class into groups and assign each to a “cracked ice” area.
7. Have students practice the technique.

Part 2

1. Discuss items that could be used for self-rescue from a hole in the ice.
2. Show students examples of ice rescue tools.
3. Discuss how each tool might be used for self-rescue.
4. Have students suggest other tools that might be used for self-rescue.
5. Distribute and have students complete Student Handout #2.
6. Distribute and have students complete Student Handouts #3 and #4.
7. Save students’ work for Activity #6.

Extension

Practice the rescue techniques at the pool using large pool mats as floating “ice.”

This activity addresses Alaska Content Standards:

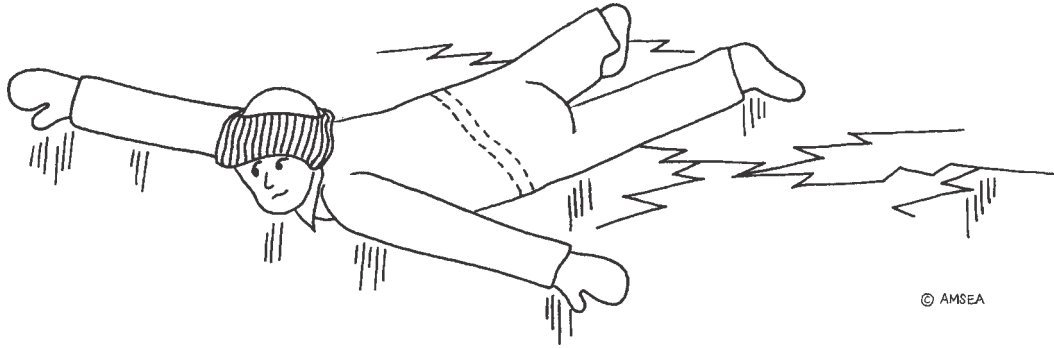
Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury

prevention, A-6 Making informed choices, B-1 Risk and consequences

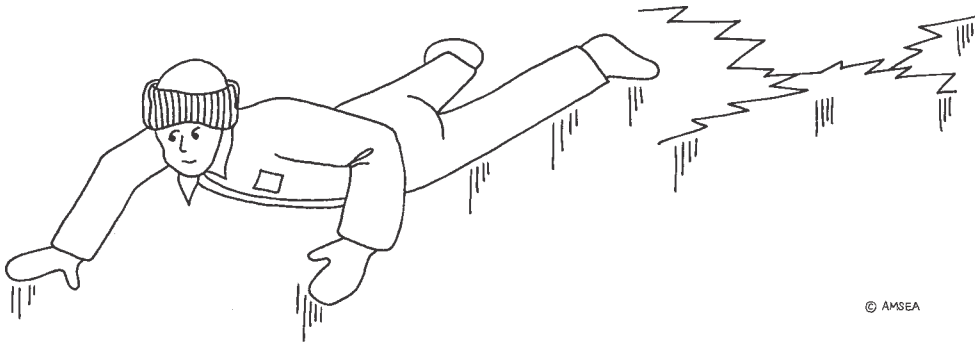
Name: _____

Cracked Ice!

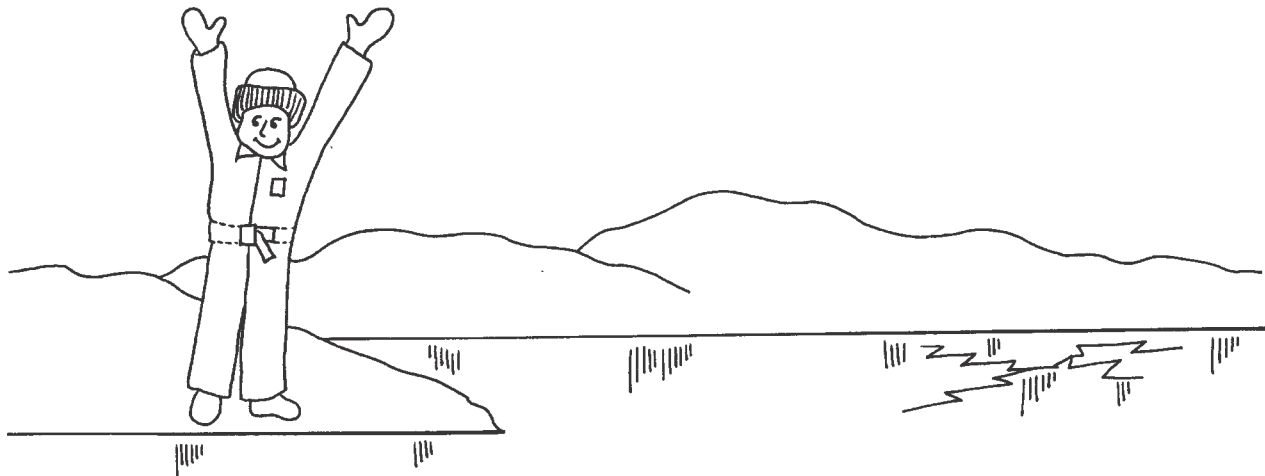
What to do when the ice cracks or starts to break under you:



1. Lie down right away and spread out your arms and legs.



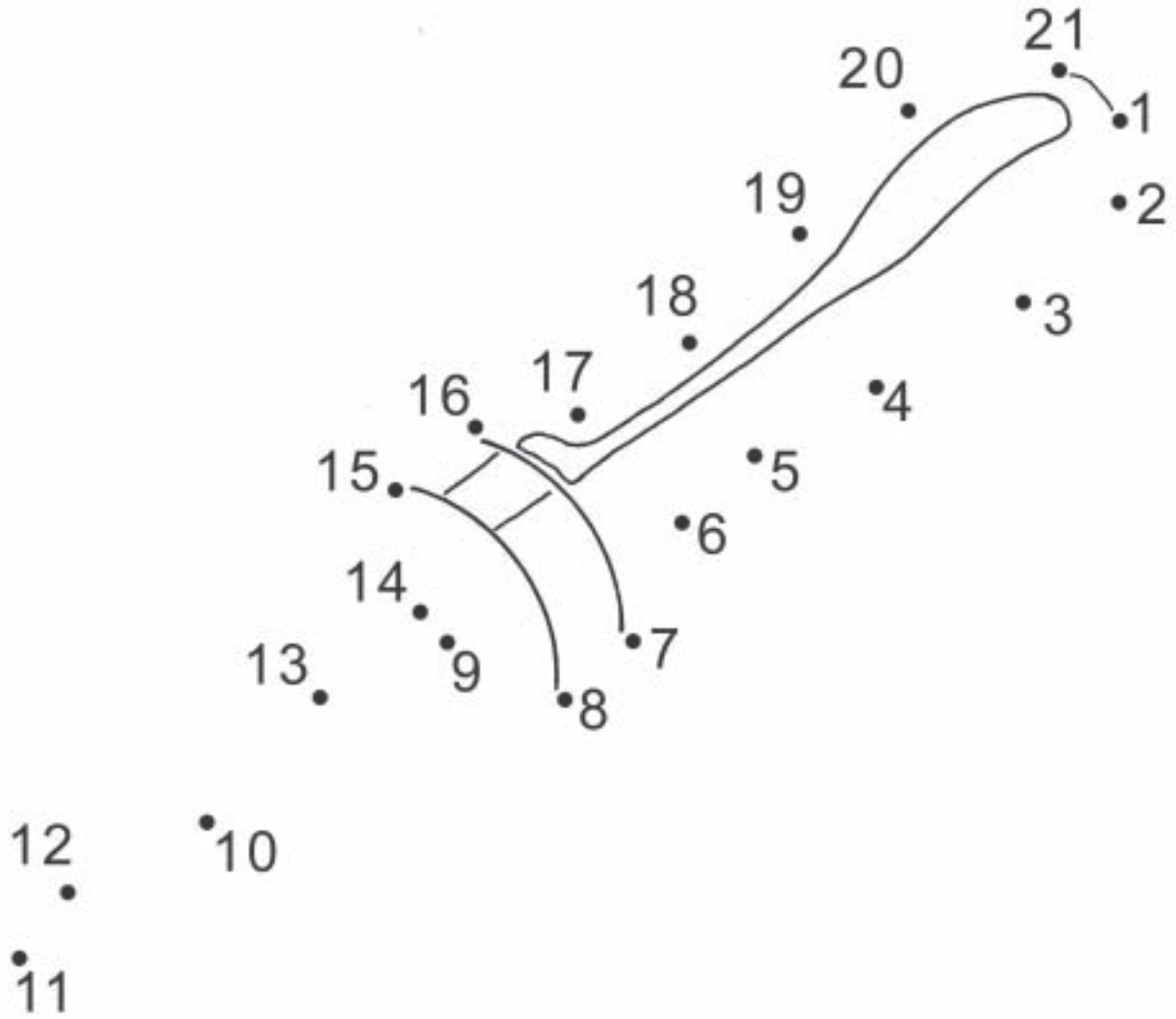
2. Crawl or roll back the way you came.



3. Do not stop until you are safely on strong ice or land.

Name: _____

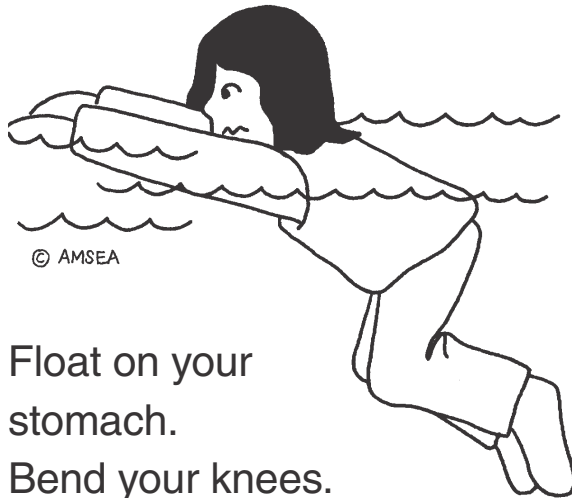
Rescue Tool



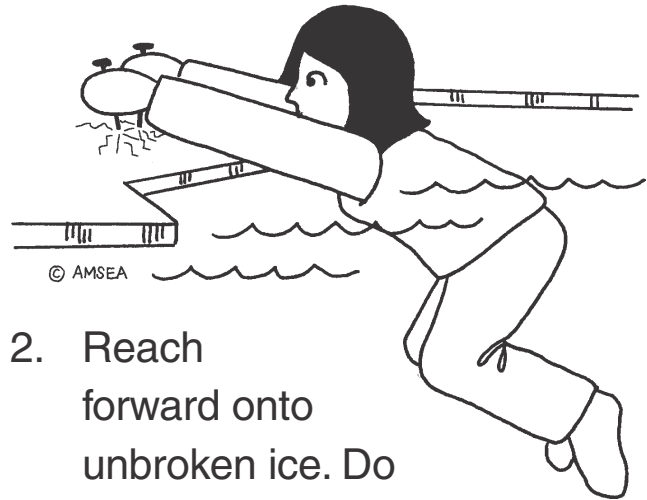
Name: _____

You Can Rescue Yourself

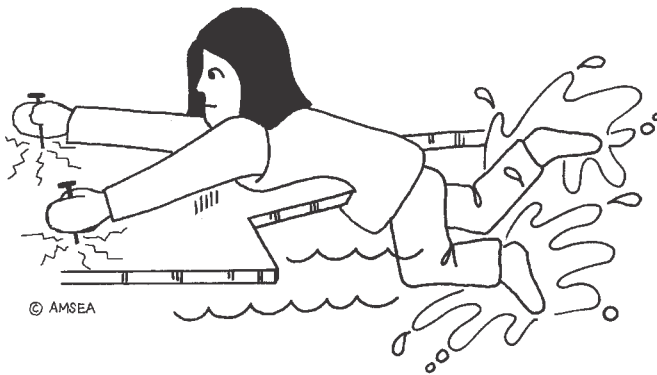
If you fall through the ice, stay calm and do the following things:



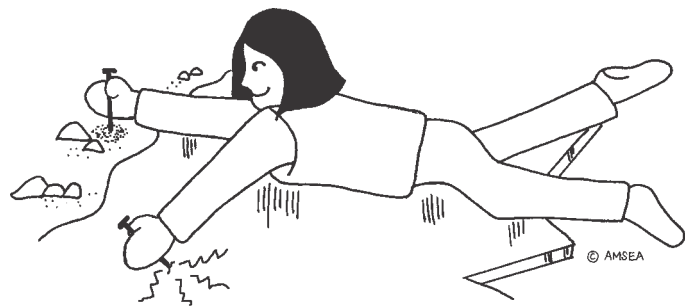
1. Float on your stomach.
Bend your knees.



2. Reach forward onto unbroken ice. Do **not** push down on the ice.



3. Use a strong flutter kick to push yourself out of the water.

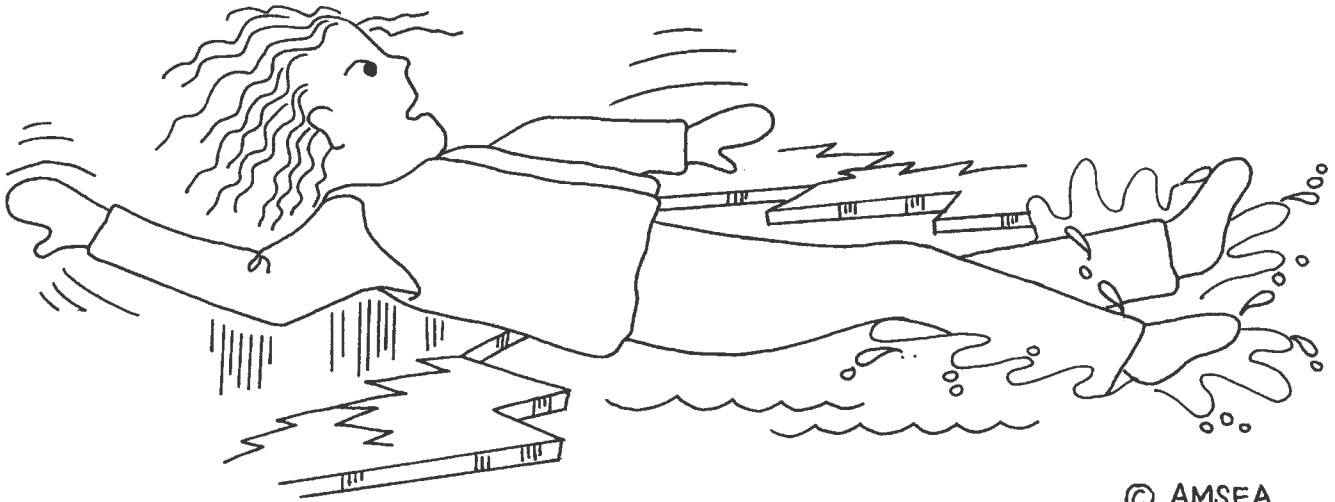


4. When you are on the ice, spread your arms and legs. Crawl or roll to safety.

Name: _____

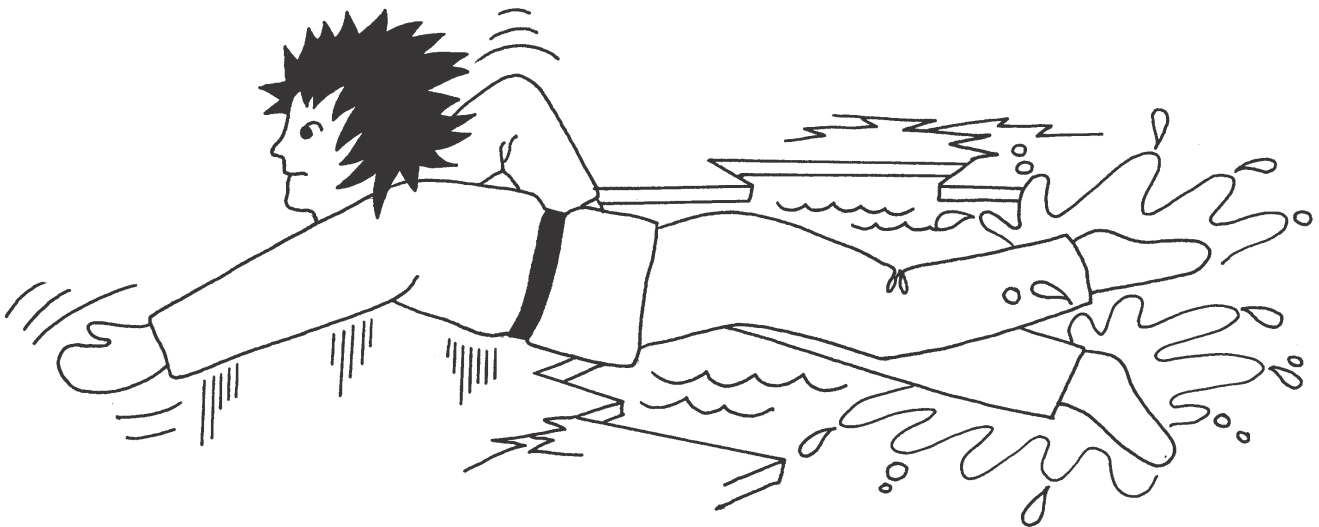
Another Way to Rescue Yourself

If you fall through the ice, you can swim out of the hole.



© AMSEA

You can swim on your back or you can swim on your stomach.



© AMSEA

Be sure to use your strongest flutter kick.

Throw, Don't Go on the Ice!

Time: 30 minutes

Use with Teacher Information

Overview

In the classroom, practice rescuing others from a fall through the ice.

Objective

After completing this activity, students should be able to demonstrate the Throw, Don't Go! technique for ice rescue.

Materials

- One per student, Student Handouts #1 **Rescue!** and # 2 **Rescuing Someone Else**
- Throwable object such as Type IV PFD **AMSEA** or plastic jug
- 20-foot piece of line/rope
- Tape to mark floor

Procedure

Before Class

1. Use tape to mark out a “hole in the ice” area, and a “safe” area on the floor.

During Class

1. Discuss the Throw, Don't Go! technique for rescuing someone from cracked ice or a hole in the ice.
 - Stress that children should always run for help if an adult is nearby.
 - Stress that the rescuer must remain in a safe area and “Don't Go!” to the victim.
2. Distribute and have students complete Student Handouts #1 and #2. Save students' work for Activity #6.
3. Have students practice Throw, Don't Go! rescues.
 - Students line up in the “safe” area.
 - The first person in line moves to the “cracked ice” or “hole in the ice” and stands there. He/she is the “victim.”
4. Summarize by emphasizing prevention.
 - The second person in line is the “rescuer.” The rescuer ties the line to a throwable object and the other to something stationary (do this step for groups unable to tie knots).
 - Stress that the rescuer should never attach the line to himself/herself.
 - Have the rescuers toss the throwable object beyond, **not at** the victim.
 - Stress that rescuers must remain in the safe area and “Don't Go!” to the victim.
 - The rescuer throws the object beyond the victim and then pulls it back toward the victim.
 - When the victim grasps the object, the rescuer gently pulls the victim toward the safe area.
 - The rescuer then takes a turn as the next victim.
 - Follow this procedure until all have taken a turn as both victim and rescuer.

This activity addresses Alaska Content Standards:

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices,

B-1 Risk and consequences, D -1 Responsible decisions

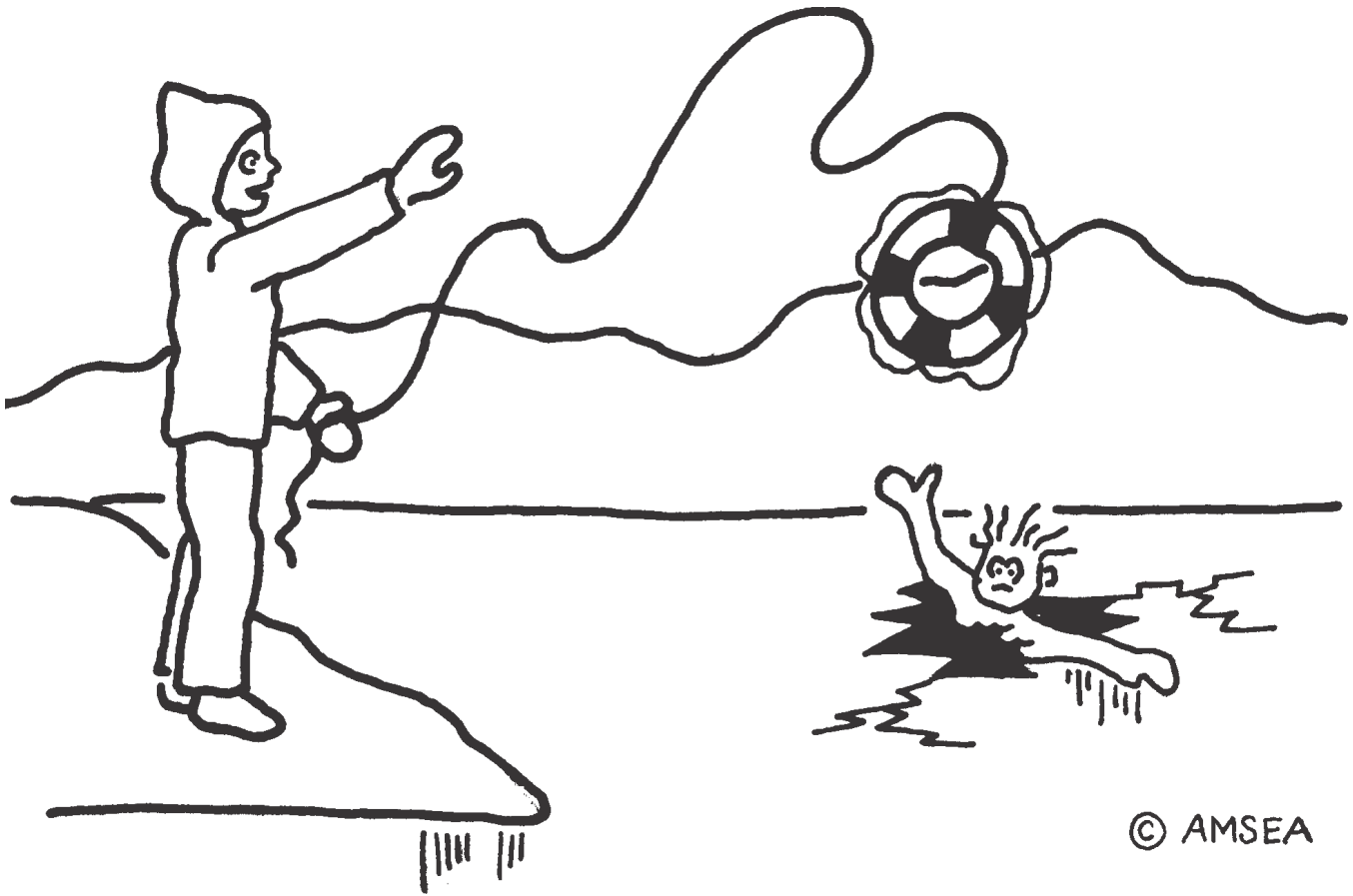
Name: _____

Rescue!

Frank has fallen through the ice.

Color the thing his friend has thrown to him to rescue him.

Be sure **you** stay on solid ice or land when helping someone who has fallen through ice!



