



# New Jersey School of Conservation

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## Survival Lesson Plan

### OBJECTIVES:

1. Students will learn the four steps to deal with emergencies, and be able to prioritize the four needs for survival.
2. Students will recognize that being resourceful and improvising will help any emergency response be more effective.
3. Students will learn what precautions should be taken to deal with unexpected emergency situations when going on hikes with their families or friends.

### MATERIALS:

Survival pack containing many of the following items: Flint and steel for spark, large plastic bag, candy bar, compass, map, newspaper, hat, pocket knife, whistle, flashlight, insect repellent, water bottle, watch, metal can, reflecting device, first aid kit, bandana, steel wool, and a tarp.

### PROCEDURE:

Have group form a circle. Explain that with the ever-increasing luxuries and conveniences at work and at home, many people are unprepared for their trips in the out of doors. Life threatening situations can happen at any time. Please do not feel compelled to conduct all the activities described in this lesson.

#### 1. **First Activity:**

Ask the class - **What is the worst reaction you could have to an emergency?**

Answer - **PANIC!**

It then follows that one of the most important things we can teach is a tool for avoiding panic. We do this by using the **S.T.O.P.** cards. Place the cards, in order, on the ground, then lead a discussion to help the class understand these four steps.

**S = Slow down.** This gives you some time. Time for the sense of panic to pass, and Time to... Think! How much time you need to slow down depends on your situation. For example, you can spare more time if you are lost than if your house is on fire.

**T = Think** about the factors affecting your situation, such as time of day, weather, injuries, etc. If lost study the map for landmarks. When did you last know where you were? Are your footprints visible? Can you hear sounds of traffic? You can often find your way back if you take time to think. If you can't determine your way back, *stay where you are!*

**O = Observe** what things are available to you that may be useful (resources) to help with the situation. What do you have in your pockets or pack? What useful items can you

find or make from the natural materials surrounding you? *You are trying to make yourself as comfortable as possible and also as visible as possible to rescuers.*

**P = Plan** your actions. *Your plan should consider how to best use your resources and your energy.* If you have followed the **STOP** sequence your plan will be the best available to you and therefore you probably should stay with this plan.

Gain control. Your mind is a tool, which when in control can be used constructively, or destructively when panicking. The **S.T.O.P.** exercise is important because it helps reduce panic, which is critical in emergency situations. It has been said by survival experts that survival is 80% mental (keeping a positive mental attitude), 10% skill (knowledge), and 10% equipment (specialized resources).

2. **Second Activity:** Ask the students to name the four needs we have as humans (which are the same needs as all other animals). As they identify the needs, place the corresponding card on the ground in front of the group. Then ask the class to assign a time card to the appropriate need card. A general rule of thumb is, you can survive for approximately:

**3 minutes without air,**

**3 hours without shelter** (in average weather for N.J. ~ 50 degrees, realizing that clothing is shelter)

**3 days without water,** and

**3 weeks without food.**

This exercise is important because it *identifies and prioritizes our needs*, which is something that is essential in emergency situations.

3. **Third Activity: Take the bandanna from the daypack and have a student come up with one use for it.** Then have the first student pass it to another student who gives a different use for it. Continue until all students have had a chance to participate. Having each student state their name prior to their idea of how they would use the bandana, helps teachers to learn their names. Each student must provide a *unique* use for the bandana. As it becomes more difficult, remind the group to remember the four needs, they can then pick one need and develop a use for the bandana to meet that need. Some uses for the bandana are; bundle nuts or berries, warm hat, shade hat, wipe sweat from brow, tie hair back, signaling, hot pot holder, trail marker, cover mouth and nose to filter smoke, help with shelter building, and many first aid uses- including arm sling, bandage, tourniquet, support wrap.

The important concept behind this activity is *improvisation* - Making the best use of your resources in emergency. This is an important skill when dealing with emergencies.

Further explain that maintaining and conserving your energy is an important concern.

Begin the hike away from camp. A few words of caution for the students; watch where you place your feet- ankle twists, loose rocks, and slippery logs. No one should go out of sight of the group.

4. **Fourth Activity:** Explain to the group that we will be in a simulated survival exercise for this class. Lay the contents (see materials above) of daypack on top of the tarp with the group surrounding the tarp. Have the group choose 8-10 items. The items they chose should represent those items the group feels are most important or most useful. You might also ask the students to rate them from 1-5 with 1 being the most important item.

The group should be able to give the reasons for the top 5 selections. Review with the class those items selected as well as those resources not selected. All items in the pack are useful in some way.

**Scenario:** *Imagine our group was in a helicopter that crashed in the mountains of northern New Jersey. The pilots did not survive the crash. Your assignment is to keep everyone in your group alive. Before the helicopter explodes the group only has enough time to get themselves and the 8-10 items out of it.*

The group can take as much time to discuss the items as you wish.

The following are some possible uses for the items in the survival pack. Items in **BOLD** are probably better choices than those items printed in *italics* for our students, although all are useful.

