OUTDOOR SAFETY IN ACTIVITIES

MIDDLE SCHOOL CURRICULUM

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I. *Enduring Knowledge:*

In order to live a healthy life in a healthy environment, students should have a familiarity with basic safety rules of outdoor activities, know and practice good nutrition and exercise essentials, and understand the environmental impact of human activity on the natural world through a respectful interaction with nature.

Curricular Overview:

This DVD features an exciting eco-trek race between two groups of students as they participate in outdoor activities (kayaking, archery, caving, and mountain biking), investigate the natural world by identifying rare plant species and environmental threats (deer ticks associated with Lyme disease and poison ivy plants), and reflect on the importance of a exercise (*Play60*) and nutrition (*MyPlate*).

Three separate curricula have been prepared, one for each of the three areas reflected in the DVD, with separate Learning Targets, Viewing Guides, and Extended Learning activities. The following materials focus on Safety in Outdoor Activities.

II. *Learning Targets:*

1. Students should know the basic safety rules for: kayaking, archery, caving, and mountain biking.
2. Students should recognize that good, healthful exercise can be fun and challenging and is a good way to spend time outdoors with friends.
3. Students should know the importance of respecting the environment and taking responsibility for the impact of their activities on the well-being of the natural world.

III. *Teacher Background Materials:*

While this video includes information on different additional topics, the study in this curriculum focuses on identifying safe outdoor activity practices. Some of the information found in the teacher background materials is not found in the video. It is offered here as a helpful, but not universal, guide for teachers to use as the students develop lists of safety tips.

Safety in wooded areas and waterways includes awareness of dangerous insects, in particular the deer tick and the potential Lyme disease from a bite of an infected tick. Using insect repellent and covering the head and body are recommendations. Also, being able to identify poison ivy and poison oak are important.


DEER TICK
POISON IVY
POISON OAK

A. Basic safety rules for kayaking include:

1. Wear a properly fitted personal flotation device (PFD).
2. Never go a long way or into unknown waters by yourself. It's always best to have a buddy system when kayaking.
3. Tell someone where you're going and how long you'll be gone.
4. Bring along a full water bottle.
5. If you have a Global Positioning System (GPS) and cell phone, bring them with you.
6. Bring along bug spray and sunblock.

ADDITIONAL SAFETY CONSIDERATIONS:

1. Check the weather before heading out (one good source is: www.weather.gov)
2. Attach a whistle to your PFD. If you get in trouble, blow once on the whistle, wait, and repeat. If it is a serious situation, blow three times and then wait. This is the universal signal of distress in the water.
3. Have a dry bag to hold your GPS, cell phone, a first aid kit, energy bars, camera, etc.
4. It is also helpful to have towlines and bilge pumps.

IF YOUR KAYAK SHOULD TIP:

1. don't panic,
2. stay with the kayak,
3. try to find and hold onto the paddle,
4. float on your back.

It is very good to practice tipping and recovering your kayak.
There are excellent videos on-line demonstrating how to right the kayak and re-board.

GOOD ON-LINE RESOURCES INCLUDE:

- www.smart-start-kayaking.com
- www.IntoTheOutdoors.org
- www.commanderbob.com

B. Basic rules for caving (also known as spelunking) are:

1. Make caving a group activity.
2. Know your location. Memorize or mark your progress through the cave (using small stones, or non-permanent markers) so that you can find your way out.
3. Assess the flood risk. Caves are very vulnerable to flash flooding. Never go caving in the rain or if a nearby river is full and flowing rapidly. When you enter a cave, note any mud or debris caked to cave walls or ceilings. This might indicate that the cave is susceptible to flash flooding.
4. Note high and low spots in the cave as you progress.
5. Have appropriate safety equipment:
   - a helmet with a mounted headlamp, extra batteries,
   - protective gear – helmet, knee and elbow pads,
   - a cave pack – water, extra clothing, removable cave markers, a pee bottle, and energy bars
6. Watch where you put your hands – lots of bat droppings are found in caves and can be toxic.
7. Don't touch rock formations (stalagmites and stalactites) as the oil on your hands can have a deleterious effect on them.
8. Respect the cave – no graffiti, no litter.

THE MOST COMMON RISKS IN CAVING ARE:

- hypothermia
- falling
- flooding
- physical exhaustion

EXCELLENT ONLINE RESOURCES FOR MORE INFORMATION ABOUT CAVING:

- www.livestrong.com/article135434-safety-rules-spelunking
- www.basspro.com *(Search "Outdoor Sites Library", "Amateur Spelunking")*

C. Safety rules for archery:

1. Check the equipment and targets to see that they are in good condition.
2. Technique is important. To avoid injury to your arms and hands, wear protective gear.
3. Watch carefully for animals or people who may stray into the shooting area.
4. No horseplay. Bows and arrows are deadly weapons.
5. Spread all archers out. The targets should be set 4 to 6 feet apart to maintain good space between archers.

6. Always stay behind the shooting line until the instructor says it's safe to retrieve your arrows. Remember, arrows are sharp so you can hurt yourself if you are careless when you remove them from the target.