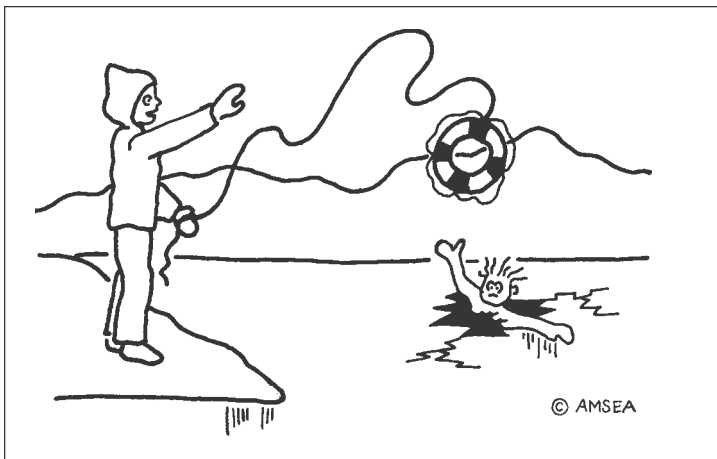
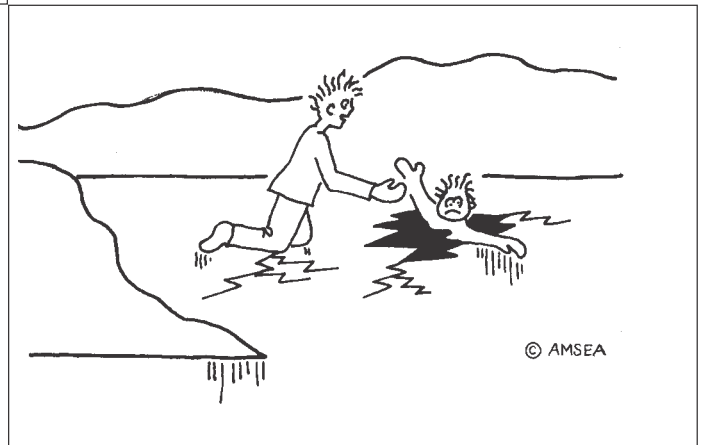
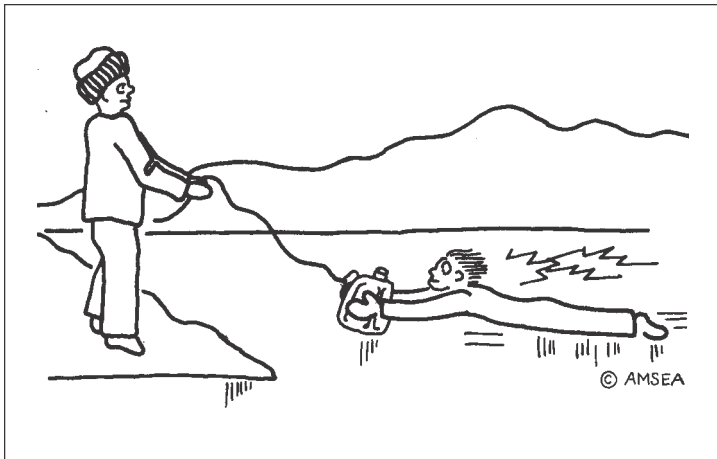
© AMSEA

Name: _____

Rescuing Someone Else

Reach, Don't Go!

Put an X on the picture that is **wrong**.



Ice Safety Mural

Time: 30-40 minutes

Use with Teacher Information

Overview

Students create a mural to review ice dangers and safety.

Objectives

After completing this activity, students should be able to:

1. List four ways people use ice.
2. List two dangers of ice.

3. State that they should have an adult with them when on the ice.
4. Draw one technique for self-rescue from cracked ice.
5. Draw two techniques for self-rescue from a hole in the ice.
6. Draw the Throw, Don't Go! technique for rescuing someone who has fallen through the ice.

Materials

- Students' work from Activities #2-#5.
- Butcher paper or newsprint
- Art supplies

Procedure

1. Plan the mural with your class. The mural should illustrate:
 - Different ways people use ice.
 - Safe and unsafe practices on or near ice.
 - Equipment to carry on ice trips.
 - Ice self-rescue techniques.
 - Throw, Don't Go! ice rescue technique.
2. Assign students to work on different parts of the mural, using their handouts from Activities #2-#5 as reference.
3. When completed, hang the mural where many people will be able to view it.

This activity addresses Alaska Content Standards:

Language Arts C-1 Developing a project, C-2 Project organization, C-3 Group decision making, C-4 Project quality, C-5 Project collaboration

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-5 Well-being of family, A-6 Making informed choices, B-1 Risk and consequences

Arts A-1 Participate in the arts, A-3 Materials, tools, techniques, and processes

Library/Information Literacy A-4 Search for information and resources, B-2 Consider and determine useful strategies, B-3 Access information, B-5 Organize and use information to create a product

Ice Choices

Time: 30 minutes

Use with Teacher Information

Overview

Card game to review unit objectives.

Objectives

After completing this activity, students should be able to:

1. List four ways people use ice.
2. List two dangers of ice.

3. State that they should have an adult with them when on the ice.
4. Describe one technique for self-rescue from cracked ice.
5. Describe two techniques for self-rescue from a hole in the ice.
6. Describe the Throw, Don't Go! technique for rescuing someone who has fallen through the ice.

Materials

- One per every two students, **Ice Choices cards** (make from Template #1)

Procedure

Before Class

1. Make **Ice Choices cards**. Copy duplex-to-duplex to produce 2-sided cards.

During Class

1. Review rules for being on the ice and techniques for ice rescue.
2. Use the cards to review ice safety.
3. Divide the class into groups of 2.
 - Distribute one set of cards to each group.
 - Have students place the sides face-up that show safe choices when on the ice.

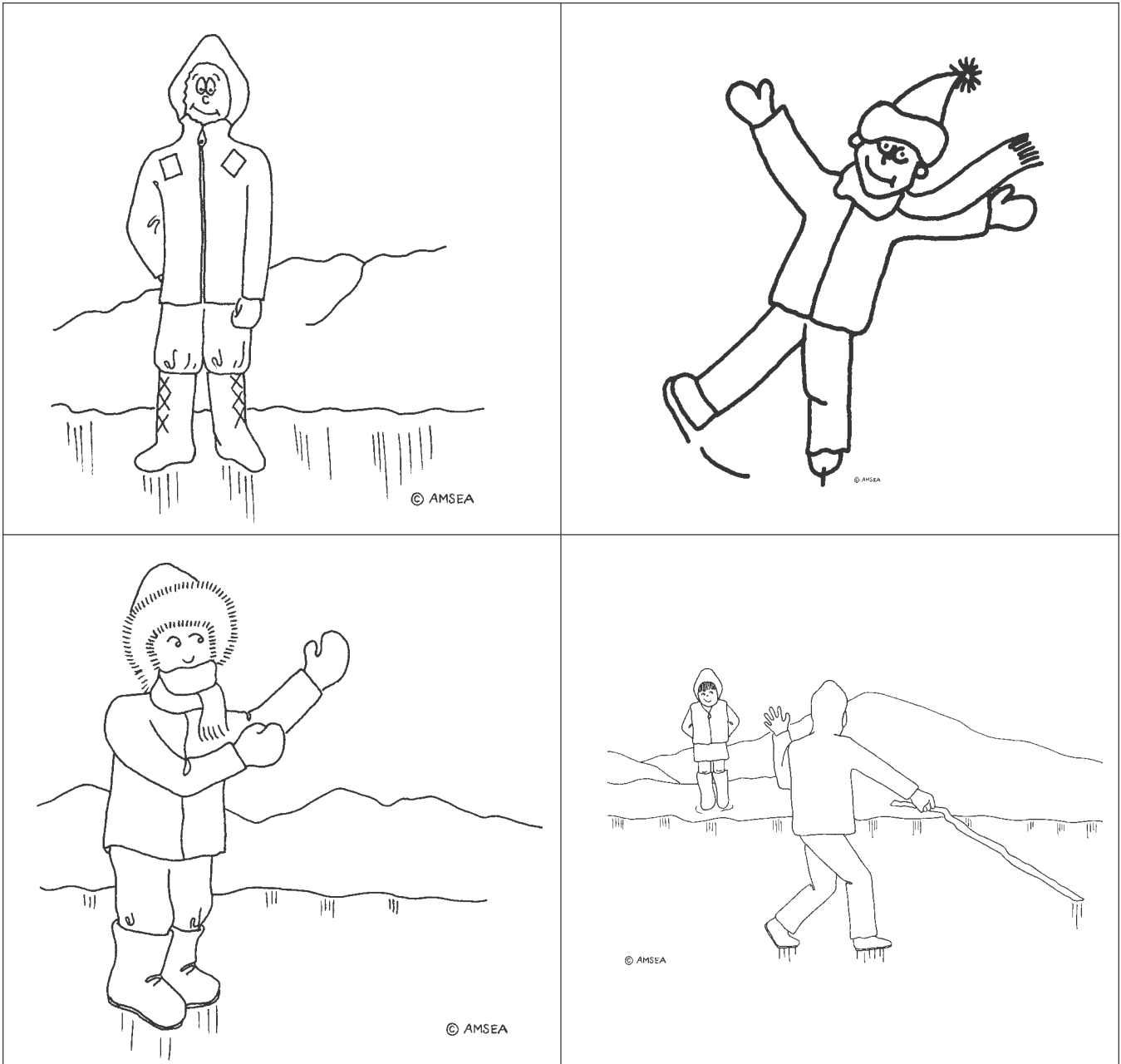
- Discuss the choices students made. The pictures may be interpreted differently by different children.
 - Repeat, but with the sides that show unsafe choices face up.
 - Again, discuss with the class why the choices are unsafe.
4. Leave cards in the game area of your room for a week.

This activity addresses Alaska Content Standards:

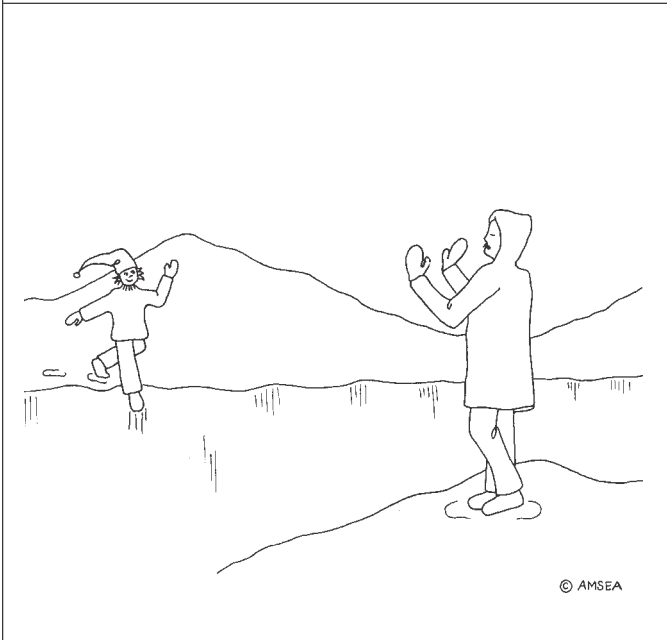
Language Arts A-4 Writing and speaking with purpose

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices, B-1 Risk and consequences

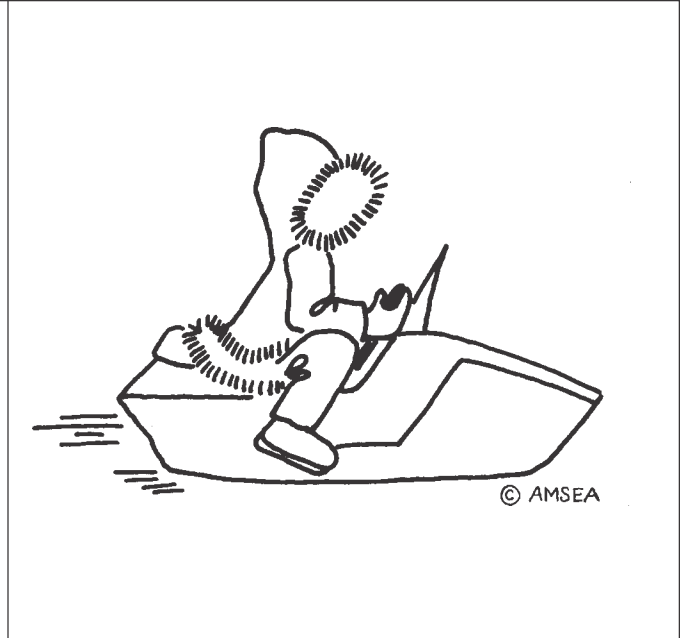
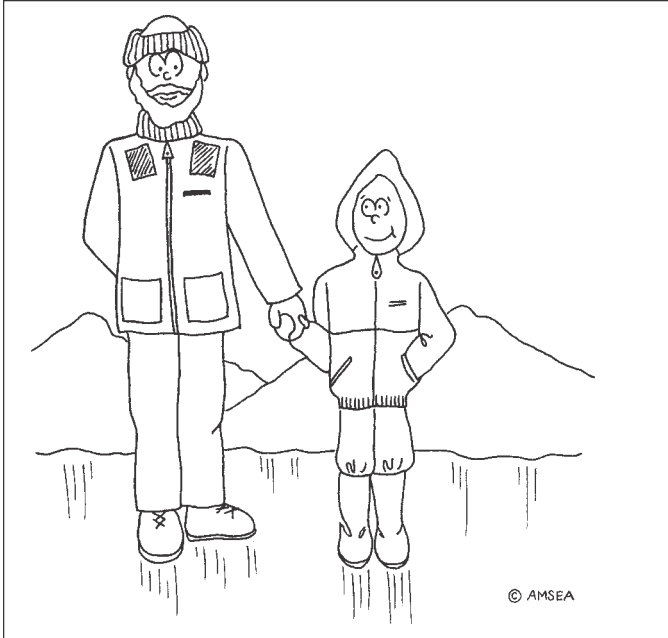
Ice Choices Cards



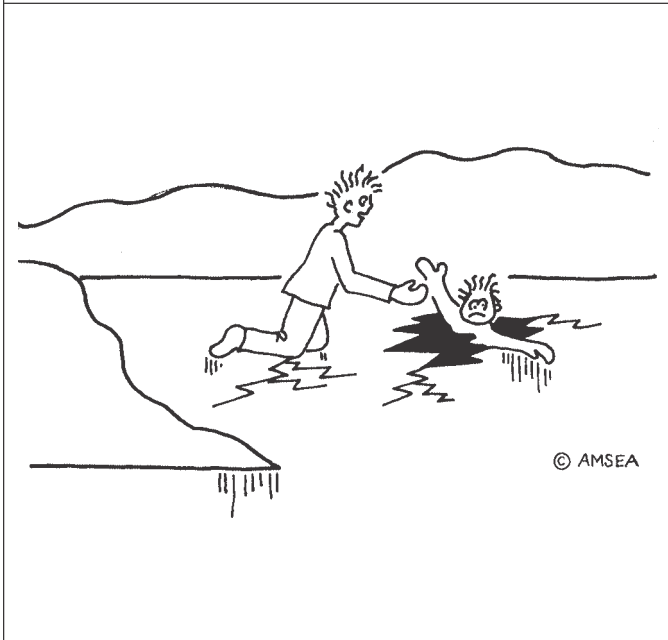
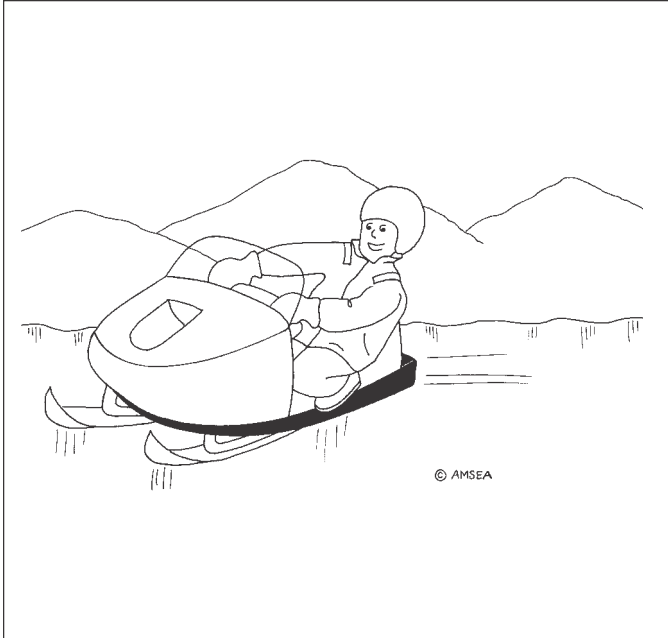
Ice Choices Cards



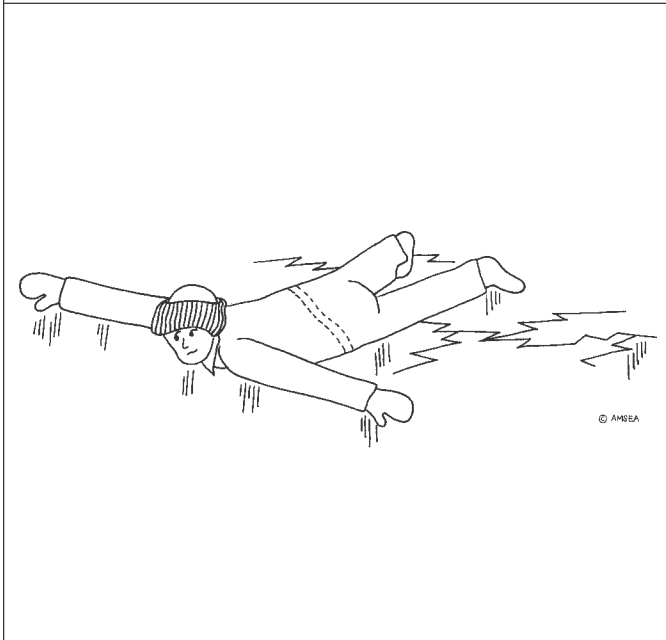
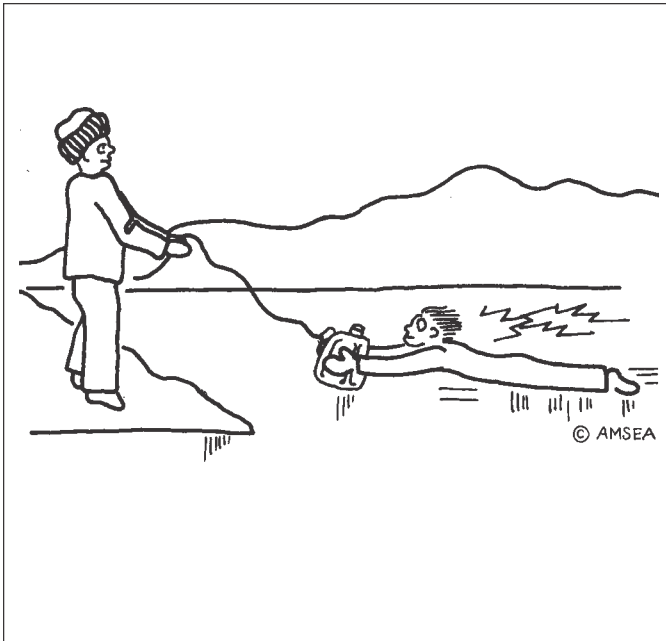
Ice Choices Cards



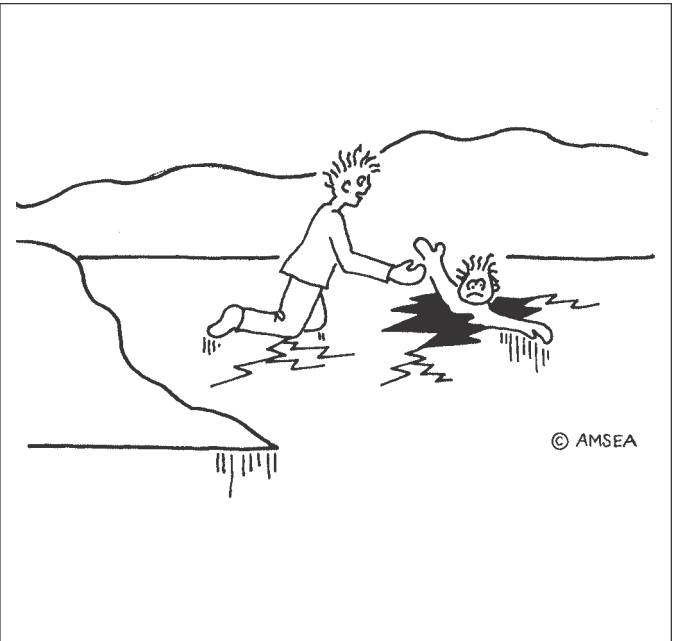
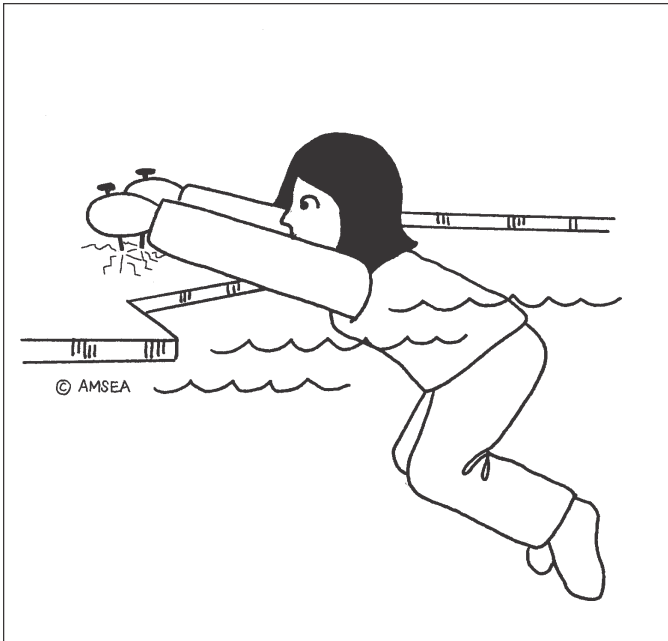
Ice Choices Cards



Ice Choices Cards



Ice Choices Cards



Ice Choices Cards



Ice Choices Cards





Unit 5: Boating Safety

Unit Rationale

Drowning is the second leading cause of death for children nationwide, but that can be changed! Familiarity with general features of boats and basic boating safety procedures increase children's boating enjoyment and safety. Introduction to basic boating information and safety rules at a young age instill lifelong habits that can save lives.

Unit Goal

Children will recognize the importance of wearing a PFD whenever boating and be introduced to basic rules for safe boating.



Boating Safety: Teacher Information

The information in this section gives you, the teacher, a background in the topic. Use judgment when presenting this material. Many concepts are not suitable for young children.

Many Types of Boats on the Water

Boats come in many sizes

- A. Some boats are very large: freighters, tankers, ocean liners, aircraft carriers, etc.
- B. Some boats are quite small: skiffs, kayaks, canoes, etc.

People use boats for work

- A. Freighters carry cargo around the world
- B. Tugboats help move other boats and tow barges
- C. Fishing boats are used to catch fish, crab, shrimp, and other seafood
- D. Ferries move people and vehicles from one place to another
- E. U.S. Coast Guard boats are used in rescues

People use boats for having fun

- A. Cruise ships carry people on vacation
- B. Tour and charter boats take people to see sights and sport fish
- C. Sailboats
- D. Powerboats
- E. Canoes, kayaks, rowboats, etc.