<b>Tarp</b> - Shelter. Probably top choice	<b>Metal can</b> - Boil water, cook food, collect or carry things
<b>First aid kit</b> – Important to be prepared	<b>Hat</b> – Extra clothing–hypothermia, cooler temp. at night
<b>Flashlight</b> – signaling (three flashes)	<b>Flint &amp; Steel/Lighter</b> - a fire needs spark, air & fuel
<b>Whistle</b> - signaling – 3 whistles for help	<b>Pocket knife</b> - versatile, helpful with shelters, fire, food
<b>bags</b> – provides shelter, poncho	<b>Garbage Steel Wool</b> – One of the few things to make fire from a spark
<i>Newspaper</i> – Fuel for fire	<i>Reflecting device</i> – Signaling, reflect sunlight
<i>Map &amp; compass</i> – Knowledge needed	<i>Bandana</i> – versatile, signal, rope, trail marker
<i>Snack</i> – Extra food - people need food	<i>Water bottle</i> – people need water, can't boil in plastic
<i>Watch</i> – Determine direction, & time	

Ask the group if this crash really did happen what would they do first?

*Check for injuries! Secure the scene and move away from crash!*

### **Optional Activity 1:**

Provide first aid to a person with a deep cut on an arm caused by the helicopter crash. Did the group pick the first aid kit? Does anyone know any first aid procedures? Have them talk you through what their actions would be. Correct procedure: Calm victim, sit them down. To stop bleeding apply clean dressing (in first aid kit or bandana). Apply pressure directly to the wound, and elevate the area. Also apply pressure to the pressure point to slow bleeding to the injured arm. Apply bandage and continue to calm victim.

The brachial artery and pressure point is located along the upper arm bone on the inside of the arm (arm pit side) midway between the elbow and the shoulder. To check for effectiveness of the pressure point, find normal pulse rate, then apply pressure to the pressure point and recheck pulse. If you are correct with your pressure point the pulse will be reduced.

### **Optional Activity 2:**

It is the month of ? . The wind is picking up, temperature is dropping and dark clouds are gathering. What should your group begin to do? **Build shelters**. If they are building a tarp shelter they will need to work as one team, if you want them to build debris shelters then they could work in one, two or three groups. They may use any of the materials chosen in the beginning of the session.

*For debris shelters the groups should not use any living plants, move buried rocks, or cause any harm to the environment.*

\* Leaders information: To be shared with students following their attempt to construct shelters.

- **Size:** Should be just big enough to shelter the builders. If too large your body heat which warms the shelter will be less effective.
- **Sturdy:** Able to stand up to wind, rain, and snow. Use a tree, log or rock as a foundation or structural support.
- **Wind:** Door should open opposite the direction of wind and be as windproof as possible.
- **Rain/Snow:** Waterproof. Sloping roof tends to shed water better.
- **Insulation:** Must hold in the warm air. Dead tree leaves work great. Piled up to three feet thick.

Always consider whether the amount of energy you will save by being protected from the elements will be greater than the amount of energy needed to build the shelter.

**\*\* TAKE DOWN AND SCATTER ALL MATERIALS USED FOR SHELTER BUILDING ! \*\***

### **Optional Activity 3:**

Clothing is your most basic form of shelter. Evaluate as a whole the group's clothing situation. Are they appropriately dressed for this session? Would they be comfortable if forced to remain outside for an extended period of time? Check footwear, rain gear, insulation materials, hats/hoods. Hats can conserve up to 70% of your total body heat output. Are the majority wearing sneakers, cotton jeans (skin tight), and cotton T- shirts or sweatshirts? Cotton is a very comfortable fabric which when wet is very slow to dry out. What dries your clothes when you're wearing them? Your body heat of course. This robs you of vast amounts of energy. It is critical to remain dry, both from perspiration and from rain/snow. When you are wet, you lose energy up to 250 times faster than when you are dry.

Discuss Hypothermia. Hypothermia a lowering of the core body temperature (98.6 F). The body is using more energy than it is producing. The body is unable to warm itself. Often occurs at temperatures well above freezing and is compounded by dampness and wind. Symptoms include shivering, slurred speech, lack of coordination, irritability, and mental confusion. First Aid for Hypothermia is to remove wet clothing and replace with dry clothing. Give warm sugared fluids to a conscious, is alert victim. Move victim into a warm place.

Optional: Secretly assign one student with hypothermia. The group should identify the problem and verbally give effective first aid.