SOME GOOD ON-LINE RESOURCES INCLUDE:

- www.library.thinkquest.or/27344/safety.htm
- www.IntoTheOutdoors.org

D. Safety rules for mountain biking:

1. Put that helmet on your head. Make sure it is secure and the proper size.
2. Know what gear you need and how to use it. Some common gear to add to your safety and comfort include: gloves, shoes, padded shorts, rain gear, protective glasses.
3. Know your fitness level. Many riders get into situations that are beyond their stamina tolerance. Tell others in your group how you are feeling. Don't be afraid to get off your bike and walk it through situations that are beyond your ability level.
4. Ride with someone else. Let others know where you are going and when you plan to return.
5. Carry basic first aid equipment with you, along with extra tire inner-tubes, bike wrenches, etc.
6. Always maintain your bike. Check brakes before heading out.

GOOD ONLINE RESOURCES FOR BICYCLE SAFETY TIPS INCLUDE:

- www.mountainbike.about.com/od/bikingsafetytips
- www.upaddownhill.com/mountain_bikes
- www.IntoTheOutdoors.org

Vocabulary:

1. ***acid rain:*** rainfall made sufficiently acidic by atmospheric pollution that it causes environmental harm, typically to forests and lakes; the main cause is the industrial burning of coal and other fossil fuels, the waste gases, which contain sulfur and nitrogen oxides, which then combine with atmospheric water to form acids.
2. ***carbonic acid:*** a very weak acid formed in solution when carbon dioxide dissolves in water.
3. ***GPS — Global Positioning System:*** technology that allows individuals to locate their position in the world using satellite that interface with handheld devices
4. ***Kickapoo River:*** A river in Wisconsin named by the Ho Chunk Indians. "Kickapoo" is the word for a river that goes this way and turns that way. Some scientists believe it is one of the oldest rivers in North America.

5. ***labyrinth:*** a place that is full of intricate passageways and blind alleys, such as some caves
6. ***nocking point:*** the part of an arrow having a notch for the bowstring
7. ***Personal Flotation Device — PFD :*** a lifejacket is an example; a wearable or carryable item that will provide buoyancy
8. ***spelunking:*** the hobby or practice of exploring caves; also called "caving"
9. ***stalactites:*** a deposit of calcium carbonate resembling an icicle hanging from the roof or sides of a cavern
10. ***stalagmites:*** a deposit of calcium carbonate like an inverted stalactite formed on the floor of a cave by the drip of calcareous water
11. ***subterranean:*** being, lying, or operating under the surface of the earth

IV. *Before Viewing the Video:*

Ask the students what kinds of active sports they like to engage in outdoors. Give students a chance to list as many as they can think of.

V. *Viewing Guide:*

Tell students the activities they are going to see in this video are: kayaking, archery, caving, and mountain biking. Have them make a chart in their notebooks using each of the activities as a heading. As they watch the video, they should list safety rules for each one.

VI. *Discussion Guide:*

Working in small groups, have the students combine their safety rules to make a master list. To save time, assign students to just do one of the activity safety lists. Then write the lists on the board and have students see if they can add any ideas. *(Teacher Note: You can refer to teacher background information for suggestions.)*

VII. *Evaluation:*

Depending on the activity you choose for your class, teachers can create rubrics for quality of presentations and have attending students fill out response forms. If time is limited, an evaluation of the notes taken by the students, as well as observation of their group and discussion participation would provide assessment.

Suggestions for extended learning:

1. Have students make posters to hang in the school hallways emphasizing outdoor activity safety related to kayaking, caving, archery, and mountain biking.
2. If students are active in other outdoor sports, have them research safety practices related to that activity and make posters to communicate those practices. Some students may participate in motorized outdoor activities, such as riding all terrain vehicles or motorbikes. These would have very important safety rules to be identified and posted.
3. Have students create a Safety Fair, bringing in equipment they may have, and setting up displays of safe activity guidelines. They could invite other classes to view their work.
4. Have students research how caves are created. They could make a poster of stalactites and stalagmites and how they are created.
5. Students could find pictures of some of the famous caves in North America, such as Carlsbad Caverns, or in Wisconsin – Cave of the Mounds, Crystal Cave, Eagle Cave, or the Bayfield Ice Caves.

The following Wisconsin Student Proficiency Standards can be met by teaching *Safety in Outdoor Activities*:

SCIENCE

1. Connections: How evidence explains phenomena
2. Inquiry: Understanding how questions direct research
3. Earth Science: Earth history & structure of earth
4. Physical Science: Motion & Forces

NOTE: Because student learning standards for science and physical education are now being processed in relation to national Core Curriculum Standards, a pertinent document is not available at this time.

Wisconsin Teacher Standards which can be met with this curriculum, including rationale:

STANDARD 1: ***Subject matter***
This curriculum provides information not readily available in other forms.
A teacher using this material will be well-informed about the subject matter.

STANDARD 3: ***Adapt instruction***
The curriculum provides suggestions for learners with a variety of intelligences and levels of ability.

STANDARD 4: ***Instructional strategies***
The curriculum includes the use of technology to gain information and suggestions for using research in extending learning.

STANDARD 5: ***Individual and group motivation***
Both the use of prior knowledge and carefully designed group projects promote motivation for students to learn.

STANDARD 6: ***Verbal and nonverbal communications***
Instructional media and technology that promote active learning are key parts of this curriculum.

STANDARD 7: ***Organizes and plans systematic instruction***
The curriculum is organized to support teacher knowledge, to draw on and motivate students to engage in active learning, and promotes active inquiry, collaboration, and supportive interaction in the classroom.

STANDARD 8: ***Formal and informal assessments***
Suggestions for a variety of assessments, both formal and informal, are offered in the curriculum.