Boating Safety Rules

- Always wear your PFD in small, open boats and when on deck of a big boat
- A. In some states, including Alaska, law requires children under age 13 to always wear a PFD in open boats and when on deck of other vessels
- B. When not wearing PFDs on large enclosed boats, store where quickly and easily retrievable
- C. For information about PFDs, see PFDs unit
- Young children should never boat alone
- Make sure someone files a float plan for every boat trip
- Children should follow directions of adult in charge
- Don't boat with someone who has been drinking alcohol or using other drugs
- A. Alcohol
 - 1. Plays a role in at least 50% of boating fatalities
 - 2. Affects judgment, attitude, reasoning, decision-making, and processing; contributes to increased risk-taking; slows reaction time
 - 3. Reduces ability to focus, peripheral vision, and ability to distinguish colors

4. Increases risk of hypothermia by reducing body’s ability to protect itself from the cold
 5. Operating a boat while intoxicated is against federal and state laws
- B. Prescription drugs and controlled substances
1. Can negatively affect judgment, physiology, vision, and other capacities
 2. Specific effects depend on type of drug
 3. Check possible prescription drug side effects before boating
- Get on and get off a boat one person at a time
 - Always consider stability on a small boat
- A. Stay low and to the center when you move
- B. Sudden or careless movement may cause boat to capsize
- C. Don’t overload boats; they can swamp and capsize
- D. Make sure gear, especially heavy items, can’t shift while underway
- Always keep your body totally inside boat
 - Don’t fool around
 - Watch the weather (see Preparation for Outdoor Activities, Unit 1 of this book)
 - Know what to do in an emergency
- A. Practice improves survival chances in actual emergency
- B. Abandon ship procedure for passengers
1. When captain or crew directs, proceed to PFD donning station
 2. Put on PFD
 3. Follow captain or crew to abandon ship

Orientation

- Orient everyone onboard—you never know who will have to respond in emergency

Topics to cover in orientation—some may be inappropriate for young children

- A. PFDs—location and use
- B. Fire extinguisher(s)—location and use
- C. Radio and other distress signals—all onboard should be able to signal for help in event captain is incapacitated
1. Mayday
 - a. Analogous to 911 call on the water, but many can hear it
 - b. Highest priority emergency radio call for when there is immediate threat to life or limb
 - c. Check that VHF radio is on and tuned to channel 16
 - d. Press microphone key before speaking, release when done speaking
 - e. State this critical information clearly
 - (1) “Mayday, Mayday, Mayday”

- (2) Party name and call sign—identify yourself or your boat
 - (3) Location
 - (a) Latitude and longitude are preferred
 - (b) If using geographic reference, use proper place names found on maps or charts and be as specific as possible
 - (c) Young children should transmit whatever location information they know
 - (4) Nature of distress (medical emergency, lost, stranded, etc.)
 - (5) Total number of people in party
 - f. Mayday hoax
 - (1) Can cost lives
 - (2) Unnecessary searches cost money
 - (3) May result in fines and/or imprisonment
2. See Lost and Stranded, Unit 6 of this book, for more information on distress signals
- D. First aid kit—location
 - E. Person overboard recovery procedure
 - F. Starting and steering procedure
 - G. Anchoring procedure
 - H. Line handling
 - I. Rough weather/water procedures
 - J. Loading and balance concerns
 - K. Drug/alcohol policy
 - L. Waste management

Boating Safety: Activities Guide

- Activities in this volume are sequential, and each unit assumes some knowledge of the material in the preceding unit.
- Activities are arranged by topic in the same order as the Teacher Information.
- Detailed Alaska Content Standards are located at the end of each activity’s procedures.
- Times given for activities are approximate.
- In order to provide a choice of handouts for prereaders and readers, many activities have more than one handout that covers the same information.
- Many activities contain true stories; be sensitive to the possibility that they could be written about your students’ relatives or friends.
- **AMSEA** This symbol means the items are available to borrow from AMSEA.

Topic: Many Types of Boats on the Water

Activity	Objectives	Standards
1. Many Kinds of Boats Books, a video, worksheets, a field trip, and a bulletin board are used to learn about boat types and uses p. 243	<ul style="list-style-type: none"> • List several different kinds of boats • List two different uses for boats 	Language Arts Mathematics Arts

Topic: Boating Safety Rules

Activity	Objectives	Standards
2. The M/V Ready Make-believe boat and PFD game p. 248	<ul style="list-style-type: none"> • Explain the process for donning a PFD on a ferry or other large ship 	Skills for a Healthy Life Arts
3. Keep Your Boat Afloat Two experiments with play boats and weights explore stability p. 249	<ul style="list-style-type: none"> • Explain the need to stay in the center of a small boat • Explain the need to board a small boat one person at a time • Explain why putting too much weight in a boat is dangerous 	Science Skills for a Healthy Life
4. Safe Boating Behavior Discussion and worksheets introduce safe boating rules p. 252	<ul style="list-style-type: none"> • List six rules for safe boating 	Language Arts Mathematics Skills for a Healthy Life Arts

<p>5. Boats and Alcohol Don't Mix</p> <p>Discussion, puppets, and a worksheet introduce the dangers of using alcohol when boating p. 258</p>	<ul style="list-style-type: none"> • Explain why using alcohol when boating is unsafe 	<p>Language Arts Skills for a Healthy Life</p>
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<p>6. Mayday!</p> <p>Discussion, a worksheet, and practice giving maydays p. 260</p>	<ul style="list-style-type: none"> • List the five essential components of a Mayday 	<p>Language Arts Skills for a Healthy Life</p>
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Topic: Culminating Activity

Activity	Objective	Standards
<p>7. Boat in a Box</p> <p>Art project to review boating safety p. 262</p>	<ul style="list-style-type: none"> • Explain three safe boating rules 	<p>Language Arts Skills for a Healthy Life Arts</p>

Many Kinds of Boats

Time: 20-40 minutes

Use with Teacher Information

Overview



Books, a video, worksheets, a field trip, and a bulletin board are used to learn about boat types and uses.

Objectives

After completing this activity, students should be able to:

1. List several different kinds of boats.
2. List two different uses for boats.

Materials

- *Harbor* by Donald Crews, *Boat Book* by Gail Gibbons, *The Boat Alphabet Book* by Jerry Pallotta, *Tug Boats* by Lola M. Schaefer, *Fishing Boats* by Jason Cooper, *Sailboats* by Jason Cooper, *Cargo Ships* by Jason Cooper, and *Ships and Boats* by Angela Royston 
- *All about Boats* video
- One per student, Student Handouts #1 **Amazing Boats**, #2 **What People Do on Boats**, and #3 **Working on the Water**
- One per student and teacher, PFD for the field trip 
- Collection of old magazines with boat pictures in them

Procedure

Part 1

1. Read some or all of the books.
2. Show the video *All about Boats*
3. Discuss the different kinds of activities people do on boats.
4. Distribute Student Handout #1. Tell students they will draw shapes around boats, following your instructions. Explain that some boats will have more than one shape around them.
 - Draw a circle around the boats that are work boats.
 - Use a different color to draw a square around boats that are used for having fun.
 - Use a different color to draw a triangle around big boats.
 - Use a different color to draw a star around small boats.
5. Distribute and have students complete Student Handout #2. The top half may be done as a group or individual activity.
6. Distribute and have students complete Student Handout #3.

Part 2

1. Visit a harbor or marina in your community to observe different sizes and types of boats and how people use them.
2. Stop at a few different types of boats and discuss uses.
3. Have each student draw a picture of the different types of boats they saw and write or dictate a sentence about the trip to an adult.
4. Have students write and illustrate a story about the trip, focusing on the uses and different types and sizes of the boats.

Part 3

1. Using old magazines, have students cut out pictures of boats and create collages of the many types, sizes, and uses of boats.
2. Create a bulletin board display using the pictures, stories, and collages.

This activity addresses Alaska Content Standards:

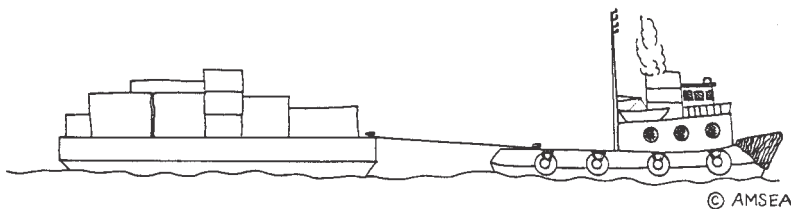
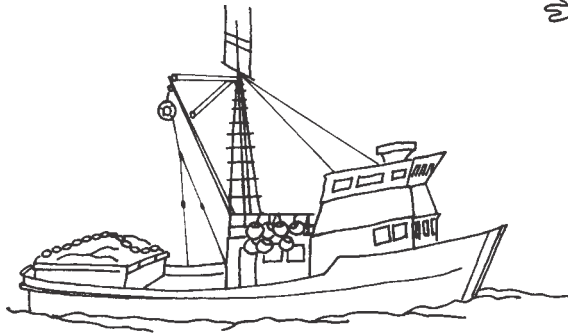
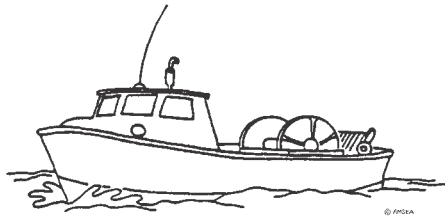
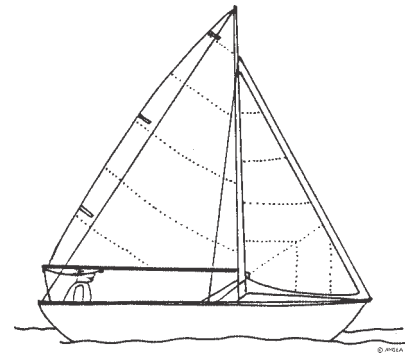
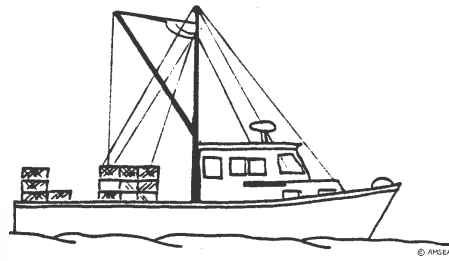
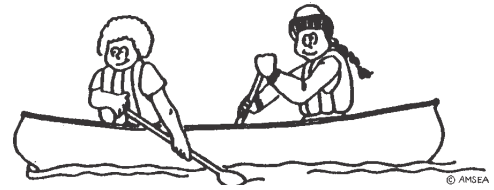
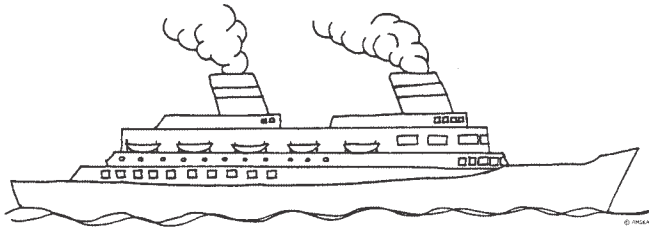
Language Arts A-1 Effective writing, A-3 Demonstrate speaking skills, A-6 Using visual communication

Arts A-1 Participate in the arts, A-3 Materials, tools, techniques, and processes

Mathematics A-1 Numeration

Name: _____

Amazing Boats



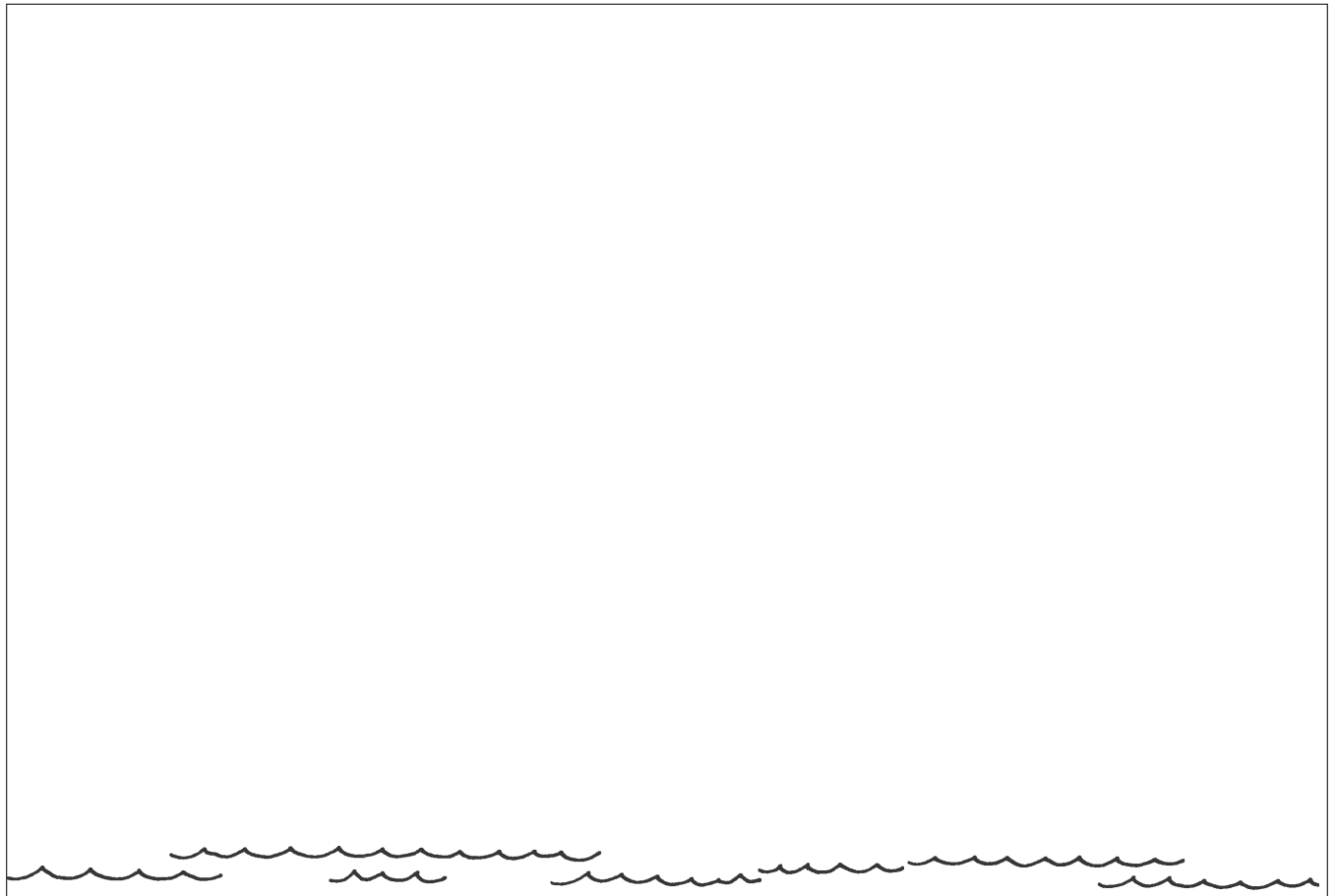
Name: _____

What People Do on Boats

Make a list of some things people can do onboard a boat.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Choose your favorite boating activity and draw a picture of yourself doing this:

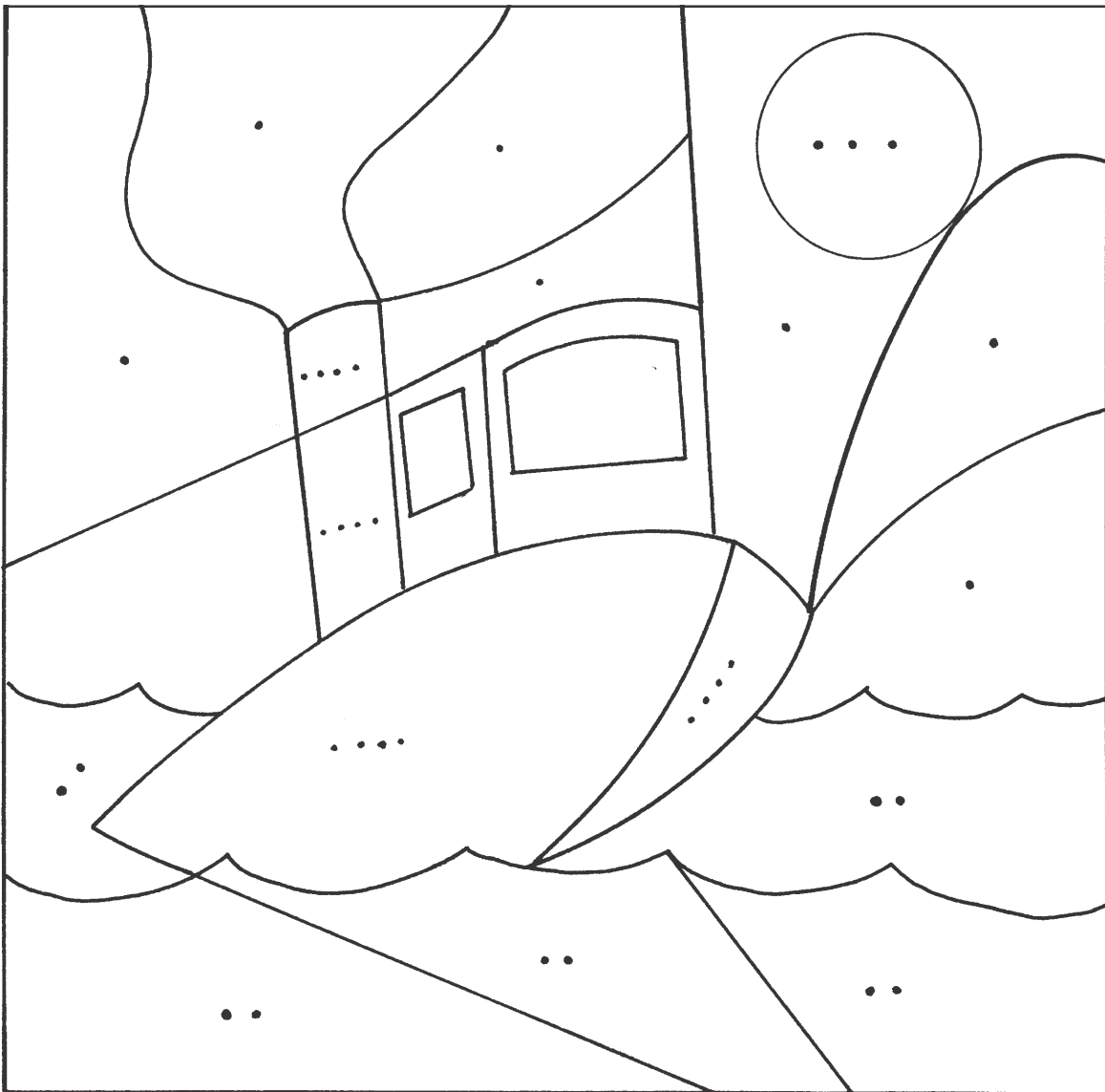


Name: _____

Working on the Water

Color the spaces and see what appears!

- blue ●●● yellow
- green ●●●● black



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People use boats to work on the water. Some work for money. Others work gathering food.

The *MV Ready*

Time: 30 minutes

Use with Teacher Information





Overview

Make believe boat and PFD game.

Objective

After completing this activity, students should be able to explain the process for donning a PFD on a ferry or other large ship.

Materials

- *Ships and Boats* by Angela Royston and *The Boat Alphabet Book* by Jerry Pallotta 
- One per student and teacher, PFD 
- Life raft , inflatable dinghy , or cardboard lifeboat

Procedure

1. Read books. Discuss which boats are so large that people might not always wear a PFD.
2. Pile PFDs in a big box or corner of the room.
3. Have students pretend they are on a ferry or other large ship.
4. Explain where the PFDs are, where the lifeboat is, and the steps they are to follow if they have to abandon ship:
 - Put on their PFDs.
 - Report to you.
 - Go as a group to the lifeboat.
5. Tell a story to further the fantasy:
 - They are cruising on the ocean.
 - List the sights they might see.
 - A loud grinding noise is heard as the ship hits a rock.
6. Describe the scene as the water rushes in.
7. Announce: “Everyone put on a PFD! Report to me!! We have to abandon ship!!!”
6. Once everyone has reported to you and is snapped, buckled, and zipped into a PFD, walk to and board the lifeboat.
7. Have students discuss what worked and what didn’t work. Emphasize the importance of knowing where PFDs are stored on ferries and other large boats and the importance of following directions.
8. Repeat the activity and discuss how much easier a little practice makes the procedure.

This activity addresses Alaska Content Standards:

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices, B-1 Risk and consequences

Arts A-1 Participate in the arts

Keep Your Boat Afloat

Time: 30 minutes

Use with Teacher Information

Overview

Two experiments with play boats and weights explore stability.


Objectives

After completing this activity, students should be able to:

1. Explain why they need to stay in the center of a small boat.
2. Explain the need to board a small boat one person at a time.

3. Explain why putting too much weight in a boat is dangerous.

Materials

- *Adrift* by Colleen Politano and Jean Neudecker 
- Story #1 **Waves**
- Large, shallow container with 3 to 5 inches of water
- Toy boat or small, floatable container to use as a boat
- Small rocks or other weights

Extension

- *Science Fun with Toy Boats and Planes* by Rose Wyler 

Procedure

Part 1

1. Introduce the activity by reading chapter 2 of *Adrift*.
2. Discuss what Roger did that caused him to fall overboard.
3. Explain that you are going to show how weight affects a boat's ability to stay afloat.
4. Place the "boat" on the water.
5. Place rocks or other weight in the center of the boat. Discuss how it floats.
6. Move the weight to one side and point out how it tips.
7. Place more weight on the side, making the boat capsize.
8. Discuss what things could do this to a little boat. Emphasize that stepping on the gunwale (edge) of a small boat may cause it to capsize and that taking turns boarding is very important.

Part 2

1. Read Story #1 aloud to the class.
2. With the container, water, and boat, load weight evenly until the boat floats very low in the water.
3. Swish the water, creating waves, until the boat swamps (fills with water).
4. Explain that the toy boat is like a real boat. Discuss the dangers of waves, swell, people moving, etc., with a boat loaded too full.

Extensions

1. Leave containers and weights in the water area of your classroom for a week.
2. Use *Science Fun with Toy Boats and Planes* to investigate other aspects of buoyancy and propulsion.

This activity addresses Alaska Content Standards:

Science A-4 Observable natural events, A-5 Forces of nature, A-15 Using local knowledge, C-2 Knowledge through experimentation, C-6 Scientific discovery

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices, B-1 Risk and consequences

Waves

Based on a true story from Kingston, New York

Once upon a time, Aunt Nelda took Peter and Hannah for a ride in her skiff. They had a wonderful day. They saw fish in the water and a beautiful rainbow.

Then a big ship went by. Everyone in the skiff was busy admiring the rainbow in the sky when the wake from the big ship reached them. Their skiff was sideways to the waves, which were steep and close together. Before they knew it, all three of them were in the water and their skiff was upside down beside them. Their PFDs kept them afloat and they quickly climbed up on the overturned skiff.

The captain of the big ship saw what had happened, circled around, retrieved them, and towed their skiff to shore.

They were very happy to get home to some hot soup.

Safe Boating Behavior

Time: 30 minutes

Use with Teacher Information


Overview

Discussion and worksheets introduce safe boating rules.

Objective

After completing this activity, students should be able to list six rules for safe boating.

Materials

- *Harbor* by Donald Crews or *Boat Book* by Gail Gibbons 
- One per student, Student Handouts #1 **Safe Boating Behavior**, #2 **Unsafe Boating Behavior**, #3 **Boating Is Fun When You Play It Safe**, #4 **Yes! No!**, and #5 **Boating Safety Messages**

Procedure

1. Introduce the topic by distributing and completing Student Handouts #1 and #2. These may be done as group or individual activities.
2. Discuss the rules learned.
3. Read *Harbor* or *Boat Book*. Talk about safe practices on the different boats shown in the book.
4. Distribute and have students complete Student Handout #3, #4, and #5. Have students discuss or write about their answers.