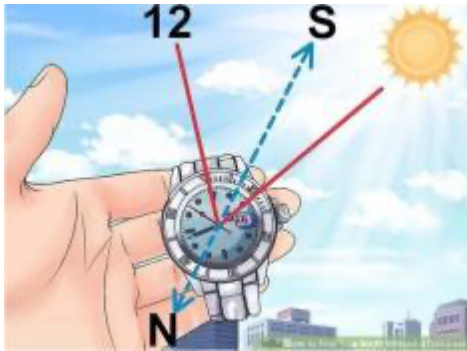
#### **Optional Activity 4:**

Finding Direction. There are many ways to identify the basic directions north, south, east or west even without a compass. There are natural indicators such as:

**Note:** *Covering all 5 items listed below may confuse your students, proceed cautiously!*

- A) the growth rings on cut tree stumps tend to be widest on the south side.
- B) the color and texture of tree bark may reveal north and south. Northern exposure tends to be smoother with a more solid color due to punishment from the wind and rain/snow. The south side is often lighter and rougher as a result of more exposure to direct sunlight.
- C) tree branches tend to grow larger and thicker on the south side.
- D) spiders tend to weave their webs on the south side of trees or shrubs.
- E) moss grows best on the north side of trees, out of direct sunlight in moist, cooler conditions.

There also is a simple way of finding direction with an ordinary watch face. Point the hour hand at the sun. Then divide the angle formed by the hour hand and the 12 on your watch in half, this points to the south.



Have the students try to use the above indicators to identify directions. Verify with a compass. Don't forget that remaining in one place is generally the best thing to do! Do not try to find your way out.

#### **Optional Activity 5:**

Make a fire / Purify water. **FOR THIS EXERCISE, BUILD FIRE ONLY IN AN AUTHORIZED FIRE CIRCLE**

Ask the group - Why is building a fire important? A fire is important because; it gives warmth and light, acts as a signal, can purify water, dry clothing, and boosts morale.

Allow the group do this at first. They should be organized. Collect wood and separate into three piles-**tinder** (toothpick size -smallest twigs & shavings), **kindling** (pencil size), and **fuel wood**

(up to thumb size only). Don't begin fire until all wood has been collected. Allow   ?   matches, or flint/steel and steel wool.

Discuss water purification. Folklore contends that water running over rocks and small water falls is safe to drink- True/False? **FALSE**. Boiling water for 5 minutes is the safest method to kill germs and bacteria. **Boiling will not remove chemical pollutants.**

With fire burning strong, place water (from bottle) into the metal can and place in fire. You can add the needles from hemlock or pine trees to make a vitamin rich tea. Contains about 7 times more vitamin C than orange juice.

**In an emergency situation, you should begin building the fire two to three hours before dark and gather two to three times as much wood as you think you need.**

At the end of this activity, extinguish the fire by pouring a bucket (provided) of water over the fire area and stir the ashes with a stick. Continue this until you are safely able to place your hand on the fire site, and then in the ashes. If the ashes are cold the fire is completely extinguished.

IS YOUR FIRE COMPLETELY OUT?

THE FIRE RING SHOULD BE COLD!

### **Optional Activity 6.**

**Discussion** - What do you do when lost? **S.T.O.P.** People will be looking for you. **STAY TOGETHER.** This will help to calm everyone and you will be easier to find. You can also use the resources of the group by sharing knowledge, skills and ideas. What do you have to signal with? Did the group choose a flashlight, reflector or whistle from the pack? These take no energy to use and can travel a long distance in good conditions. Stay alert to car horns, whistles and voices. When you hear something call out in a loud voice, whistle or signal in some other way.

In New Jersey, which is the most densely populated state in the country, you could also walk downhill until you find a stream or trail. Then walk down stream or in one direction on the trail. This will lead to a road in a short distance. Follow the road in one direction until you come to help.

In other areas of the United States, **STAY WHERE YOU ARE.** Search teams will be looking for you. You will be found sooner if you stay put. Make yourself obvious by building a fire, tie colorful bandana in a visible place or place markers in an open area such as a field. *A grouping of three is a universal distress signal.* Make three piles of rocks or three fires or blowing a whistle three times signals that you need help.

### **For further information:**

Brown, Tom, Jr. (1983). Tom Brown's Field Guide to Wilderness Survival. Berkley Publishing, New York.

Boy Scouts of America. (1984). Wilderness Survival. Irving, TX.

Boy Scouts of America. (1984). Fieldbook. Third Edition. Irving, TX.

George, Jean, Craighead. (1988). My Side of the Mountain. Penquin Putnam, New York.

Olsen, Larry Dean. (1976). Outdoor Survival Skills. Brigham Young University Press, Provo, UT.

Paulsen, Gary. (1987). Hatchet. Alladin Paperbacks, New York.

Risk, Paul. (1983). Outdoor Safety and Survival. John Wiley & Sons, Inc. New York.

## **NJ Student Learning Standards:**

### **LIFE LITERACY AND KEY SKILLS**

- 9.4.5.CT.1: Identify and gather relevant data that will aid in the problem-solving process
- 9.4.5.CT.4: Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global

### **COMPREHENSIVE HEALTH AND PHYSICAL EDUCATION**

- 2.1.8.SSH.3: Demonstrate communication skills that will support healthy relationships

### **SCIENCE**

- 3-5-ETS1-2 Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.

### **SOCIAL AND EMOTIONAL LEARNING**

All of our field lessons integrate the concepts of self-awareness, self-management, social awareness, responsible decision-making, and relationship skills found in the [New Jersey's Core Social and Emotional Learning \(SEL\) Competencies](#).