This activity addresses Alaska Content Standards:

Language Arts A-1 Effective writing, A-2 Writing conventions, A-3 Demonstrate speaking skills, B-1 Meaning from written, oral, and visual text

Mathematics A-1 Numeration

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices, B-1 Risk and consequences

Arts A-1 Participate in the arts

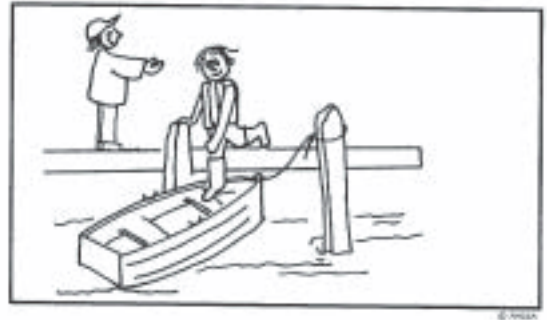
Name: _____

Safe Boating Behavior

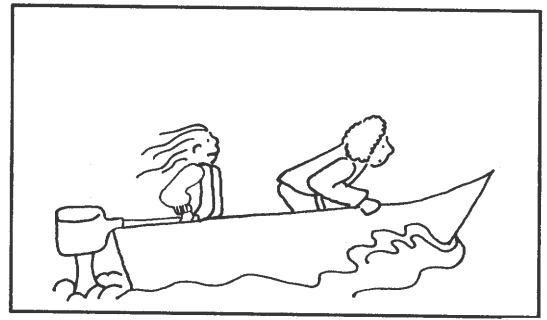
Safe boating behavior is good boating behavior.

Draw a line from each safe boating rule to the right picture.

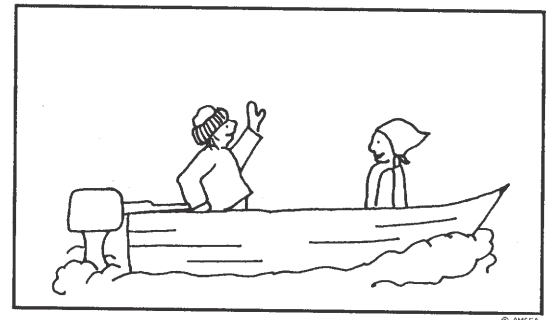
Always wear your PFD.



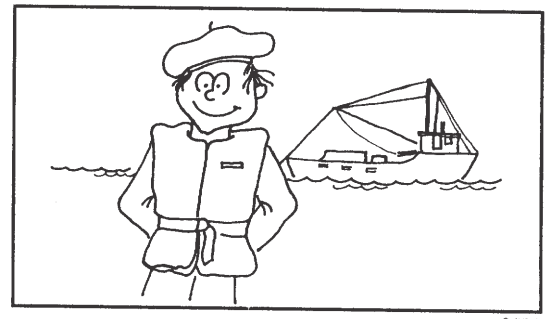
Take turns getting in and out of boats.



If you move around when in a boat, do it slowly and carefully.



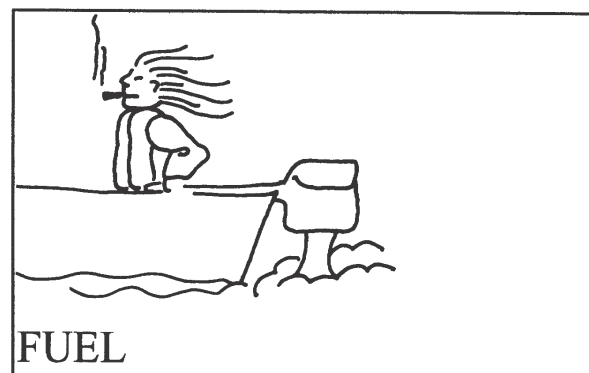
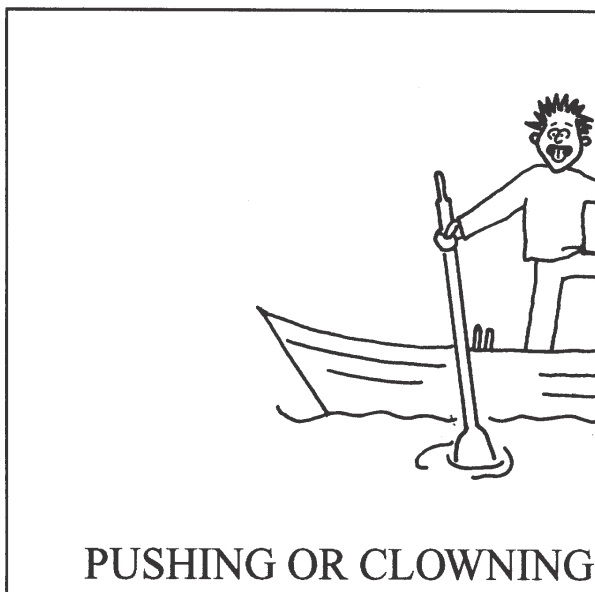
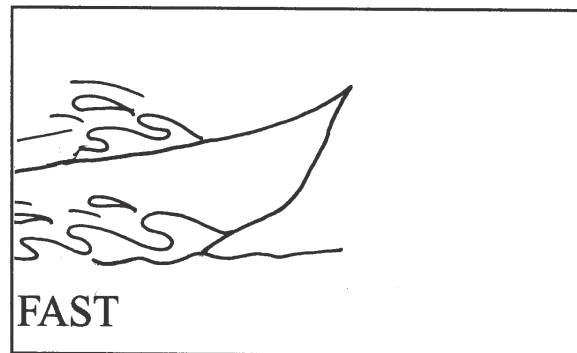
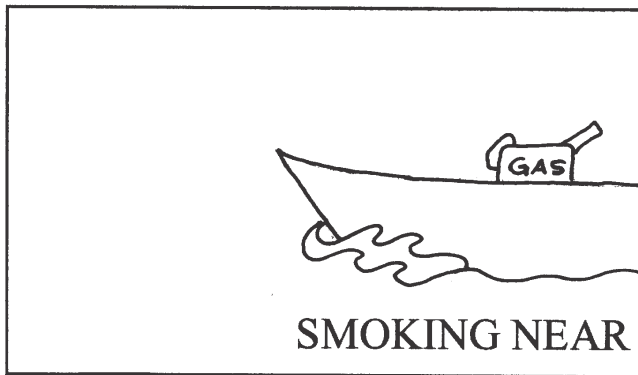
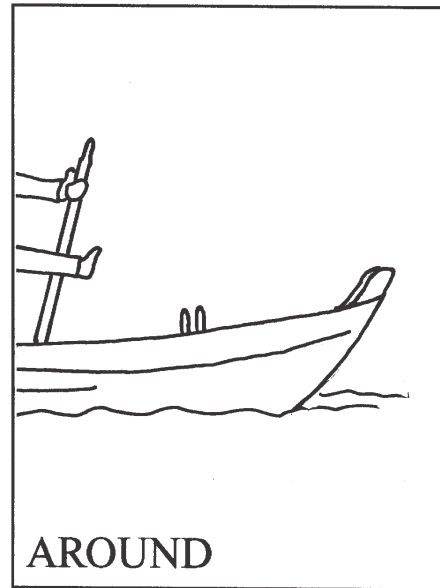
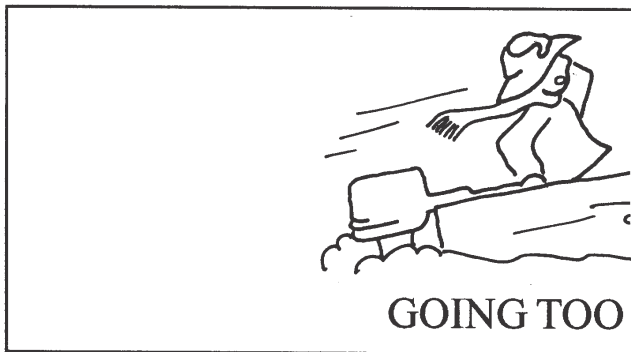
Keep arms and legs inside the boat. Do not hang over the side.



Name: _____

Unsafe Boating Behavior

Cut out the pieces below. Fit them together to make three pictures of **unsafe** boating behavior.



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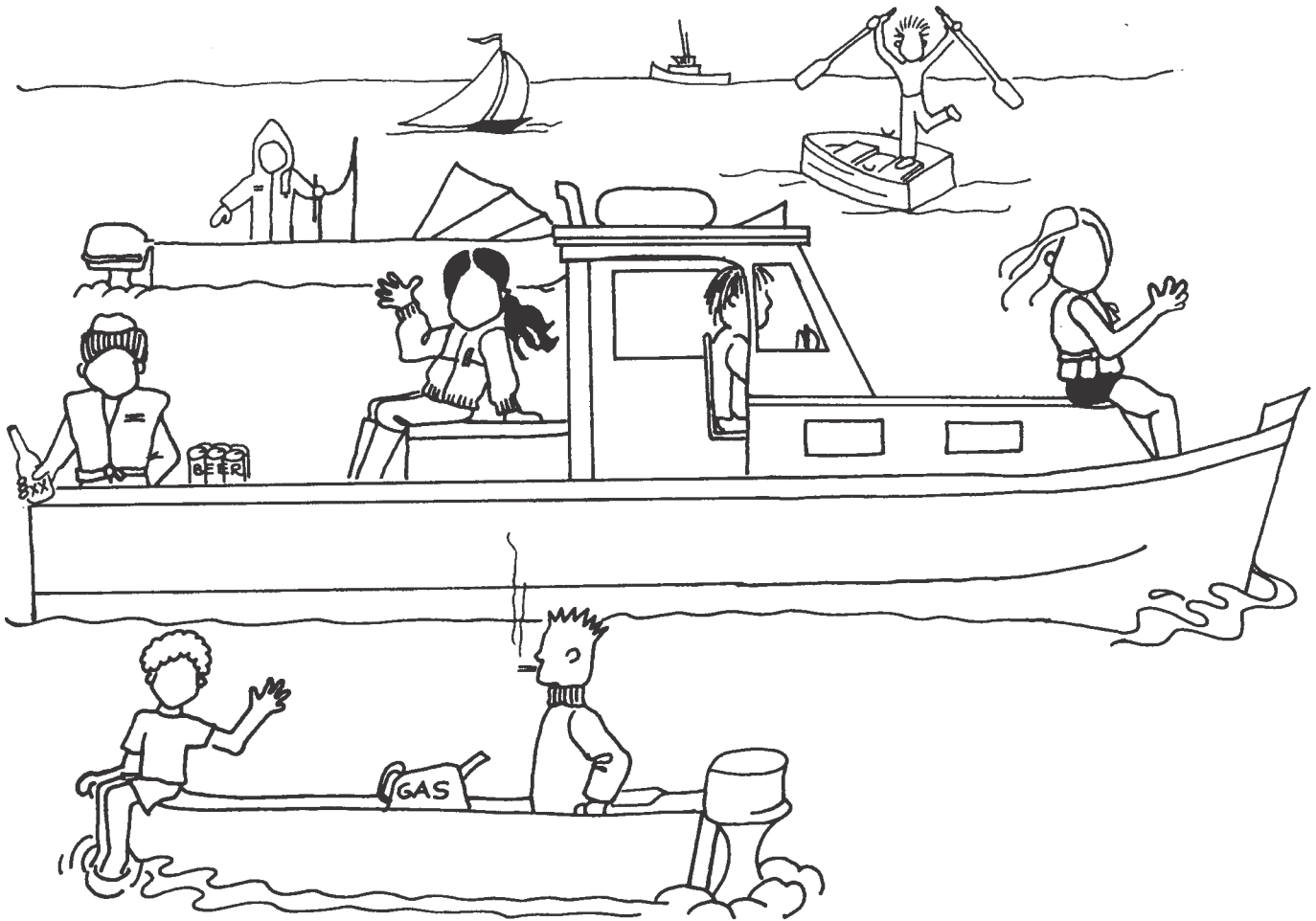
Name: _____

Boating Is Fun When You Play It Safe

Some of these boaters are following safe boating rules. Some are not.

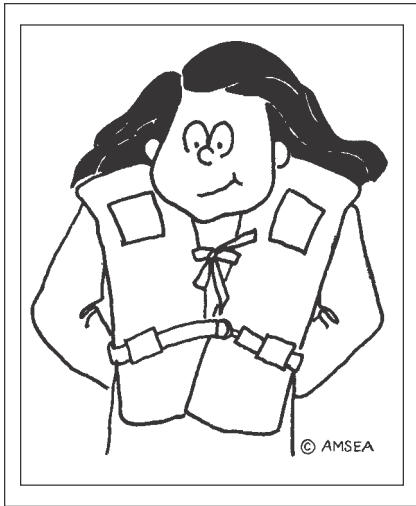
Draw a happy, smiling face on the boaters who are using good boating behavior.

Draw a sad face on the boaters who have not remembered safe boating rules.

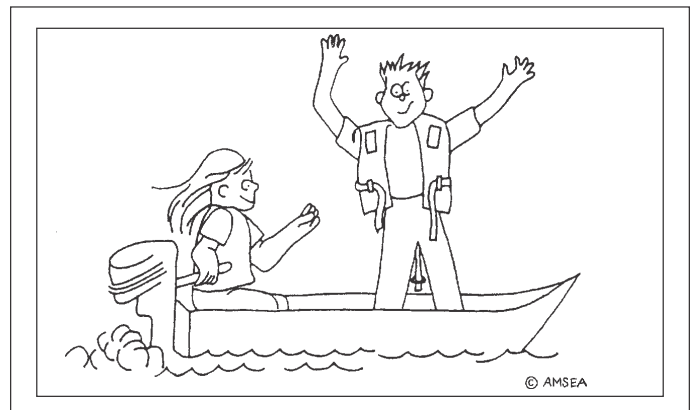
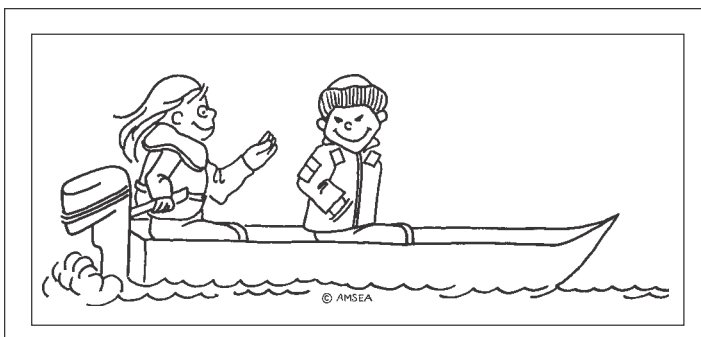
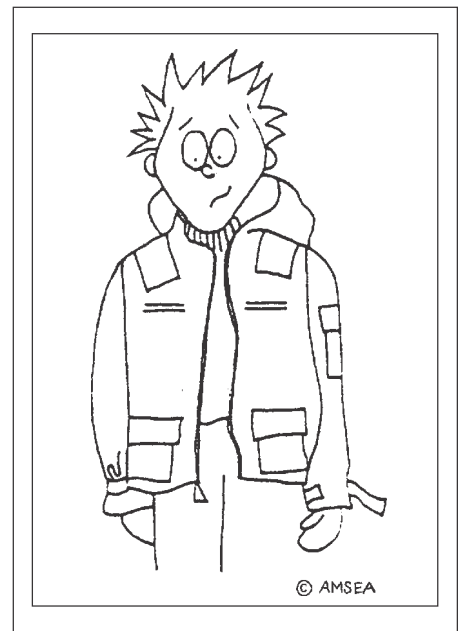
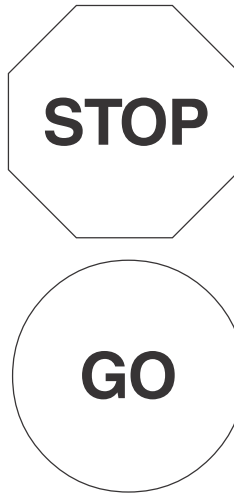
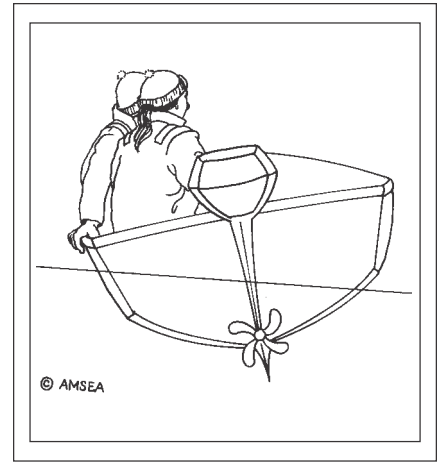


Name: _____

Yes! No!



1. Color the circle green to make it a green light.
2. Color the six-sided shape red to make it a stop sign.
3. Draw a line from the safe behavior to the Go sign.
4. Draw a line from the unsafe behavior to the Stop sign.
5. Color the borders of the safe behavior pictures green.
6. Color the borders of the unsafe behavior pictures red.



Name: _____

Boating Safety Messages

Can you break this code?

Count the letters in your first name. Subtract 4 if your name has 6 or more letters. Add 3 if your name has less than 6 letters. The number you get is your code number. Circle all the letters under your code number and find a message just for you.

6	3	8	2	5	4	7	2	5	9	4	2	7	5	9
D	T	D	W	D	M	S	E	O	K	O	A	T	N	E
9	8	6	8	4	3	4	9	7	5	2	4	3	6	4
E	R	O	I	V	A	E	P	A	O	R	S	K	N	L
9	5	3	9	6	4	7	8	4	3	9	4	6	8	3
F	T	E	I	O	O	Y	V	W	T	R	L	T	E	U
3	4	8	2	7	5	2	8	6	4	9	8	5	4	5
R	Y	C	Y	A	D	O	A	H	A	E	R	R	N	I
6	7	5	9	3	4	5	3	8	2	3	4	5	2	3
A	L	N	A	N	D	K	S	E	U	S	C	A	R	T
4	5	3	8	6	9	3	5	4	7	8	3	6	4	5
A	L	E	F	N	W	P	C	R	E	U	P	G	E	O
8	6	8	2	5	4	6	3	9	3	5	6	9	8	3
L	O	L	P	H	F	V	I	A	N	O	E	Y	Y	G
3	5	6	7	9	3	2	3	5	6	9	3	5	6	5
O	L	R	R	F	N	F	A	W	T	R	N	H	H	E
5	9	4	9	3	6	4	5	6	3	2	9	6	5	7
N	O	U	M	D	E	L	B	S	O	D	F	I	O	T
6	9	3	5	9	5	3	5	6	4	9	5	2	4	5
D	U	F	A	E	T	F	I	E	L	L	N	S	Y	G

Boats and Alcohol Don't Mix

Time: 20 minutes

Use with Teacher Information

Overview

Discussion, puppets, and a worksheet introduce the dangers of using alcohol when boating.

Objective

After completing this activity, students should be able to explain why using alcohol when boating is unsafe.

Materials

- One per student, Student Handout #1 **What Alcohol Can Do**
- Puppet(s) 

Procedure

1. Use puppets to illustrate and discuss the effects of alcohol on people's behavior.
2. Distribute and have students complete Student Handout #1 as either an individual or group activity.

This activity addresses Alaska Content Standards:

Language Arts A-6 Using visual communication

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-5 Well-being of family, A-6 Making informed choices, D-2 Safe and healthy environments

Name: _____

What Alcohol Can Do

People who drink too much alcohol sometimes do these things:

Stumble

Make mistakes

Fall

Get cold

Think slowly

Act silly



Write the words and phrases above in alphabetical order.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

People who drink too much alcohol and do these things can have accidents. What may happen if they go boating?

Mayday!

Time: 20-30 minutes

Use with Teacher Information

Overview

Discussion, a worksheet, and practice giving Maydays.

Objective

After completing this activity, students should be able to list the five essential components of a Mayday.

Materials

- One per student, Student Handout #1 **Mayday, Mayday, Mayday!**
- One per pair of students, microphones for VHF or CB radios that are disconnected from the radios **AMSE** or substitute items to use as pretend microphones
- Recording of Mayday (optional)

Extension

- Two per pair of students, sturdy paper cups or empty tin cans
- String

Procedure

1. Explain that many boats have radios that can be used to make an emergency call.
2. List the steps involved. Optional: Listen to a recording of a Mayday.
3. Discuss the parts of a Mayday and the order in which to relay each piece of information.
4. Explain to students that it is against the law to make a false Mayday.
5. Distribute and have students complete Student Handout #1. This may be done as a whole group activity.
6. Divide class into groups of two.
7. Have students take turns giving a Mayday into a microphone. If using real microphones, check that each student presses the button on the microphone before speaking and releases it after speaking.

Extension

1. Make a string and cup “radio” for each pair of students.
2. Have students hold string taut.
 - One student gives a “Mayday” into one cup.
 - The other student listens with the other cup close to his/her ear.
 - Students reverse roles and repeat.

This activity addresses Alaska Content Standards:

Language Arts A-3 Demonstrate speaking skills, B-1 Meaning from written, oral, and visual text

Skills for a Healthy Life A-3 Injury prevention, A-6 Making informed choices, B-2 Effective communication, C-2 Effective communication, D-1 Responsible decisions

Name: _____

Mayday, Mayday, Mayday!

To make a radio distress call when boating:

1. Make sure the VHF radio is on and tuned to channel 16.
2. Press in the button on the microphone and say:
 - “Mayday, Mayday, Mayday”
 - The name of your boat and describe it.
 - Your location.
 - How many people are onboard your boat.
 - What the trouble is.



Write your Mayday here.

Say your own Mayday.

Boat in a Box

Time: 45 minutes

Use with Teacher Information

Overview

Art project to review boating safety.

Objective

After completing this activity, students should be able to explain three safe boating rules.

Materials

- One per student, small cardboard box (shoe box size)
- One per student, small toy boat
- Boating and outdoor magazines to cut up
- Art supplies
- Assortment of small props, such as plastic people (optional)

Procedure

1. Review safe boating rules covered in Activities #2-#6.
2. Divide class into groups of two.
3. Distribute a box and a boat to each group.
4. Assign each group one boating safety rule.
5. Have each group use their boat and other supplies to create a scene inside their box showing either safe or unsafe boating behavior.
6. Have members of each group tell the rest of the class about their box and what it illustrates.

Extension

1. Display the boxes and invite parents or other students to view the display.
2. Have each group explain their safe boating rule and answer questions about their project for the visitors.

This activity addresses Alaska Content Standards:

Language Arts A-6 Using visual communication, C-1 Developing a project, C-2 Project organization, C-3 Group decision making, C-4 Project quality

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-5 Well-being of family,

A-6 Making informed choices, B -1 Risk and consequences, B-2 Effective communication, D-2 Safe and healthy environments

Arts A-1 Participate in the arts, A-3 Materials, tools, techniques, and processes



Unit 6: Lost or Stranded

Unit Rationale

Due to their innate curiosity, children frequently wander away and become disoriented, scared, and lost. Knowing appropriate behavior and basic survival skills provides children with the tools they need to avoid becoming lost, to better cope with situations if they do become lost or stranded, and to increase their chances of survival. Learning skills in a secure environment before they are needed, practicing with survival techniques and equipment, and becoming familiar with environmental factors have been shown to increase self-confidence, help people avoid panic, and foster appropriate behavior in emergency situations.

Unit Goal

Children will gain information and skills that will help them survive being lost or stranded on land.



Lost or Stranded: Teacher Information

The information in this section gives you, the teacher, a background in the topic. Use judgment when presenting this material. Many concepts are not suitable for young children.

Avoiding Emergencies

Let people know where you are

- A. Children should always ask permission before going
- B. File a trip or float plan, and include information helpful for searchers—see Preparation for Outdoor Activities, Unit 1 in this book, for more information
- C. Stay with your group

Be prepared

- A. Learn outdoor safety and survival skills
- B. Practice skills—regular practice in safe environment increases likelihood of survival
- C. Address young children’s fears about being lost
 - 1. May fear punishment
 - 2. May feel ashamed of being lost
 - 3. Stress that family and friends will be happy when child is found
 - 4. May fear noises and people
 - 5. Tell stories in which children experience an emergency
 - a. Talk about what child should do
 - b. Cover a variety of situations
 - c. Emphasize appropriate actions
- D. Carry adequate clothing, water, food, and a survival kit

Types of Emergencies

- A. Immediate onset
 - 1. Sudden, with little or no warning
 - 2. Examples: animal attacks, falls, injuries, sudden changes in weather
- B. Delayed onset
 - 1. Start out slowly and build until situation becomes life-threatening
 - 2. Examples: slowly becoming hypothermic, deteriorating weather, extended exposure, getting lost, illness

Emotional Factors in Emergencies

Studies show that, in emergencies

- A. 12% to 25% of people act effectively
- B. 50% to 75% are stunned, bewildered, tend to have tunnel vision, and tend to operate in an automatic way
- C. 10% to 25% show levels of inappropriate behavior including panic

Potentially disabling emotions during emergencies

- A. Fear
 - 1. Normal reaction in an emergency
 - 2. Useful function in keeping you aware, “on your toes,” in dangerous situations
- B. Panic
 - 1. Prevents clear thinking
 - 2. Wastes energy
 - 3. Obstacle in setting priorities
- C. Depression or apathy
 - 1. Recognize that they can be a problem
 - 2. Destroy the will to live
 - 3. Documented cases in POW camps show that depression leads to lethargy, which can lead to death

Ways to reduce or eliminate fear, panic, depression, and apathy

- A. **Before** emergency
 - 1. Accept the fact that an emergency situation can happen to you
 - 2. Make contingency plans, file trip plans, check weather, etc.
 - 3. Acquire relevant training—first aid, technical climbing, cold climate survival, navigating with a map and compass, etc.
 - a. Gives you procedures to follow that will increase confidence and improve skills
 - b. Practice reduces panic and increases likelihood that “automatic operators” act in a helpful way
 - c. Best training is hands-on practice with actual equipment
- B. **During** emergency
 - 1. Recognize your ability to be creative, innovative, and resourceful—your mind is your most powerful survival tool
 - 2. Develop a positive mental attitude—think like a survivor, not a victim
 - 3. Do something to improve your situation

Will to live

- A. Very important in all survival situations
- B. Thinking about loved ones and things important in your life helps focus on living
- C. Some people have a stronger will to live than others
- D. In identical situations, a strong will to live can make the difference between life and death

Your body’s physical condition affects your mental state

- A. Hypothermia, dehydration, and hypoxia (condition reducing levels of oxygen available to cells, common at 10,000 feet plus altitudes) cause inadequate blood flow to brain which causes
 - 1. Inability to think clearly, leading to poor judgment and decision making

2. Inappropriate behavior
 3. Denial and apathy
- B. Problems can be difficult to recognize in yourself; watch for signs in others

Lost or Stranded Survival

- Even skilled, experienced people become lost or stranded
- Admitting you are lost can be emotionally difficult due to ego or pride
- Be aware that your group leader can succumb to guilt, panic, or other debilitating emotions

Lost/stranded behavior affected by

- A. Activity; e.g., hunters and berry-pickers act differently
- B. Personality
- C. Experience
- D. Mental and emotional make-up
- E. Age
 1. Three to six year olds
 - a. Are able to travel a good distance
 - b. Usually try to return home
 - c. May be drawn away by animals, older children, or curiosity
 - d. When tired, usually will try to find a sleeping spot
 - e. Have been taught not to speak to strangers so often won't respond to searchers
 - f. Abandon shelter during night because they hear noises
 2. Six to twelve year olds
 - a. Have some navigation and direction skills
 - b. Often become confused in unfamiliar environment
 - c. May intentionally run away to avoid punishment or gain attention
 - d. Often do not answer when called
 - e. Darkness usually makes them want to be found, if they didn't want to be found before
 - f. Suffer same fears and problems as adults, but have less confidence in their ability to help themselves
 3. For in-depth information on lost or stranded behavior, read *Search Is an Emergency* by Lavalla and Stoffel.

Knowing and taking appropriate actions in an emergency improves your chances of survival

- A. Stay in one place
 1. Being close to point last seen greatly increases your chance of being found
 2. Do not wander around
 - a. Increases risk of falls and injuries
 - b. Decreases opportunity to make your situation better

- B. Build a good shelter and stay with it
- C. Build good signals
- D. Gather food and water
- E. Conserve energy
- F. Answer a noise with noise—if you hear a noise, make a noise back
 - 1. If it is an animal, noise will usually cause it to run away
 - 2. If it is a searcher, your noise will help you be found
- G. Always respond to searchers
 - 1. They want to help you
 - 2. They are **friendly** strangers
- H. Use Seven Steps to Survival to help you act effectively

Seven Steps to Survival

- A. Developed by U.S. Coast Guard air crewmen and others in Alaska as means to identify and prioritize needs in an emergency
- B. Review every time your situation changes
- C. Listed in order of priority and logical sequence for staying alive in a survival situation; order may change depending on circumstances
 - 1. Recognition
 - 2. Inventory
 - 3. Shelter
 - 4. Signals
 - 5. Water
 - 6. Food
 - 7. Play

Recognition—stop and ask, are you in danger?

- A. Realize that you are or may be in trouble—this is an essential step
 - 1. Emergencies are unpredictable and can happen to anyone
 - 2. Many emergencies are survivable if you recognize them and are prepared to act
 - a. Refusal to recognize situation limits options
 - b. Some people refuse to believe that they can get into or are in a survival situation
 - c. Some people are fatalistic or superstitious (e.g., “If I don’t have survival equipment nothing bad will happen to me.”)
 - d. Refusal to recognize situation may exacerbate situation
 - e. Refusal to recognize situation may result in death
 - 3. Understand that you are not a survivor until you are safely home
- B. Be prepared to take effective action using Seven Steps to Survival as guide

Inventory

- Take into account things that work for you and things that work against you
- A. People
 1. Account for all
 2. Assess and treat injuries
 3. Assess emotional condition
 4. Inventory skills
- B. Equipment—condition and availability
 1. Survival kits
 2. Comfort kits
 3. Everything on and around you can potentially help
 - a. Keys and key rings become fishhooks, lures, shovels, or signal mirrors
 - b. Plastic sheeting becomes tent, raincoat, water container
 - c. Lip balm can protect from sunburn and make fires burn hotter
 - d. Throw nothing away no matter how insignificant it seems at the time
- C. Environmental factors
 1. Weather—present and forecasted
 2. Cliffs, terrain, avalanche dangers, etc.
 3. Animals
 - a. Look for sign of animals that may be hazardous to you, food, or gear
 - b. Find a place to cache food out of reach of bears or other predators
 - c. Avoid camping on game trails
- D. Location—do you know where you are?
 1. Is your location safe from falling trees, avalanche, animals, tides, etc.
 2. Forested areas provide shelter building materials, but may hide you from rescuers
 3. Open areas make you visible to rescuers, but provide little protection from environment
- E. Ability to communicate with rescuers
- F. Initial inventory may be rapid
- G. Inventory is ongoing as survival situation changes
 1. Take advantage of positive changes
 2. Be creative!
 3. Your most valuable tool lies between your ears!
 4. Inventory step gives you time to think

Shelter—protect yourself from environment

- A. Body tolerates only narrow range of core temperature
- B. Clothes are your primary shelter; add layers if available and needed

- C. In cold climates, find or make additional shelter to survive for long periods
- D. Build one shelter for every two to four people in group; multiple bodies generate more heat
- E. Three requirements of a good shelter
 - 1. Small—but not so small you get claustrophobic and don't want to use it
 - 2. Protect you from wind, precipitation, and heat loss
 - 3. Insulate you from ground (most important) and cold air
- F. Shelter site
 - 1. Near point last known
 - 2. Protected area that is visible or near area good for signaling
 - 3. Close to fresh water supply
 - 4. Away from high tide line and surf, if near ocean
 - 5. Away from low gravel bars, dry streambeds, or other areas that fill with water during rain
 - 6. Not on bear trails or other game trails
 - 7. Not under dead standing trees or snags
 - 8. Use natural aids—fallen trees, dry hollows, caves, overhangs, and rocks
- G. Factors that determine your shelter
 - 1. Imagination
 - 2. Immediate physical needs
 - 3. Available materials
 - 4. Available energy
- H. Types of shelters
 - 1. Plastic garbage bag(s) from your survival kit
 - a. Don't insulate or protect from environment as well as debris and snow shelters
 - b. Trap body heat and increase effectiveness of clothes
 - c. Quick and take little energy
 - d. Can be first day's shelter if insufficient time to build a better one
 - e. Quick shelter for small child (uses two bags)
 - (1) Fill one bag with debris—as dry as possible, no sharp objects
 - (2) Make hollow in center of debris and stuff second bag into it
 - (3) Child climbs into “nest”
 - (4) Wear hat and scarf or hood—shelter doesn't cover neck and head
 - f. Quick shelter for larger child or adult (uses two or more bags)
 - (1) Fill both bags with debris—as dry as possible, no sharp objects
 - (2) Lay bags on ground next to each other in a protected area; fasten together if possible
 - (3) Gather boughs or other dry material suitable for a “blanket”
 - (4) Lie down on bags and pull boughs/other material over you; remember to cover your head and neck
 - (5) Pull another plastic bag over all if you have one

2. Quick debris shelter if you don't have plastic bags
 - a. Heap dry debris
 - b. Burrow into it
3. Debris hut shelter
 - a. Very effective—can keep you warm and dry, and provide a psychological boost
 - b. Best shelter to make for more than one or two people
 - c. Difficult for young children to make on their own
 - d. Keep small, but not so small you get claustrophobic and don't want to use it
 - e. Be concerned about efficiency, not looks
 - f. Natural features like fallen logs and overhangs aid construction
 - g. Critical to insulate from ground
 - (1) Build floor first
 - (a) At least three feet thick
 - (b) Start with “spring box” layer—arched, forked branches directly on ground (creates air layer between you and ground)
 - (c) Then build loft layer, filling gaps of “spring box” with softer insulation, using dry insulating material where possible and vapor barrier of plastic bags
 - (2) Build walls and roof to insulate above and around you
 - (a) Use branches or other rigid material for frame
 - (b) Walls and roof should be two or three feet thick
 - (c) Cover with a waterproof barrier—overlap bark or large leaves like shingles, or use large plastic bags/tarp on top of insulation and anchor securely
 - (d) Can cover waterproof layer with snow as added insulation
 - (e) If light shines through anywhere, shelter will leak water, wind, and warmth
 - (3) Door should insulate, keep out wind and rain, and be easily removed from inside for quick exit for signaling
 - (4) It can take days to get shelter completely tight
4. Snow shelters
 - a. Snow is a good insulator
 - (1) Spaces between snow crystals trap air
 - (2) Snow shelters offer more insulation than airplane fuselage or vehicle
 - (3) Snow and the ground under thick blanket of snow remain near 32° F, often warmer than ambient air—snow shelters takes advantage of this
 - b. Decrease exposure to wind
 - c. Candle in snow shelter increases inside temperature, but a lot of heat inside shelter will melt it
 - d. Snow shelter components

- (1) Cold air well
 - (a) Cavity lower than rest of shelter that accumulates cold air (hot air rises)
 - (b) Six inches to one foot below sitting or sleeping area
 - (c) Increases efficiency of shelter
- (2) Two ventilation holes
 - (a) CO₂ created during respiration and combustion (i.e., burning candle) can accumulate and suffocate occupants
 - (b) One low and one high for best air flow
 - (c) Must always be kept clear
- (3) Door made from extra gear, seat cushions, bag filled with snow, moss, etc.
- e. Snow caves
 - (1) Build into a **gradual** slope or drift
 - (2) Avoid steep slopes due to avalanche danger
 - (3) A curving entrance tunnel lessens direct airflow into cave
 - (4) Entrance built at right angle to wind helps prevent sealing of tunnel by drifting snow
 - (5) Dig entrance tunnel so it slopes up into a sleeping area, making a built-in cold air well
 - (6) If uphill sloping entrance tunnel is not possible, excavate a cave with raised sleeping platform and make a door
- I. See *Land Safety and Survival* (Volume 3 in this series) for in-depth information on building shelters

Signals—must attract attention and convey message that you need help

- A. Person on open ocean, vast tundra, or long stretch of beach is hard to see
- B. Precipitation or fog reduces visibility and increases difficulty locating survivors
- C. Signals must attract attention; make them
 - 1. **Bigger**
 - a. Make signals as big as possible
 - b. Running around and waving your arms makes you a bigger visual target
 - 2. **Brighter**
 - a. Carry brightly colored objects for signaling and/or wear bright colors
 - b. Big blue tarps are easy to see from the air
 - c. Neon colors are most visible from a distance if they contrast with background
 - 3. **Different**
 - a. Use contrast to your advantage
 - (1) Dark branches on snow
 - (2) Light colored shells or rocks against dark sand or dirt

- (3) Dark shadows cast by trenches in snow or sand, sand blocks, or stomped snow
 - b. Use straight lines, sharp geometric shapes, and right angles
 - (1) Rarely found in nature
 - (2) Create SOS with right angles
 - c. Movement
 - (1) Wind moves passive signals like surveyor’s tape, flags, or plastic sheeting
 - (2) Wave **both** arms or objects when rescuers are in sight. (Caution: waving one arm means “all is well”)
 - (3) Toss rocks to create ripples in flat, calm water
- D. Signals must convey the need for help
 - 1. Use universal SOS or, for English speakers, HELP
 - 2. Items or sounds grouped in threes and spaced consistently convey message of distress
 - a. Three fires
 - (1) A lot of work
 - (2) Too much for small children
 - b. Three blows on a whistle
 - c. Three flags or buoys
- E. Be innovative and construct multiple signals
- F. Use signals that are both passive and active
 - 1. Passive signals work without you
 - a. Examples: SOS, strobe light, Emergency Locator Transmitters (ELTs), Personal Locator Beacons (PLBs), three pieces of surveyor’s tape hanging about 10 feet apart
 - b. May need maintenance
 - (1) Falling snow covers an SOS quickly and repeatedly
 - (2) Winds can destroy an SOS
 - 2. Active signals—you make them work
 - a. Examples: waving your arms up and down, whistles, mirrors, radio distress calls
 - b. Require constant effort
 - c. Use when rescuers are within range
 - (1) Stay alert—rescue may come at any moment
 - (2) Be prepared to set active signals in motion
- G. Do not construct or use emergency signals for nonemergency purposes—**it is illegal**
- H. Visual signals
 - 1. Visible from ground or water **and** air
 - 2. SOS or HELP
 - a. Passive
 - b. Large and in contrast with background

- c. U.S. Coast Guard recommends letters be 18 feet tall with line width of 3 feet (6:1 ratio)
 - d. Use right angles
 - e. Adequately space letters so each is distinct at great distances
3. Reflective tape
 - a. Passive
 - b. Requires light source to work
 4. Mirrors
 - a. Active, unless hung to catch light
 - b. Work in sun or overcast
 - c. Visible from aircraft up to 50 miles
 - d. Procedure for using a signal mirror when sun and potential rescuers are positioned in front of you
 - (1) Hold up one hand to act as sight between you and rescuers
 - (2) Hold mirror in other hand
 - (3) Catch sunlight with mirror and aim reflection so it appears on back of sighting hand
 - (4) Keeping light on sighting hand, position hand in line with rescuers
 - (5) Drop sighting hand and shine reflection on rescuers
 - (6) If rescuer and sun are not in front of you, lie on your back and follow procedure above
 - (7) To better attract attention, wiggle mirror to “flash” signal
 - (8) For young children wiggling may be best procedure
 5. Strobe lights
 - a. Passive
 - b. More visible than steady lights
 - c. Universal distress signal
 - d. Require batteries
 6. Chemical light sticks
 - a. Passive
 - b. Dim when cold
 - c. Check for expiration date
 7. Fire
 - a. Daytime signal fires should be smoky
 - b. Nighttime signal fires should be bright
 - c. Three fires convey distress message
- I. Radios, telephones, and electronic signaling devices
 1. See Boating Safety, Unit 5 (this volume) for radio distress call (Mayday) instructions
 2. Contact help quickly and efficiently over long distances
 3. Keep batteries warm and dry, and conserve use

4. Must be appropriate type to reach search and rescue (SAR) resources
 - a. Citizens Band radio (CB)
 - (1) Limited range
 - (2) May not be monitored by SAR personnel
 - (3) May not have designated distress frequency; depends on local convention
 - b. VHF marine radio
 - (1) VHF channel 16 reserved for distress, safety, and calling
 - (2) Limited range is broad enough for most mariners
 - c. Single sideband (SSB) radio
 - (1) Permits long-range communication for boats too far offshore for VHF system
 - (2) Frequency 2182 kHz used for emergencies
 - d. VHF aircraft radio
 - (1) Aviation distress frequencies are 121.5 MHz (civilian) and 243.0 MHz (military)
 - (2) Hand-held aviation radios broadcast voice emergency calls on these frequencies
 - (3) Monitored continually by direction-finding stations
 - (4) Aircraft may monitor, but are not required to
 - (5) Limited to line of sight
 - e. Cellular telephone
 - (1) Not operable in all areas
 - (2) Only party called can hear distress call
 - (3) Party called may fail to respond
 - (4) Dial 911 to reach local police in most of North America
 - (5) Dial *CG to reach U.S. Coast Guard (not all service providers offer *CG call)
 - f. 406 Emergency Locator Transmitters (ELTs) and Personal Locating Beacons (PLBs)
 - (1) When turned on, broadcast strong signal on 406 MHz and weaker homing signal on 121.5 MHz
 - (2) 406 MHz signal picked up by COSPAS SARSAT (search and rescue satellite-aided tracking) satellites that link to search and rescue services
 - (3) 121.5 MHz signal can be received by passing aircraft and is used by SAR as homing beacon

Water

- A. Essential for life; required for body function
 1. You can live without food for weeks, but only days without water
 2. You are approximately 70% water
 3. People have lived without food for weeks, but only days without water

- B. Daily requirements—two to four quarts of nondehydrating fluid per day is recommended **minimum** for most school age children through adults
 - 1. Adults 18 years and up—minimum 35 ml/kg body weight
 - a. 150-pound adult needs 2.4 liters per day
 - b. 250-pound adult needs 4 liters per day
 - c. 350-pound adult needs 4.7 liters per day
 - 2. Adolescents 11 through 17 years—minimum 40 to 60 ml/kg body weight
 - a. 100-pound adolescent needs 1.8 liters per day
 - b. 150-pound adolescent needs 2.7 liters per day
 - 3. Young children 2 to 10 years—minimum 70 to 110 ml/kg body weight
 - a. 30-pound child needs 1 liter per day
 - b. 50-pound child needs 1.6 liters per day
 - c. 75-pound child needs 2.4 liters per day
 - 4. Infants 0 through 1 year—minimum 100 to 150 ml/kg body weight
- C. Water needs increase with any activity, especially stressful activity
- D. As water intake decreases, serious health problems may arise
- E. When temperatures are below freezing, carry water in sealed container between layers of clothing
- F. Choosing water sources
 - 1. Common sources include surface water, rainwater, melted ice, and snow
 - 2. Never assume water is safe for consumption
 - a. In a study of 10,000 streams from Alaska to Arizona, all tested positive for giardia
 - b. All water, with exception of rainwater, must be treated to be safe (even rainwater must be treated if collected as runoff from trees, bushes, or rocks)
 - 3. Proximity to water source should be a factor in choosing shelter location
 - 4. Don't eat ice or snow in solid state
 - a. Uses precious body heat for melting
 - b. Metabolic process creating body heat to melt ice and snow uses water, which could result in no net liquid gain
 - c. Freezing does not destroy all contaminants
- G. Only five safe sources of water in a survival situation
 - 1. Prepackaged
 - 2. Boiled
 - a. Most reliable way to purify water in survival situation if you have container
 - b. Centers for Disease Control recommends
 - (1) A 1 minute rolling boil for low altitudes

- (2) If above 2,000 meters (6,562 feet) boil vigorously for 3 minutes or use chemical disinfection after boiling vigorously for 1 minute
 - (3) Water can be boiled in a plastic bag slowly passed over hot coals if metal container is not available
- 3. Filtered
 - a. Several types of filtering systems available
 - b. Be sure to read labels to make sure they filter out contaminants; many don't
- 4. Chemically treated
 - a. Includes use of chlorine, halozone, and iodine
 - (1) Not effective in all cases
 - (2) Chlorine dioxide kills cryptosporidium, but plain chlorine does not
 - b. If using chemicals they must have contact with water **and** all parts of container
 - (1) Put untreated water and chemicals in bottle
 - (2) Loosen cap a bit and turn bottle upside down
 - (3) Shake so some water comes out onto threads on cap
 - c. Effectiveness of treatment depends on type of chemical and contaminant and water temperature, pH, cloudiness, and organic content
 - d. Be sure to read chemical treatment literature
- 5. Rainwater
 - a. Safe if caught and stored in uncontaminated container
 - b. **Not** safe if collected as runoff from trees, bushes, or rocks
- H. See *Land Safety and Survival* (Volume 3 in this series) for in-depth information on water in a survival situation
- I. The Centers for Disease Control's Web site has much valuable information on water treatment and contaminants
- J. Acquiring safe water in wilderness requires work and may be difficult for young children; carry extra water whenever possible

Food

- A. Important for energy and morale but people have survived for months on very little
- B. Helps ward off effects of cold, illness, and depression
- C. As a general rule, if you do not have water, do not eat
 - 1. Digestion uses water and increases dehydration
 - 2. Exceptions are foods with high water content, like berries
- D. Wild edibles available in many areas
 - 1. May taste strange if you have not eaten them before but often have little or no taste
 - 2. Eat only plants and animals you know are safe
 - 3. Learn to identify and eat wild edibles in your area

- a. Hunting usually uses more energy than it provides
- b. Gathering generally provides more energy for effort

Play

- A. Important component of will to live
- B. Helps combat depression
 1. Depression can rob you of your will to live
 2. Depression is foremost killer in survival situations; many people just give up and die
- C. Play is any positive activity that helps create and maintain positive attitude
 1. Make yourself more comfortable
 2. Provide more food
 3. Improve shelter and signals
 4. Play games
 5. Sing songs
 6. Tell stories
 7. Think of a happy reunion with family and friends
 8. Pray
- D. Being alone can decrease will to survive, especially in children
 1. Teach children to hug a tree
 2. Talking to yourself can be calming and reduce panic
- E. Think and act like a survivor!

Lost or Stranded: Activities Guide

- Activities in this volume are sequential, and each unit assumes some knowledge of the material in the preceding unit.
- Activities are arranged by topic in the same order as the Teacher Information.
- Detailed Alaska Content Standards are located at the end of each activity’s procedures.
- Times given for activities are approximate.
- In order to provide a choice of handouts for prereaders and readers, many activities have more than one handout that covers the same information.
- Many activities contain true stories; be sensitive to the possibility that they could be written about your students’ relatives or friends.
- **AMSEA** This symbol means the items are available to borrow from AMSEA.

Topics: Avoiding Emergencies, Emotional Factors in Emergencies, Lost or Stranded Survival

Activities	Objectives	Standards
<p>1. Being Lost is Scary! Stories, a discussion, and a game explore feelings when lost or stranded p. 283</p>	<ul style="list-style-type: none"> • List three feelings they might experience if lost or stranded • Explain three things they can do to make themselves feel better when frightened 	Skills for a Healthy Life
<p>2. Addressing Fears Story, discussion, and games teach safe behavior when lost p. 284</p>	<ul style="list-style-type: none"> • Describe at least one emotion often felt by someone who is lost • Explain at least one self-calming action to take if lost • List five actions to take in a lost situation 	Language Arts Mathematics Science Skills for a Healthy Life

Topic: Seven Steps to Survival

Activities	Objectives	Standards
<p>3. Seven Steps to Survival Matching game, play with stuffed animals, and an art project teach the Seven Steps to Survival p. 290</p>	<ul style="list-style-type: none"> • List the Seven Steps to Survival in order 	Language Arts Skills for a Healthy Life Arts

<p>4. Taking Inventory Creative brainstorming and a song teach about taking inventory when lost or stranded p. 294</p>	<ul style="list-style-type: none"> • Take inventory in a lost or stranded scenario • List four items that might be useful in a survival situation • List three other things to assess during the inventory step of the Seven Steps to Survival 	<p>Language Arts Mathematics Skills for a Healthy Life Arts</p>
<p>5. Shelter Building A story, song, in-class practice, and field trip to practice building an emergency shelter with garbage bags p. 298</p>	<ul style="list-style-type: none"> • List three requirements of a good shelter • List three effective ways to use a garbage bag as a shelter • Demonstrate how to make an emergency shelter with a garbage bag 	<p>Skills for a Healthy Life Arts</p>
<p>6. Signal Building Students build and critique signals outdoors p. 301</p>	<ul style="list-style-type: none"> • Demonstrate two components of a good signal • Demonstrate three techniques for signaling for help 	<p>Mathematics Skills for a Healthy Life Arts</p>
<p>7. Survival Diorama Art project to review shelter and signal building p. 304</p>	<ul style="list-style-type: none"> • Build a miniature shelter that incorporates the three requirements of a good shelter • Build miniature signals that incorporate the two components of a good signal 	<p>Language Arts Skills for a Healthy Life Arts</p>
<p>8. Water and Food Video, local expert, and field trip help students identify safe food and water p. 305</p>	<ul style="list-style-type: none"> • Select one edible wild food from their local area • List two sources of safe water in a stranded situation 	<p>Language Arts Science Skills for a Healthy Life</p>
<p>9. Play A book and a field trip explore ways to maintain good morale in a survival situation p. 306</p>	<ul style="list-style-type: none"> • List five ways to play in a survival situation 	<p>Language Arts Skills for a Healthy Life</p>

Topic: Culminating Activities

Activities	Objectives	Standards
10. Lost? Saved! A story and a game illustrate things that can help and can hurt in a lost or stranded situation p. 307	<ul style="list-style-type: none">• List 20 things that can help them and 20 things that can hurt them in an emergency	Language Arts Mathematics Skills for a Healthy Life
11. Lost or Stranded Show Make a hand-cranked “movie” to review the unit p. 312	<ul style="list-style-type: none">• List three practices that will help avoid becoming lost or stranded• List the Seven Steps to Survival in the correct order• Explain five actions to take in a lost or stranded situation• Describe three requirements of a good survival shelter• Describe two components of a good signal	Language Arts Mathematics Skills for a Healthy Life Arts Library/Information Literacy

Being Lost Is Scary!

Time: 20 minutes

Use with Teacher Information

Overview

Stories, a discussion, and a game explore feelings when lost or stranded.

Objectives

After completing this activity, students should be able to:

1. List three feelings they might experience if lost or stranded.
2. Explain three things they can do to make themselves feel better when frightened.

Materials

- *Life Doesn't Frighten Me* by Maya Angelou or *I Feel Scared* by Kelly Doudna
- Bouncing ball

Procedure

1. Introduce the activity by reading *Life Doesn't Frighten Me*, *I Feel Scared*, or another book about emotions.
 2. Talk about the feelings students might experience if they are lost or stranded.
 3. Give examples of things students can do when they are frightened to make themselves feel better.
 4. Play a game to explore emotions:
 - Have the students stand in a circle with one holding the ball.
 - Have the student with the ball bounce it to another student while calling out an emotion one might feel if lost or stranded.
 - Have recipient call out an action he/she might use to alleviate that feeling, then call out another emotion one might feel if lost or stranded while bouncing the ball to a third student.
- Play continues in this manner until all students have had an opportunity to bounce the ball, call out an emotion, and state a coping strategy.

Variation

Make the game competitive. Players who receive the ball and then cannot think of an emotion to call out while bouncing it, are “out.” Play continues until only one player remains.

This activity addresses Alaska Content Standards:

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-5 Well-being of family, A-6 Making informed choices, B-2 Effective communication,

C-5 Effects of attitude and behavior, D-1 Responsible decisions, D-2 Safe and healthy environments

Addressing Fears

Time: 30 minutes

Use with Teacher Information

Overview

Story, discussion, and games teach safe behavior when lost.


Objectives

After completing this activity, students should be able to:

1. Describe at least one emotion often felt by someone who is lost.

2. Explain at least one self-calming action to take if lost.
3. List five actions to take in a lost situation.

Materials

- *Lost in the Woods* by Colleen Politano 
- One set per class, **Helpful Things cards** (make from Template #1)
- One set per class, **Not-Helpful Things cards** (make from Template #2)
- Two sets per two or four students, **Lost Time game cards**—one white and one another color (make from Template #3)
- Directions for **Lost Time game** (make from Template #4)

Procedure

1. Read *Lost in the Woods*.
2. Discuss Calvin's feelings when first out in the woods. Ask students how they would have felt.
3. Discuss Calvin's feelings after he realized he was lost. Ask students if they have ever been lost and how they felt. Emphasize that these feelings are normal in this situation.
4. Ask students how Calvin's parents felt when Calvin was found. Ask them how their parents reacted when they were found, or how they think they might react. Recognize that some parents might react in anger, especially if the child got lost because he/she disobeyed, but that it is important for children to respond to help so they can get found.
5. Discuss what to do if you hear an animal and are afraid.
6. Discuss Calvin's behavior after the deer leaves him. Point out that people often walk in circles and get confused when lost. Emphasize the importance of staying put.
7. Discuss what Calvin learned in school and from his father, and how that helped him when he realized he was lost.
8. Read the **Helpful Things** and **Not-Helpful Things cards** aloud. Discuss each and emphasize what is helpful and what is not helpful.
9. Distribute cards randomly, one per student.
10. Have students read their cards silently and decide whether their cards indicate something that helps or something that hurts a lost person.
11. Designate one area of the room as helpful, and another as not helpful.
12. Direct students to walk to the area their card indicates.
13. Review students' decisions.
14. Collect cards and follow steps 3 through 7 again, if desired.
15. Divide students into groups of two to four students.
16. Have students play the **Lost Time game**.

Extensions

1. As a group, create a poem or song about things helpful to a lost person.
2. As a group, create a poem or song about things not helpful to a lost person.
3. Have students write a fantasy story about survival while lost or stranded.
4. Use puppets or stuffed animals to act out the helpful and not helpful actions and/or the fantasy story.

This activity addresses Alaska Content Standards:

Language Arts A-3 Demonstrate speaking skills, A-4 Writing and speaking with purpose, A-6 Using visual communication, B-1 Meaning from written, oral, and visual text, B-2 Investigations in written materials, C-3 Group decision making, D-1 Developing a logical position, D-1-A Personal experience and prior knowledge, D-2 Evaluating information

Mathematics A-1 Numeration

Science A-5 Forces of nature, A-14 Living things and their environments, A-15 Using local knowledge, D-1 Practical applications of scientific knowledge

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-5 Well-being of family, A-6 Making informed choices, B-1 Risk and consequences, B-2 Effective communication, C-2 Effective communication, D-1 Responsible decisions, D-2 Safe and healthy environments

Helpful Things Cards

Stop! Ask, "Am I in danger?"	Stay as dry as possible.
Stay in one place.	Make a shelter.
Look at the weather.	Make signals.
Look at what might help or hurt you.	Drink safe water.
Look at what is in your pockets.	Respond to searchers.
Put on a hat.	Think and act like a survivor!

Not-Helpful Things Cards

Keep wandering around.	Eat unfamiliar things.
Don't look at the weather.	Sit and cry. Don't try to help yourself.
Move as fast as you can.	Get really mad and break things.
Use the first thing you see.	Stay out in the rain and get very wet.
Do nothing.	Throw away clothes or things from your pack.
Drink stream water.	Hide from people searching for you.

Lost Time Game Cards

You need two sets of cards for each group of two to four students. Make one set white, the other set another color.

Stay in one place.	Put on extra clothes.
Think about rescue.	Don't be ashamed.
Yell if you hear voices.	Put on a hat.
Yell if you hear animals.	Only eat food you know is safe.
Make a shelter.	Drink safe water.
Make signals.	Learn survival skills.

Directions for Lost Time Game

1. Shuffle and stack the white cards face down. Shuffle and place the other 12 cards face down in a circle like a clock around the stack of white cards.
2. The first player takes the top card off the white stack, reads it aloud, and turns over a colored card from the circle that he/she thinks says the same thing.
3. If the first player is correct he/she keeps both cards and takes another turn. If no mistakes are made, he/she can take up to three turns. If incorrect, the player returns the colored card to its place and the white card to the bottom of the stack, and his/her turn passes to the next player.
4. Play continues until all cards are matched.
5. The winner is the one with the most cards.

Extension

Use this game to reinforce telling time. Ask students to “tell the time” where the message is: e.g., at 2 o’clock, 4 o’clock, etc.

Seven Steps to Survival

Time: 45 minutes

Use with Teacher Information

Overview

Matching game, play with stuffed animals, and an art project teach the Seven Steps to Survival.

Objective

After completing this activity, students should be able to list the Seven Steps to Survival in order.

Materials

- *Lost in the Woods* by Colleen Politano, *Salty Takes Off* by Gloria Rand, or *Willie Takes a Hike* by Gloria Rand [AMSEA](#)
- One set per two students, **Seven Steps to Survival cards** (make from Template #1)
- One set per two students, **Seven Numbers cards** (make from Template #2)
- One per student, Student Handout #1 **Seven Steps to Survival Tangram**
- Scissors

Procedure

1. Read *Lost in the Woods*, *Salty Takes Off*, or *Willie Takes a Hike*. For whichever book(s) you read, point out where the main character goes through the Seven Steps. If it isn't clear, point out where it could have happened. Hold up the appropriate card for each step and explain what it means.
2. Review by holding cards up in the correct order. As each goes up, the class recites the step. Practice a few times.
3. Shuffle all Seven Steps to Survival cards and numbered cards together.
4. Distribute one card to each student.
5. A volunteer with "Recognition" reads his/her card. All students who have either "Recognition" cards or "1" cards raise their cards. Repeat until all steps have been covered.
6. Drill by saying a number and asking students with the corresponding words to raise their cards. Then call out a word and students with the corresponding number raise their cards.
7. Break the class into groups of two. Distribute one set of each type of card per group.
8. Have students arrange the cards in the correct order with the "1" next to "Recognition," etc.
9. Distribute Student Handout #1.
10. Have students cut out tangram pieces and build different shapes with them.
11. Working as a group, make up a story illustrating the Seven Steps to Survival.
12. Students may then act out the story.

This activity addresses Alaska Content Standards:


Language Arts A-3 Demonstrate speaking skills, A-4 Writing and speaking with purpose, B-1 Meaning from written, oral, and visual text, B-2 Investigations in written materials

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury

prevention, A-5 Well-being of family, A-6 Making informed choices, B-1 Risk and consequences

Arts A-1 Participate in the arts, A-3 Materials, tools, techniques, and processes

Seven Steps to Survival Cards

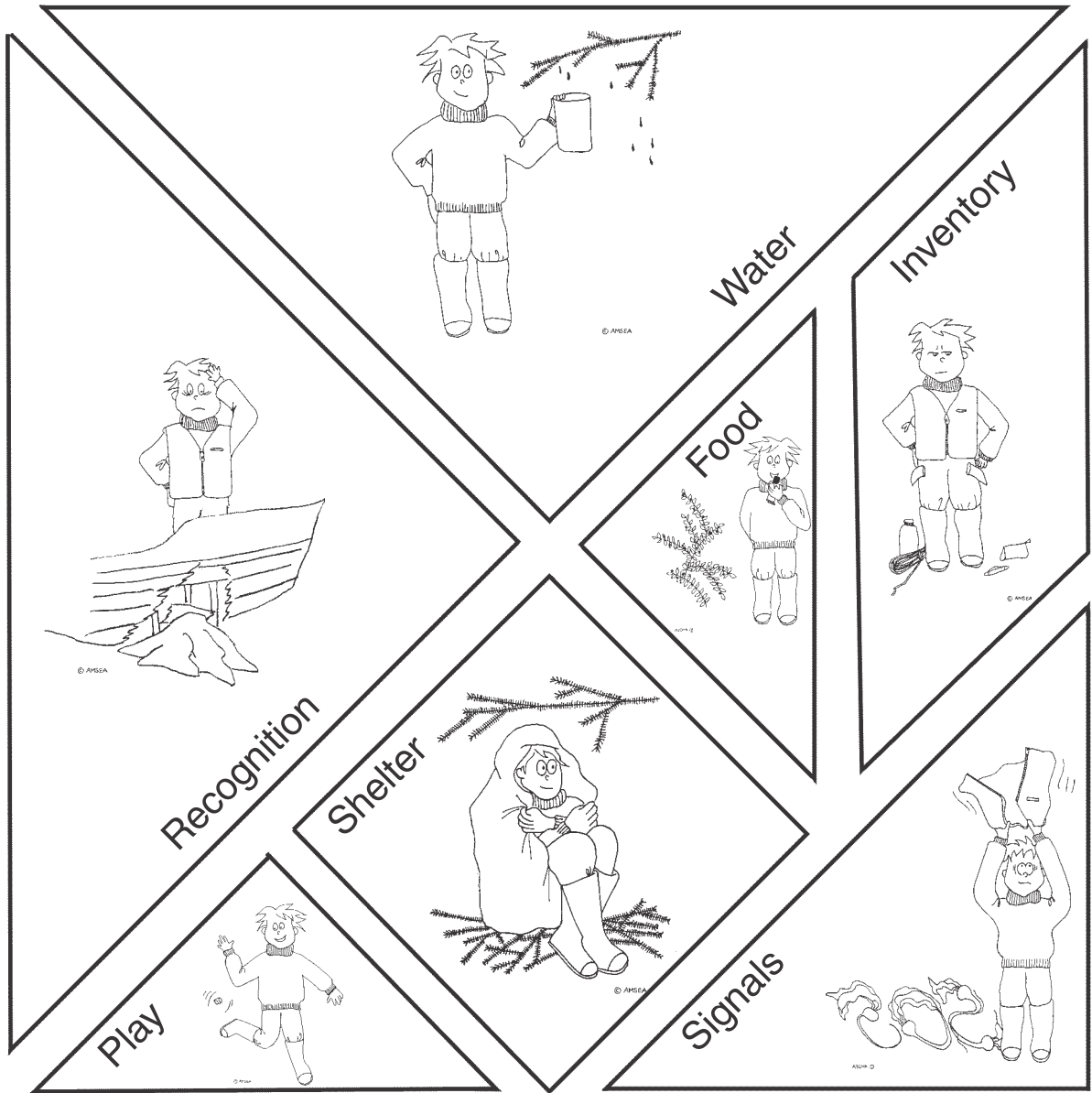
 <p>Recognition</p>	 <p>Water</p>
 <p>Inventory</p>	 <p>Food</p>
 <p>Shelter</p>	 <p>Play</p>
 <p>Signals</p>	

Seven Numbers Cards

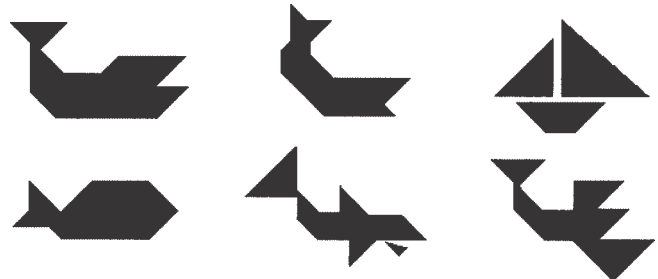
1	5
2	6
3	7
4	

Name: _____

Seven Steps to Survival Tangram



Make these and other shapes with your Seven Steps to Survival tangram pieces.



Taking Inventory

Time: 45 minutes

Use with Teacher Information

Overview

Creative brainstorming and a song teach about taking inventory when lost or stranded.


Objectives

After completing this activity students should be able to:

1. Take an inventory in a lost or stranded scenario.

2. List four items that might be useful in a survival situation.
3. List three other things to assess during the inventory step of the Seven Steps to Survival.

Materials

- An assortment of survival kit items  and other items
- Song #1 **Inventory Song**
- Backpack for song
- Props for the song

Procedure

Before Class

1. Set survival kit items and other items around classroom.

During Class

1. Discuss some things students may need to do in a lost or stranded situation.
2. Talk about taking inventory, including:
 - Things they might carry on their person that can be used as “tools”—even ordinary items normally with other uses.
 - Things they might find in the environment.
 - Assessment of the weather.
 - Assessment of their clothing.
 - Their own strengths, weaknesses, and abilities.
3. Ask students to pretend that they are stranded in their classroom.
4. Take an inventory of items on their persons and possible uses for those items.
5. Have students walk around the classroom and pick up items that they think might be useful in a survival situation. Take turns looking at items and brainstorming possible uses.
6. Have students look outside and assess the weather for outdoor activities.
7. Discuss the clothing students are wearing and its appropriateness if stranded outdoors.
8. Sing the **Inventory Song**, holding up items in the backpack as you sing about them.
9. Categorize the items in the backpack according to the seven Steps to Survival.
10. Discuss what would be realistic to have in a backpack.

Extension

Make up new verses for the **Inventory Song**.

This activity addresses Alaska Content Standards:

Language Arts B-1 Meaning from written, oral, and visual text, D-1-A Personal experience and prior knowledge, D-1-D Analyzing information

Mathematics A-1 Numeration

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices, B-1 Risk and consequences

Arts A-1 Participate in the arts

Inventory Song

Sung to the tune of The Twelve Days of Christmas

When first I was stranded,
I found inside my pack,
A big bag of keep-me-warm
snacks.

When first I was stranded,
I found inside my pack,
Two nice warm hats,
And a big bag of keep-me-warm
snacks.

When first I was stranded,
I found inside my pack,
Three clothing layers,
Two nice warm hats,
And a big bag of keep-me-warm
snacks.

When first I was stranded,
I found inside my pack,
Four bags of nuts,
Three clothing layers,
two nice warm hats,
And a big bag of keep-me-warm
snacks.

When first I was stranded,
I found inside my pack,
Five plastic bags,
Four bags of nuts,
Three clothing layers,
Two nice warm hats,
And a big bag of keep-me-warm
snacks.

When first I was stranded,
I found inside my pack,
Six shiny flashlights,
Five plastic bags,
Four bags of nuts,
Three clothing layers,
Two nice warm hats,
And a big bag of keep-me-warm
snacks.

When first I was stranded,
I found inside my pack,
Seven cans of fruit juice,
Six shiny flashlights,
Five plastic bags,
Four bags of nuts,
Three clothing layers,
Two nice warm hats,
And a big bag of keep-me-warm
snacks.

When first I was stranded,
I found inside my pack,
Eight extra stockings,
Seven cans of fruit juice,
Six shiny flashlights,
Five plastic bags,
Four bags of nuts,
Three clothing layers,
Two nice warm hats,
And a big bag of keep-me-warm
snacks.

When first I was stranded,
I found inside my pack,
Nine knives for cutting,
Eight extra stockings,
Seven cans of fruit juice,
Six shiny flashlights,
Five plastic bags,
Four bags of nuts,
Three clothing layers,
Two nice warm hats,
And a big bag of keep-me-warm
snacks.

When first I was stranded,
I found inside my pack,
Ten packs of soup mix,
Nine noisy whistles,
Eight extra stockings,
Seven cans of fruit juice,
Six shiny flashlights,
Five plastic bags,
Four bags of nuts,
Three clothing layers,

Two nice warm hats,
And a big bag of keep-me-warm
snacks.

When first I was stranded,
I found inside my pack,
Eleven ropes for tying,
Ten packs of soup mix,
Nine noisy whistles,
Eight extra stockings,
Seven cans of fruit juice,
Six shiny flashlights,
Five plastic bags,
Four bags of nuts,
Three clothing layers,
Two nice warm hats,
And a big bag of keep-me-warm
snacks.

When first I was stranded,
I found inside my pack,
Twelve brand new light sticks,
Eleven ropes for tying,
Ten packs of soup mix,
Nine noisy whistles,
Eight extra stockings,
Seven cans of fruit juice,
Six shiny flashlights,
Five plastic bags,
Four bags of nuts,
Three clothing layers,
Two nice warm hats,
And a big bag of keep-me-warm
snacks.

Shelter Building

Time: 90 minutes

Use with Teacher Information

Overview

A story, song, in-class practice, and field trip to practice building an emergency shelter with garbage bags.

Objectives

After completing this activity, students should be able to:

1. List three requirements of a good shelter.
2. List three effective ways to use a garbage bag as a shelter.
3. Demonstrate how to make an emergency shelter with a garbage bag.

Materials

- *Outdoor Survival: A Practical Review* video (6 minutes) **AMSEA**
- *Sailor Dog* by Margaret Wise Brown, *Lost in the Woods* by Colleen Politano, or *Willie Takes a Hike* by Gloria Rand **AMSEA**
- Song #1 **We've Been Working on Our Shelter**
- Piano or guitar (optional)
- One per student, plastic grocery bag
- One per student, 30-gallon garbage bag
- Grassy or weedy shelter building area that is clear of garbage and other hazards but with abundant natural debris
- Adult helpers for shelter building exercise

Extension

- Box of debris
- Assortment of gallon, quart, and pint-sized reclosable plastic bags
- One per student, student's stuffed animals

Procedure

Before Class

1. Cue the video to shelter building segment at 1 minute and 20 seconds from beginning.

During Class

Part 1

1. Read *Sailor Dog*, *Lost in the Woods*, or *Willie Takes a Hike*.
2. Discuss the requirements of a good shelter.
3. Review the high heat loss areas and the importance of having them protected by the shelter.

Part 2

1. Distribute a garbage bag to each student with the instruction to use it to cover as many of their high heat loss areas as they can, but *they must keep their faces out of the bag*.

2. Allow two to three minutes for all to get into their bags.
3. Have students “freeze” in place to reduce the noise of moving plastic.
4. Discuss how various students used their bags and whether the bags help them feel warmer.
5. Keep students in the bags until they notice the temperature change.
6. Collect the garbage bags and distribute plastic grocery bags with the instruction to create a hat with them.
7. Allow one minute for all to complete their hat donning. Keep hats on until all feel warmer.

Part 3

1. Watch the shelter building portion of *Outdoor Survival: A Practical Review*.

2. Explain that the class will go outside to make shelters.
3. Describe the shelter building process. Demonstrate in miniature with a clothespin or tiny toy person.
4. Take students to the previously chosen shelter building area.
5. Divide students into small groups and distribute one grocery bag per group.
6. Have students, teacher(s) and any adult helpers fill the bags with soft debris—no garbage, sticks, or rocks, just grass, leaves, evergreen boughs, weeds or other soft, natural material.
7. Regroup the students. Combine all collected material into one or more large garbage bags.
8. For each filled garbage bag use another garbage bag to create a sleeping bag-like shelter by placing the empty bag inside the filled bag.
9. Have students take turns climbing into the shelter. Ask:
 - Do they feel warmer?
 - Which of their high heat loss areas are not covered? What can they do about that?
 - Are their shelters big or small compared to a house, a room, a bed?
10. Remove the empty bags inside the stuffed bags and tie the tops of the stuffed bags closed.
11. Point out that it is more important to insulate from the ground than from the air.
12. Have students take turns lying on top of the stuffed bags, using the empty bags as covers. Can they cover all their high heat loss areas?
13. Have students work together to dump the contents of the garbage bags onto the ground and take turns using the piled debris as a mattress, and some of the debris as a blanket. The garbage bags can be under or over them.
14. Back in the classroom review the three essential requirements of a good shelter. Discuss good places to build their shelters.
15. Sing **We've Been Working on Our Shelter**.
16. Have students draw pictures of their house and their shelter to scale.
17. Emphasize that it's better to not get lost or stranded than to have to build a shelter and spend a cold night out.

Extensions

1. Have older children help your students with shelter building.
2. Using a box of debris and various-sized reclosable plastic bags, have students build shelters for their stuffed animals.

This activity addresses Alaska Content Standards:

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices, B-1 Risk and consequences

Arts A-1 Participate in the arts

We've Been Working on Our Shelter

Sung to the tune of I've Been Working on the Railroad

We've been working on our shelter,
Took us half the day,

Someone left a hole in the ceiling,
Someone left a hole in the wall,

We've been working on our shelter
'Cause we got stuck out today,

Someone left a hole in the ceiling,
Patch it now one and all.

Got to build a floor three feet tall,
Make the shelter small,

Fefifidlio,
Fefifidlio,

Make it wind and waterproof,
It should fit us all.

Fefifidlio, when someone finds us
We can go!

Don't forget the door,
Don't forget the door,
Don't forget to build the door,

Don't forget the door,
Don't forget the door,
Don't forget to build the door.

Signal Building

Time: 90 minutes

Use with Teacher Information

Overview

Students build and critique signals outdoors.

Objectives

After completing this activity, students should be able to:

1. Demonstrate two components of an effective signal.
2. Demonstrate three techniques for signaling for help.

Materials

Part 1

- *Outdoor Survival: A Practical Review* video (6 minutes) **AMSEA**
- One per student, Student Handout #1 **Signals**

- Props to illustrate the signaling principles of bigger, brighter, and different

Part 2

- Roll of surveyor's tape
- Outdoor location where students can build signals, preferably with a high spot or two-story building nearby so that students can view their finished signals from above
- One per group, bag of signal building material (trash bags, string or rope, pieces of surveyor's tape, foil, space blankets, a tarp or pieces of a tarp, extra items of clothing, strobe light, chemical light, whistle, etc.) **AMSEA**

Extensions

- Magazines to cut up that include full-page pictures of outdoor scenes
- Scissors, glue, and other art supplies
- Box of signaling material **AMSEA**
- Stuffed animals

Procedure

Before Class

1. Cue the video to signal-building segment at 3 minutes and 15 seconds from beginning.
2. Gather or create props illustrating "bigger," "brighter," and "different." You might use pieces of paper of different sizes, different brightness, that contrast and don't contrast.
3. Notify local police, search and rescue personnel, Federal Aviation Administration, and U.S. Coast Guard that you will be practicing signal building.
4. At the signal-building site, use surveyor's tape to outline an SOS that is about 18 feet tall with 3 foot wide lines.
2. Discuss the need for people to signal for help.
3. Using props to illustrate the principles of bigger, brighter, and different, and explain that to be effective signals must attract attention and convey the need for help.
4. Discuss ways students could signal for help in a wilderness situation.
5. Describe and give examples of active and passive signals.
6. Distribute and have students complete Student Handout #1.

During Class

Part 1

1. Watch the signal segment of *Outdoor Survival: A Practical Review*.

Part 2

1. Go outdoors to the spot where you outlined the SOS.
2. Work with students to fill in the letters.

3. When finished, gather everyone on a high spot, look down on the SOS, and evaluate how well it works.
4. Break class into groups of four to six and distribute a bag of potential signal materials to each group.
5. Allow each group 10 minutes to build an effective signal.
6. As a class, travel to each signal.
 - Allow each group to explain how its signal works and how the idea was formulated.
 - Discuss whether this signal meets the two requirements of an effective signal.
7. Count the number of signals the class made that can be seen from the air, and the number visible from land. Count the number that are active and the number that are passive.
8. Dismantle all the signals, leaving the area looking as if you had never been there.

Extensions

1. Have students create a bulletin board display illustrating the signaling principles of bigger, brighter, and different. Post pictures of outdoor scenes and have students paste on “signals” that are eye-catching because they are bigger, brighter, or different.
2. Bring into your classroom a box of signaling material. Have students build miniature signals for their “lost or stranded” stuffed animals.

This activity addresses Alaska Content Standards:

Mathematics A-3 Arithmetic and computation, B-3 Using mathematics in real-life situations, E-2 Practical applications of mathematics

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury

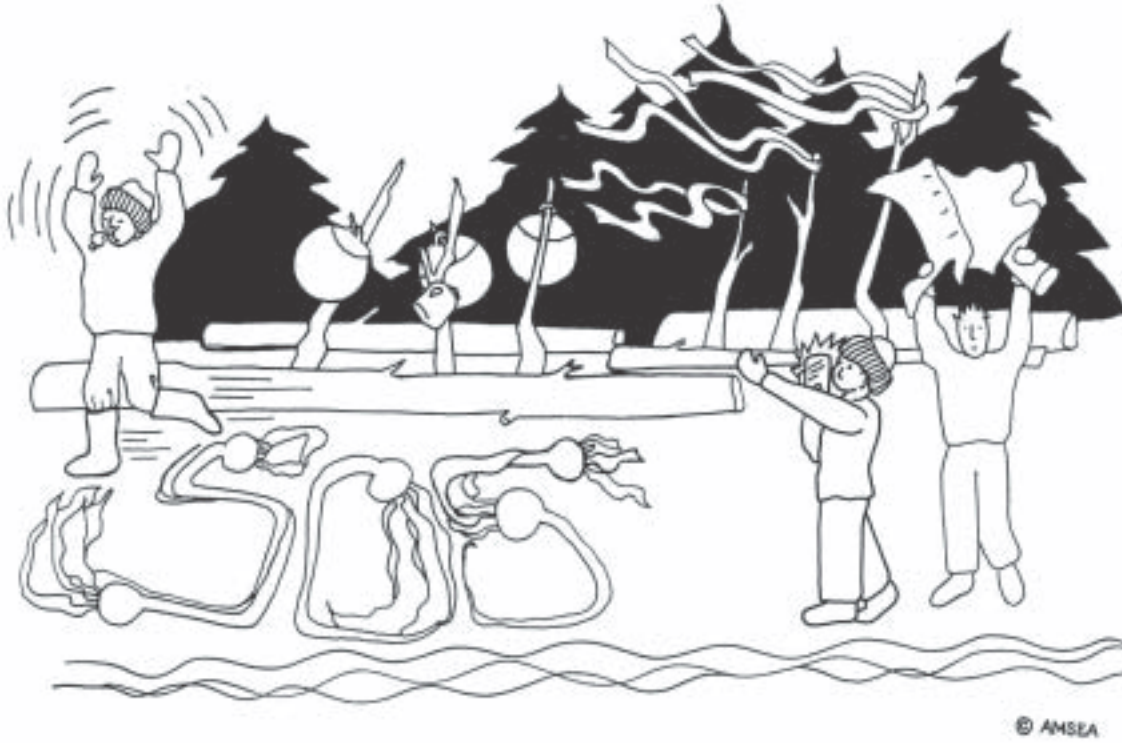
prevention, A-6 Making informed choices, B-1 Risk and consequences, B-2 Effective communication, D-1 Responsible decisions

Arts A-1 Participate in the arts

Name: _____

Signals

Use bright colors to color the things that make people look your way and tell people you need help.



Draw one other kind of signal:

Survival Diorama

Time: 40 minutes

Use with Teacher Information

Overview

Art project to review shelter and signal building.

Objectives

After completing this activity, students should be able to:

1. Build a miniature shelter that incorporates the three requirements of a good shelter.
2. Build miniature signals that incorporate the two components of a good signal.

Materials

- One per four students, cardboard box about 12 inches x 18 inches x 2 inches
- One per four students, clothespin “person” or small toy person
- Collection of material for shelter and signal building (shelter suggestions: grass, small plastic bags, twigs; signal suggestions: trash bags, string or rope, pieces of surveyor’s tape, foil, a space blanket, a tarp or pieces of a tarp, extra items of clothing, strobe light, chemical light, whistle) **AMSE1**

Procedure

1. Review the three requirements of a good shelter and the two components of an effective signal.
2. Divide class into groups of four and distribute a box, a “person,” and building supplies.
3. Have groups build a shelter and signals for their “person.”
4. If desired, allow students to change and rework their dioramas over the course of a week.
5. Use dioramas as a classroom display after students have finished their work.

Variation

Give groups two “people.”

Extension

Students count the number of signals they created and sort them by category: those visible from air; those visible from land or the water.

This activity addresses Alaska Content Standards:

Language Arts C-1 Developing a project, C-2 Project organization, C-3 Group decision making, C-4 Project quality, C-5 Project collaboration

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention

Arts A-1 Participate in the arts, A-3 Materials, tools, techniques, and processes

Water and Food

Time: 30-60 minutes

Use with Teacher Information

Overview


Video, local expert, and field trip help students identify safe food and water.

Objectives

After completing this activity, students should be able to:

1. Select one edible wild food from their local area.
2. List two sources of safe water in a stranded situation.

Materials

- *Outdoor Survival: A Practical Review* video (6 minutes) 

Procedure

Before Class

1. Cue the video to the water and food segment at 4 minutes and 30 seconds from beginning.

During Class

1. Watch water and food segments of *Outdoor Survival: A Practical Review*.
2. Discuss the importance of drinking safe water and eating only food known to be safe.

Discuss where safe water can be found in a survival situation.

3. Invite a local expert on wild edibles into your class to speak to the students.
4. Follow the speaker with a walk to identify wild edibles. Emphasize not eating things without knowing exactly what they are and that they are safe.

This activity addresses Alaska Content Standards:

Language Arts D-2 Evaluating information

Science A-4 Observable natural events, A-12 Biological diversity, A-15 Using local knowledge, B-2 Tools of scientific investigation, C-3 Cultural influences, D-6 Using reasoned decisions

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-6 Making informed choices, B-1 Risk and consequences, D-1 Responsible decisions

Play

Time: 45 minutes in classroom; 60 minutes outside

Use with Teacher Information

Overview

A book and a field trip explore ways to maintain good morale in a survival situation.

Objective

After completing this activity, students should be able to list five ways to play in a survival situation.

Materials

- *Sea of Ice* by Monica Kulling 

Procedure

1. Read *Sea of Ice*. This may take two or three 10-to-15 minute sessions.
2. Discuss ways the crew of the *Endurance* kept up their spirits.
3. Talk about whether these things would work for children.
4. Suggest other actions that might help a lost or stranded child feel better.
5. Take a field trip to a wooded area, field, or beach.
6. Instruct students to pretend that they are lost or stranded.
7. Brainstorm ways they can “play” in such a survival situation.
8. Practice the activities.

This activity addresses Alaska Content Standards:

Language Arts B-1 Meaning from written, oral, and visual text

Skills for a Healthy Life A-3 Injury prevention, A-6 Making informed choices

Lost? Saved!

Time: 30 minutes

Use with Teacher Information

Overview

A story and a game illustrate things that can help and can hurt in a lost or stranded situation.

Objective

After completing this activity, students should be able to list 20 things that can help them and 20 things that can hurt them in an emergency.

Materials

- *Brave Irene* by William Steig **AMSEA**
- One set per two or four students, **Save Lost Eileen cards** (make from Template #1)
- One set per two or four students, **Save Lost Eileen game board** (make from Template #2)
- One set of eight per four students, game pieces (like checkers)—four of one color and four of another color
- Directions for playing **Save Lost Eileen** (make from Template #3)

Procedure

1. Read *Brave Irene*.
2. Discuss the clothes Irene wore when she went out into the snow. Compare them to clothes children wear now.
3. Discuss the weather Irene encountered.
 - Was it a wise decision to go out when snow was beginning to fall?
 - How important was it to get the gown to the duchess?
 - Should Irene have listened to the wind? Point out that the wind made Irene cold faster.
4. Discuss hypothermia. Emphasize that when cold and slightly hypothermic judgment may not be good and injury is more likely.
5. Discuss emotional factors:
 - Note that Irene's stubbornness hurt her and then saved her.
 - Discuss what thought helped her to not give up and die.
6. Play **Save Lost Eileen**.

This activity addresses Alaska Content Standards:

Language Arts B-1 Meaning from written, oral, and visual text, C-3 Group decision making

Mathematics A-1 Numeration, D-3 Mathematical reasoning

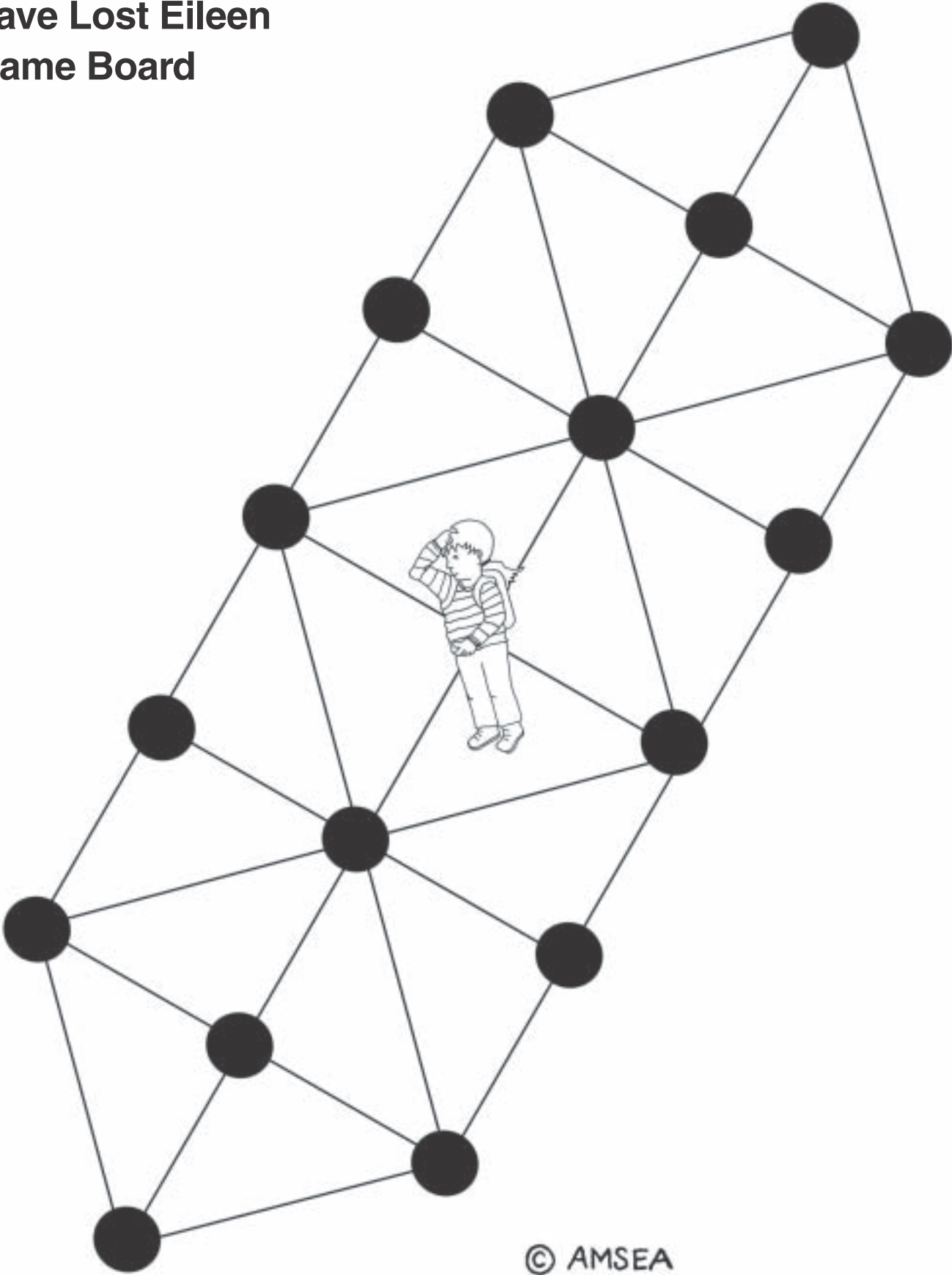
Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury prevention, A-5 Well-being of family, A-6 Making informed choices, D-1 Responsible decisions

Save Lost Eileen Cards

No survival kit	Not yelling at sounds	No hat	Sad
Being tired	Hat	No mittens	Warm coat
No scarf	Mittens	Sandals	Boots
Getting sick	Scarf	No water or food	Survival kit
Giving up	Warm pants	Being wet	Water and food
Not recognize a problem	Try hard	Wander around	Warm sun
Not being careful	Wet cotton clothes	Bad decisions	Shelter

Signal	Stay in one place	Cold	Getting sick
Mirror	Plastic bag	Wind	Giving up
SOS	Trip plan	Injury	Not recognize a problem
Long underwear	First aid kit	Night	Not being careful
Stay warm	Recognize you have a problem	Panic	Not yelling at sounds
Stay dry	Play	No survival kit	Sleep on the cold ground
Stay together	Take inventory	Being tired	No coat
Whistle	Snow	No scarf	Rain

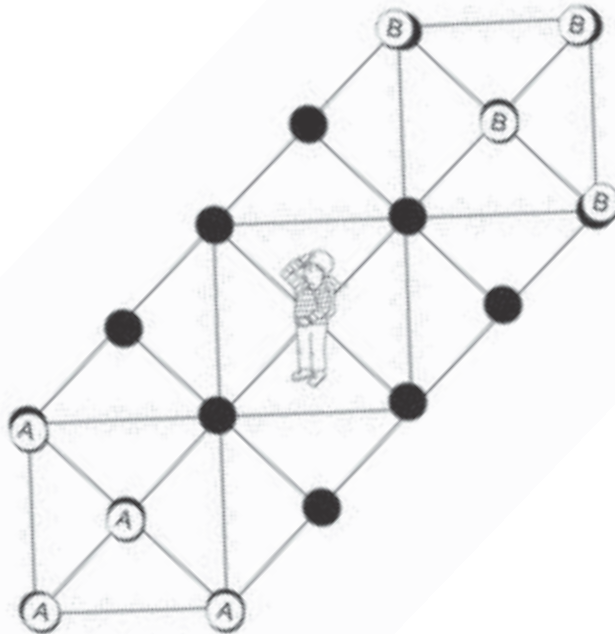
Save Lost Eileen Game Board



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Directions for Playing Save Lost Eileen

1. The object of the game is to surround Lost Eileen.
2. Shuffle and stack cards face down, wherever convenient.
3. One player or team places four Things-That-Can-Help-Her game pieces on the four spots at the far left end of the game board (color A game pieces).
4. The other player or team places four Things-That-Can-Hurt-Her game pieces on the four spots at the far right end of the game board (color B game pieces).
5. First player/team picks a card from the top of the pile and reads it. If it names something that can help Lost Eileen, the player/team with color A game pieces on the far left moves one piece one place. If it names something that can hurt Lost Eileen, the player/team with color B game piece at the far right moves one piece one place.
6. Players/teams move their game piece to an empty spot, either adjacent to their location or by jumping over another game piece. But they may not jump game pieces over Lost Eileen. Jumping your own piece has no consequence, but if the game piece jumped is of a different color, the jumped piece goes back to one of the four starting spots. If all four starting spaces are filled, it shares a space with one of the pieces already there. Any piece can move from a shared square in turn.
7. The second player/team picks the next card off the top of the pile and reads it. Play as above.
8. Play continues in this manner until Lost Eileen is surrounded by four game pieces of the same color. If Color A surrounds Lost Eileen first she is saved; if Color B surrounds her first she is overcome.



Game board showing starting positions of playing pieces.

Lost or Stranded Show

Time: 60-90 minutes

Use with Teacher Information

Overview

Make a hand-cranked “movie” to review the unit.

Objectives

After completing this activity, students should be able to:

1. List three practices that will help them avoid becoming lost or stranded.
2. List the Seven Steps to Survival in the correct order.

3. Explain five actions to take in a lost or stranded situation.
4. Describe three requirements of a good survival shelter.
5. Describe two components of a good signal.

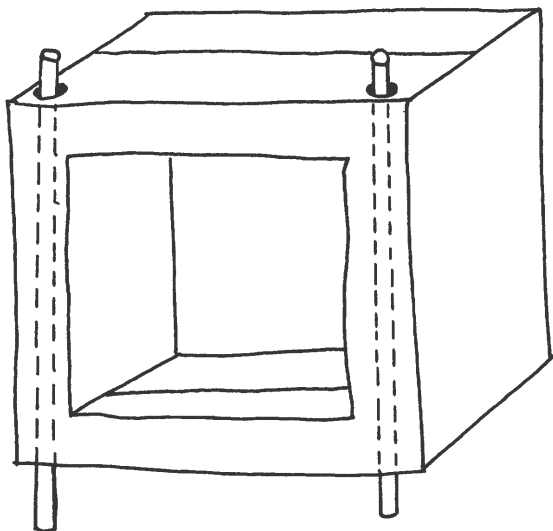
Materials

- Roll of butcher paper
- Sturdy box several inches wider than the roll of butcher paper
- Two dowels about 8 inches longer than the width of the box
- Strong adhesive tape
- Marking pens, crayons, and other art supplies

Procedure

Before Class

1. Cut a “TV screen” and holes for dowels.
2. Use a marking pen to divide the paper into “frames” about the same size as the TV screen.

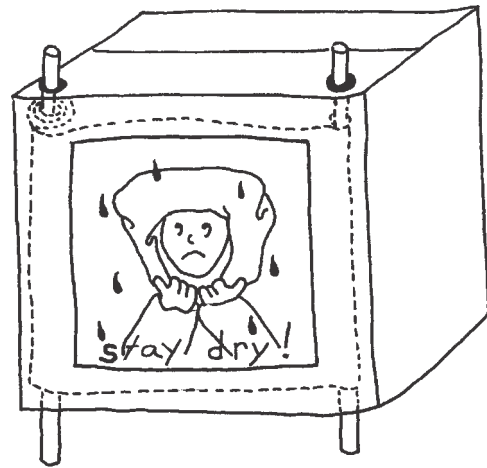


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During Class

1. Have students create a “movie script” that covers the following material:
 - Behavior that can prevent getting lost.
 - Emotional factors that can affect survival.
 - Proper actions to take when you are lost or stranded.
 - Seven Steps to Survival.
 - Shelter and signal building.
 - Water and food in a lost or stranded situation.
2. Explain that the roll of paper will serve as the movie “film.” It will roll in one direction and one frame at a time will fill the “TV screen.”
3. Break the script into frames.
4. Assign one or two students to draw a picture for each frame. You can include text with the pictures or plan to have narrators tell the story as the frames move by the “screen.”

5. When pictures for all frames are complete, securely tape the end of the paper closest to the end of the story to one of the dowels. Roll the paper onto that dowel.
6. Securely tape the other end of the paper with the beginning of the story to the other dowel.
7. Watch the movie!



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This activity addresses Alaska Content Standards:

Language Arts A-1 Effective writing, A-2 Writing conventions, A-4 Writing and speaking with purpose, A-6 Using visual communication, B-1 Meaning from written, oral, and visual text, C-1 Developing a project, C-2 Project organization, C-3 Group decision making, C-4 Project quality, C-5 Project collaboration

Mathematics B-3 Using mathematics in real-life situations, B-4 Developing problem solving strategies

Skills for a Healthy Life A-1 Personal well-being, A-2 Healthy behaviors, A-3 Injury

prevention, A-6 Making informed choices, B-1 Risk and consequences, B-2 Effective communication

Arts A-1 Participate in the arts, A-3 Materials, tools, techniques, and processes

Library/Information Literacy A-4 Search for information and resources, A-5 Identify and use search strategies, B-2 Consider and determine useful strategies, B-3 Access information, B-5 Organize and use information to create a product

Survivor Resources

Children's Literature

- 101 Great Science Experiments.* Ardley, Neil. New York: Dorling Kindersley, 1993. Book of science experiments. 119 pages.
- Adrift.* Politano, Colleen and Joan Neudecker. Sidney, British Columbia: Porthole Press, Ltd., 1986. Story of two children adrift in a boat who follow safe procedures until rescued. 61 pages.
- Amazing Boats.* Lincoln, Margarett. London: Dorling Kindersley Ltd., 1992. An introduction to the history of various types of boats. 32 pages.
- Arctic Son.* George, Jean Craighead. New York: Hyperion Books, 1997. A boy grows up in the Arctic learning the ways of the Inupiat people. 32 pages.
- Blueberries for Sal.* McClosky, Robert. New York: Penguin Putnam Books, 1976. Sal and her mom encounter Little Bear and his mom while picking berries. 55 pages.
- The Boat Alphabet Book.* Pallotta, Jerry. Watertown, MA: Charlesbridge, 1998. Covers types of boats from different cultures and times. 32 pages.
- Boat Book.* Gibbons, Gail. New York: Holiday House, 1983. Illustrates a variety of boats. 34 pages.
- Boating.* Armentrout, David. Vero Beach, FL: Rourke Press, Inc., 1998. Explores the recreational uses of boats and stresses water safety. 24 pages.
- Boats.* Barton, Byron. New York: Thomas Y. Crowell, 1986. Picture book illustrating different types of boats. 30 pages.
- Boats and Ships.* Royston, Angela. Crystal Lake, IL: Heinemann Library, 1998. Picture book explaining how a number of boats operate. 21 pages.
- Boats, Ships and Other Floating Machines.* Graham, Ian. New York: Kingfisher Books, 1993. Simple experiments and activities are used to explore different kinds of boats and how they work. 40 pages.
- A Boy of Tache.* Blades, Ann. Montreal, Quebec: Tundra Books, 1973. Story of a young Canadian First Nation boy using small boats for subsistence and transportation. 30 pages.
- Brave Irene.* Steig, William. New York: Farrar Straus Giroux, 1986. Picture book illustrating the psychology of survival, dressing, weather, and hypothermia. 28 pages.
- Bubbles, Rainbows and Worms.* Brown, Sam Ed. Mt. Rainier, MD: Gryphon House, 1981. Collection of science experiments, including one for making walkie-talkies. 105 pages.
- Burt Dow, Deep Water Man.* McClosky, Robert. New York: Viking Penguin Inc., 1963. Amusing tale of a fisherman with a run-down old boat and his encounter with a whale. 64 pages.
- Canoes and Kayaks.* Cooper, Jason. Vero Beach, FL: Rourke Corporation, 1999. Photographs and text explain canoes and kayaks. 22 pages.
- Cargo Ships.* Cooper, Jason. Vero Beach, FL: Rourke Corporation, Inc., 1999. Photographs and text explain how cargo ships work. 22 pages.
- The Cloud Book.* dePaola, Tomie. New York: Holiday House, 1975. Story book illustrating different kinds of clouds. 31 pages.
- Elizabeth Catches a Fish.* Thomas, Jane Resh. New York: Seabury Press, 1977. Story of a young girl fishing with her dad in the rain. 32 pages.
- Ferryboat.* Maestro, Betsy and Giulio. New York: Thomas Y. Crowell, 1986. Picture book describing ferry boats. 30 pages.
- Fishing Boats.* Cooper, Jason. Vero Beach, FL: Rourke Corporation, Inc., 1999. Photographs and text describe different kinds of fishing boats. 22 pages.
- Follow the River.* Dabovich, Lydia. New York: E.P. Dutton, 1980. Follow the river from its source to the sea. 29 pages.
- Frog and Toad All Year.* Lobel, Arnold. New York: Harper and Row, 1976. The chapter "Down the Hill" addresses hypothermia prevention. 64 pages.
- Frog and Toad Are Friends.* Lobel, Arnold. New York: Harper and Row, 1970. In the chapter "A Swim" Toad stays in the water too long and begins to shiver and shake. 64 pages.
- Froggy Gets Dressed.* London, Jonathan. New York: Puffin Books, 1992. Humorous story illustrating dressing in layers. 27 pages.
- Harbor.* Crews, Donald. New York: Greenwillow Books, 1982. Picture book illustrating harbors and the boats that use them. 29 pages.
- Harry by the Sea.* Zion, Gene. New York: Harper and Row, 1965. Harry the dog explores a beach. 28 pages.

- Hide and Seek Fog.* Tresselt, Alvin. New York: Lothrop, Lee and Shepard Co., 1954. Picture book illustrating the effect fog has on people's activities. 28 pages.
- The House at Pooh Corner.* Milne, A.A. New York: E.P. Dutton, 1928. Classic collection of stories about a child's stuffed animals and their humorous adventures. 180 pages.
- I Feel Scared.* Doudna, Kelly. Edna, MN: ABDO Publishing Co., 1999. A reader for grades 1-2 that explores the emotion of fear. 24 pages.
- I Saw the Sea Come in.* Tresselt, Alvin. New York: Lothrop, Lee and Shepard Co., 1954. A young boy explores a beach and deals with the tide. 24 pages.
- In the Water...On the Water.* Chlad, Dorothy. Chicago, IL: Children's Press, 1988. Nonfiction book covering basic water safety. 31 pages.
- Kitq Goes Fishing.* Nicolai, Margaret. Anchorage, AK: Alaska Northwest Books, 1998. A young Yupik boy goes fishing on the ice with his grandfather. 28 pages.
- Let's Go Fishing on the Ice.* Travis, George. Vero Beach, FL: Rourke Press, Inc., 1998. Describes techniques used to catch fish on a frozen lake. 24 pages.
- Life Doesn't Frighten Me.* Angelou, Maya. New York: Stewart, Tabori and Chang, 1978. Poetry and contemporary art celebrate the courage within each of us. 32 pages.
- Little Toot.* Gramatky, Hardien. New York: G.P. Putnam's Sons, 1939. Story of a little tugboat in a big storm. 87 pages.
- Little Toot through the Golden Gate Bridge.* Gramatky, Hardien. New York: G.P. Putnam's Sons, 1975. Story of a little tugboat and other types of boats. 86 pages.
- Lost in the Woods.* Pollitano, Colleen. Sydney, British Columbia: Porthole Press, 1984. Story of a young boy lost in the woods. 61 pages.
- Lucy and the Sea Monster to the Rescue.* Dolby, Karen. Tulsa, OK: EDC Publishing, 1997. Story of a girl and a sea monster. 28 pages.
- Nessa's Fish.* Luenn, Nancy. New York: Simon and Schuster's Children, 1997. Little girl in the Arctic cares for her sick grandmother until help arrives. 32 pages.
- Our Planet Earth.* Llewellyn, Claire. New York: Scholastic, Inc., 1997. Encyclopedia with information on wind and water. 77 pages.
- Paddle-to-the-Sea.* Holling, Holling Clancy. Boston, MA: Houghton Mifflin, 1941. Picture book about a young boy who makes a toy canoe and sets it adrift. 56 pages.
- Peter Pitseolak's Escape from Death.* Pitseolak, Peter. New York: Delaco Press/Seymour Lawrence, 1977. True story of a man caught on an ice field while walrus hunting. 30 pages.
- A Promise Is a Promise.* Munsch, Robert, and Michael Kusugak. New York: Annick Press, 1988. A retelling of an Inuit tale of a girl who disobeys her parents and learns a lesson. 29 pages.
- Rain.* Spier, Peter. New York: Doubleday, 1982. Picture book about rain. 8 pages.
- Runaway Mittens.* Rogers, Jean. New York: Greenwillow Books, 1988. Story about dressing for a cold environment. 24 pages.
- Sail Boats.* Cooper, Jason. Vero Beach, FL: Rourke Corporation, Inc., 1999. A book illustrating different kinds of sailboats. 22 pages.
- Sailing with the Wind.* Locker, Thomas. New York: Dial Books, 1986. Story about sailing down a river to the ocean. 29 pages.
- Sailor Dog.* Brown, Margaret Wise. New York: Golden Books Publishing Co., 1981. Story of a dog caught out in bad weather. 26 pages.
- Salty Dog.* Rand, Gloria. New York: Henry Holt, 1990. First in a series about a dog and his owner; they build and equip the boat that they will sail to Alaska. 30 pages.
- Salty Sails North.* Rand, Gloria. New York: Henry Holt, 1990. Second in a series about a dog and his owner. In this book they sail to Alaska. 29 pages.
- Salty Takes Off.* Rand, Gloria. New York: Henry Holt, 1991. One in a series about a dog and his owner where Salty travels by plane in Alaska. 28 pages.
- Science Fun with Toy Boats and Planes.* Wyler, Rose. New York: Julian Messner, 1986. Book of science experiments including the study of buoyancy and types of boats. 48 pages.
- Stone Soup.* Brown, Marcia. New York: Simon and Schuster, 1947. An old tale about people making a meal together starting with nothing. 42 pages.
- The Story of Three Whales.* Whittell, Giles. Milwaukee, WI: Gareth Stevens Children's Books, 1989. True story of the effort to save three whales caught in Arctic ice. 23 pages.
- The System of Fishes.* Jackson, Mike. Poulsbo, WA: Stormy Seas, Inc., 1991. Story in rhyme about the need to wear flotation when on the water. 15 pages.
- Taku and the Fishing Canoe.* Morris, Neil and Ting. Morristown, NJ: Silver Burdett Company, 1984. Story of a Native American fishing party and two children who sneak out fishing and get into trouble. 23 pages.

This Place Is Cold. Cobb, Vicki. New York: Walker and Company, 1989. Explores life in the very cold regions of Alaska. 32 pages.

Three Days on a River in a Red Canoe. Williams, Vera. New York: Greenwillow Books, 1981. Story of a family and their canoe trip down a river. 29 pages.

Tobias Goes Ice Fishing. Hertz, Ole. Minneapolis, MN: Carolrhoda Books, Inc., 1984. In Greenland, a boy and his father fish through the ice that covers a fjord. 30 pages.

Tugboats. Schaefer, Lola M. Mankato, MN: Bridgestone Books, 2000. All about tugboats. 21 pages.

The Turnaround Wind. Lobel, Arnold. New York: Harper and Row, 1988. Fanciful story about a strong wind that affects a community. 32 pages.

Up North in Winter. Hartley, Deborah. New York: E.P. Dutton, 1986. Story of a grandfather who walks home after missing the last train. 26 pages.

Weather Words and What They Mean. Gibbons, Gail. New York: Holiday House, 1990. Introduction to words associated with different types of weather. 32 pages.

Weather. Simon, Seymour. New York: Morrow Junior Books, 1993. Picture book with detailed information about weather and clouds. 29 pages.

What's Inside Boats? Parsons, Alexander. New York: Dorling Kindersley Inc., 1992. A book illustrating the inside of different kinds of boats. 17 pages.

Whatever the Weather. Wallace, Karen. New York: DK Publishing, Inc., 1999. Picture book illustrating basic weather information. 32 pages.

When the Tide Is Low. Cole, Sheila. New York: Lothrop, Lee and Shepard Books, 1985. Story book about tides. 26 pages.

When the Tides Ebb and Flow. Bowden, Joan. Boston, MA: Houghton Mifflin, 1979. An explanation of tides through myth. 36 pages.

Where's My Teddy? Alborough, Jez. Cambridge, MA: Candlewick Press, 1992. Simple picture book about a boy and a bear and their teddy bears. 24 pages.

Who Sank the Boat? Allen, Pamela. New York: Coward-McCann, 1982. A story using animals to illustrate boating safety. 28 pages.

Why the Tides Ebb and Flow. Bowden, Joan Chase. Boston, MA: Houghton Mifflin, 1979. Folktale explaining tides. 36 pages.

Willie Takes a Hike. Rand, Gloria. New York: Harcourt Brace, 1996. Picture book about a boy mouse who gets lost. 26 pages.

A Winter Place. Radin, Ruth Yaffei. Boston, MA: Little, Brown and Company, 1982. Well-illustrated story about going to a lake to skate. 31 pages.

Teacher Resources

Alaska Boater's Handbook. Anchorage, AK: State of Alaska Division of Parks and Outdoor Recreation, Office of Boating Safety, 2000. Excellent resource on Alaska recreational boating laws and safety. Prince William Sound supplemental handbook also available. Other regional supplements to be developed. 47 pages.

Alaska Children's Literature Bibliography. Spangler, Katy. Juneau, AK: Alaska Staff Development Network, University of Alaska Southeast, 2000. Extensive list of children's literature about Alaska. 133 pages.

American Red Cross Basic Water Safety. American Red Cross. 1988. Textbook covering personal flotation devices (PFDs), water hazards, basic boating safety, ice safety, and rescue techniques. 96 pages.

Analysis of Lost Person Behavior: An Aid to Search Planning. Syrotuck, William G. Westmoreland: Arner Publications, Inc., 1977. This publication examines the behavior of lost persons. 35 pages.

Chapman's Nautical Guides: Emergencies at Sea. Stapleton, Sid. New York: Hearst Marine Books, 1991. Guide in easy-to-use format covering most aspects of marine safety. 223 pages.

Cold Can Kill: Hypothermia. Hall, Christine Betz. Fairbanks, AK: University of Alaska Sea Grant, 1994. Basic information about hypothermia with simple vocabulary and large print. 20 pages.

Cold Water Kids. Allen, Marian, Susan Jensen and Kristie Sherrodd. Sitka, AK: Alaska Marine Safety Education Association, 1992. Activity book curriculum covering cold water safety, hypothermia, PFDs, boating/swimming safety, and ice safety. 180 pages.

Cold Water Safety and Survival Supplement. Allen, Marian. Sitka, AK: Sitka Migrant Education Program and Alaska Marine Safety Education Association, 1994. Supplemental activities to accompany *Cold Water Kids*. No teacher information. 53 pages.

Designed for Life: Lifejackets through the Ages. Brooks, C.J. Richmond, British Columbia: Hemlock Printers, 1995. History, with photos, of personal flotation devices. 203 pages.

Discovering Wild Plants. Schofield, Janice J. Anchorage, AK: Alaska Northwest Books, 1989. Guide to wild plants with photos, pictures, descriptions, uses, and recipes. 354 pages.

- Edible? Incredible! Pill*, Virginia, and Marjorie Furlong. Seattle, WA: Andover Printing and Graphics, 1985. Photographs, descriptions, recipes for, and distribution of edible seaweeds and other wild foods. 73 pages.
- Edible Wild Plants*. Berglund, Bernt, and Clare E. Bolsby. New York: Charles Scribner's Sons, 1977. Guide to wild edibles indigenous to North America with recipes, drawings, and descriptions for identification. 189 pages.
- Emergency Survival: How to Handle Emergencies That Can Threaten Your Life*. Lehman, Charles. Brookings, SD: Calco, 1979. A comprehensive manual covering all aspects of typical outdoor emergencies, including survival equipment and steps to take in an emergency. 150 pages.
- Federal Requirements for Recreational Boaters*. U.S. Department of Transportation, U.S. Coast Guard. Washington, DC: U.S. Government Printing Office, Revised 1994. Discusses safety information plus requirements for recreational boat registration, fire extinguishers, PFDs, signals, and navigation lights. 49 pages.
- Guidelines 2000 for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care*. American Heart Association. Dallas, TX. 2000. 167 pages.
- Heartsaver CPR*. American Heart Association. Dallas, TX: American Heart Association, 2001. Official text for American Heart Association CPR courses at the entry level. 148 pages.
- Human Error*. Reason, James. Cambridge, UK: Cambridge University Press, 1998. Covers the nature of human error and ways of reducing the human error risk. 302 pages.
- Hypothermia and Cold Stress*. Lloyd, Evan L. Rockyville, MD: Aspen Publication, 1986. Comprehensive technical survey of hypothermia research up to 1986. 400 pages.
- Hypothermia, Frostbite and Other Cold Injuries*. Wilkerson, James A., M.D., Editor. Seattle, WA: The Mountaineers, 1986. A very readable and comprehensible book on cold injuries in a handy field guide format. 105 pages.
- Marine Safety Instructor Manual*, 8th Edition. Alaska Marine Safety Education Association (AMSEA). Sitka, AK: Alaska Marine Safety Education Association, 2001. An excellent in-depth curriculum covering preparation, cold water near-drowning, hypothermia, cold water survival, sea survival including drills and station bills, shore survival, and food and water in a survival situation. 484 pages.
- Marine Survival Equipment and Maintenance*. Pennington, Hank. Fairbanks, AK: University of Alaska Sea Grant, 1990. Guide illustrating proper use of immersion suits and other emergency equipment. 26 pages.
- Outdoor Survival Training for Alaska's Youth*. Garza, Dolly. Fairbanks, AK: University of Alaska Sea Grant, 1993. Curriculum in workshop format covering preparation, shore survival, cold water survival skills, and personal flotation devices. 102 pages.
- Personal Flotation Devices*. Alaska Marine Safety Education Association. Sitka, AK: Alaska Marine Safety Education Association, 1990. Overview of USCG approved and unapproved PFDs. Brochure.
- Saved by the Jacket*. National Safe Boating Council. Delaware, OH, 2000. Survival stories of people saved by wearing PFDs. 63 pages.
- Search Is an Emergency: Field Coordinator's Handbook*. Lavalla, Patrick, and Robert C. Stoffel. Olympia, WA: ERI International, Inc., 1991. Basic pocket guide for managing the search operation. Interesting information on behavior of lost people. 152 pages.
- Southeast Alaska's Rocky Shores*. O'Clair, Rita M., Sandra C. Lindstrom and Irwin R. Brodo. Auke Bay, AK: Plant Press, 1996. Guide to identifying seaweeds and lichens with pictures, descriptions, a species list, and recipes. 149 pages.
- State of Alaska Hypothermia and Cold Water Near Drowning Guidelines*. State of Alaska, Department of Health and Social Services, Division of Public Health, Emergency Medical Services Section. Juneau, AK: State of Alaska, 1996. Provides treatment guidelines for the named conditions. 32 pages.
- Survival Guide for the Mariner*. Meurn, Robert J. Centreville, MD: Cornell Maritime Press, 1997. Guide covering preparation, station bills, emergency equipment, man overboard, abandoning ship, first aid, navigation, hypothermia, survival in a liferaft, survival on land, search and rescue (SAR), and helicopter rescues. 225 pages.
- Survival in Antarctica*. National Science Foundation, Division of Polar Programs. Washington, DC: National Science Foundation, 1990. Addresses survival in polar regions including clothing, survival skills, travel, orienteering, crevasses, signaling, and survival on sea ice. 103 pages.
- Surviving on the Foods and Water from Alaska's Southern Shores*. Garza, Dolly. Fairbanks, AK: University of Alaska Sea Grant, 1989. Resource on the nutritive value of foods commonly found in Southeast Alaska's shoreline. Includes food preparation suggestions, and a section on non-edible and poisonous plants and animals. 23 pages.

Using Small Boats in Alaska Is a Way of Life—Don't Make It a Way to Disaster. Alaska Marine Safety Education Association. Sitka, AK: Alaska Marine Safety Education Association, 1990. Addresses preparation, float plans, stability, equipment, and cold water near-drowning. Brochure.

Water Rescue Basic Skills for Emergency Responders. Smith, David S., and Sara J. Smith. St. Louis, MO: Moseby-Yearbook. Inc., 1994. Guide covering drowning, alcohol, water accidents, rescue principles, and team rescue. 368 pages.

Water Wise. Dzugan, Jerry, and Susan Jensen. Fairbanks, AK: University of Alaska Sea Grant, 1999. Award winning, nationally oriented safety book for recreational boaters. 196 pages.

Wild and Edible Plants of Alaska. Cooperative Extension Service, University of Alaska. Fairbanks, AK: Cooperative Extension Service, 1989. Guide to plants in Alaska with pictures and descriptions for identification and use. Handy field guide size. 90 pages.

Wilderness Survival. Davenport, Gregory. Mechanicsburg, PA: Stackpole Books, 1998. British Columbia Forest Service Publication. A good synopsis of several Canadian publications that address survival information including clothing, travel, psychology, shelter, fire, signals, and first aid. Included is a four-page section on survival kits and what to carry in them. Covers all the basics. 512 pages.

Videos

Adventures in Boating. Washington State Parks, 1992. Features Bill Nye the Science Guy. Great for kids. 30 minutes.

Alcohol and Boating? It's Your Choice. Sitka, AK: Alaska Marine Safety Education Association, 1995. A discussion of the risks of alcohol and boating; intended for pre-teens/teens. 20 minutes.

All about Boats. Mobile, AL: Pint Size Productions, 1994. Songs and film footage explore the many types of boats seen in a Gulf of Mexico harbor. 30 minutes.

The Cold Facts: Surviving Sudden Cold Water Immersion. Canadian Forces, Ottawa, Canada, 1998. A description of cold water immersion with footage of real-life situations and research experiments. 22 minutes.

Cold, Wet and Alive. American Canoe Association, 1989. Follows a group of friends on a canoe trip down a river showing the progression from cold reaction to severe hypothermia. 20 minutes.

Come a Tide. Reading Rainbow Program #86. Lincoln, NE: Great Plains National/Nebraska ETV. An exploration of weather and books about weather. 30 minutes.

Cross Cultural Communication. Sitka, AK: Alaska Marine Safety Education Association, 1994. Father Michael Oleksa discusses communication across culture and gender lines. 42 minutes.

Danger: Thin Ice! Minnesota Department of Natural Resources, 1993. Ice safety for anglers, snowmobilers, and cross-country skiers. 10 minutes.

Fisheries Safety and Survival Series. Anchorage, AK: University of Alaska Marine Advisory Program, 1983. Four separate videos: *Hypothermia*, *Cold Water Near-Drowning*, *Sea Survival*, and *Shore Survival*. 14 to 21 minutes; total time 75 minutes.

Hypothermia Lecture: Nemiroff 1983. Alaska Marine Safety Education Association, 1983. Dr. Nemiroff lectures on cold water near-drowning. 60 minutes.

Hypothermia Lecture: Nemiroff 1988. Alaska Marine Safety Education Association, 1988. Dr. Nemiroff lectures on cold water near-drowning at the Alaska Emergency Medical Services Symposium. 60 minutes.

Inflatable Life Rafts. John Sabella and Associates, 1989. Covers installation of liferafts, the decision to abandon ship, launching, boarding, and equipment. 16 minutes.

It Could Have Been Prevented. University of Alaska Marine Advisory Program and the Alaska Marine Safety Education Association, 1990. Depicts real people in boating situations making life and death decisions, and the consequences of their actions. 17 minutes.

Longfellow's WHALE (Water Habits Are Learned Early) Tales. Knoxville, TN: American Red Cross, 1988. Water safety video for K-6. Closed captioned. 14 minutes.

A New Look at Cold Water Near-Drowning. 20/20, 1987. An in-depth look at cold water near-drowning including an interview with Dr. Nemiroff and others. 30 minutes.

Outdoor Survival: A Practical Review. Anchorage, AK: University of Alaska Marine Advisory Program, 1993. Covers shelter, signals, food, and water in a survival situation with slides of children involved in these activities. 6 minutes.

Personal Flotation Devices. John Sabella and Associates, 1989. Covers clothing, flotation, types of PFDs, PFD fit, and how PFDs work. 17 minutes.

Safe Riders! You Make Snowmobiling Safe.

Distributed by the International Snowmobile Manufacturers Association, 1996. This video covers basic operation, riding skills, and safety procedures. 22 minutes.

Taken by Surprise: Thin Ice Safety. Alaska State Troopers. Covers safety on ice, including interviews with victims and victim's families. 29 minutes.

Visual Distress Signals. John Sabella and Associates, 1989. Discussion of visual distress signals including radio signals, pyrotechnics, and lights. 14 minutes.

When Seconds Count: Care and Use of Immersion Suits. Sitka, AK: Alaska Marine Safety Education Association, 1998. Illustrates the proper donning, use, storage, and maintenance of immersion suits. 16 minutes.

Contact Information for Resources

Alaska Marine Safety Education Association (AMSEA)
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Alaska Office of Boating Safety
Division of Parks and Outdoor Recreation
550 West 7th Ave., # 1380
Anchorage, AK 99501-3561
(907) 269-8705

U.S. Coast Guard 17th District
Maritime Office of Compliance (MOC)
P.O. Box 25517
Juneau, AK 99802-5517

Fishing Vessel Safety Office
(907) 463-2286, 1-800-478-7369

Recreational Boating Safety Office
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