

Adventure and Skills Classes:

SURVIVAL SKILLS

Themes: Community; Adaptations; The Earth Provides; McDowell Stewards

Lesson Overview: Learners will practice planning for and executing wilderness, or backcountry, travel. Learners will practice working as a team and individually to successfully prepare for being lost in a backcountry scenario, and for overnight survival in an emergency situation.

Total Time: 1.5 or 3 hours

Hiking Distance: Varied; .75-1.5 miles

Activity Level: Varied; 3 hour class not easily modified for all abilities; 1.5 hour class can be modified for most

Learning Goals: By the end of this session, learners will be able to use creative thinking skills to meet their basic needs in the backcountry in the following ways:

1. Identify and address the immediate needs of a group in an emergency backcountry situation.
2. Successfully identify and use natural and commonly carried objects to address short- and long-term survival needs in the wilderness while practicing Leave No Trace principles.
3. Discuss the resources available in natural settings and relating them to the success of other cultures today and in the past.

Scientific Practices Highlighted: Defining Problems, Designing Solutions

Crosscutting Concepts Addressed: Patterns

CANOEING

Themes: Energy; Community; Connections, Cycles, and Systems; McDowell Stewards

Lesson Overview: Learners canoe on a placid canyon stream among 80-foot bluffs and cascading waterfalls.

Participants practice communication skills and consider the relationship between Newton's Second and Third Laws to their canoe travel. ***Students should be prepared to get wet during this activity. Canoeing is not recommended in cold months! In cases of extreme weather, high wind or high water, please choose an alternate activity for your group.***

Total Time: 1.5 hours

Hiking Distance: Minimal hiking, but includes steep staircase

Activity Level: Moderate; cannot be modified for alternate abilities

Learning Goals, All Grades: By the end of this session learners will:

1. Learn how to communicate with one another to support travel on a stream.
2. Relate the speed of their canoe to Newton's 2nd Law: Force = Mass * Acceleration.
3. Relate the success of their paddling efforts to Newton's 3rd Law: Every action has an equal and opposite reaction.
4. Learn vocabulary and care for canoeing equipment.

Scientific Practices Highlighted: Developing and Using Models

Crosscutting Concepts Addressed: Cause and Effect, Energy and Matter

NAVIGATION - 1.5 hour option

Themes: Energy; Community

Lesson Overview: Learners will gain experience with a compass and learn how compasses work through demonstrations and kinesthetic activities using a compass. Learners apply their skills by completing an outdoor compass course. ****Option recommended for younger learners***

Total Time: 1.5 hours

Hiking Distance: Minimal hiking; walking over mild terrain without a trail is included

Activity Level: Low; Can be modified for most abilities but may not include outdoor course

Learning Goals: At the end of this session, learners will be able to use a compass to:

1. Determine cardinal directions, read compass bearings and apply them properly.

2. Navigate an outdoor course using a compass.
3. Use a map and a compass to discern bearings properly.

Scientific Practices Highlighted: Obtaining, Evaluating, and Communicating Information, Developing and Using Models

Crosscutting Concepts Addressed: Patterns

NAVIGATION - 3 hour option

Themes: Community; McDowell Stewards

Lesson Overview: Learners learn how to read a topographic map and use a compass to navigate themselves in the backcountry woods of Camp McDowell. Learners practice group decision making and critical thinking to troubleshoot navigation issues when they arise. ****Option recommended for older learners***

Total Time: 3 hours

Hiking Distance: Strenuous 1.5 mile hike; walking over terrain without a trail is included

Activity Level: High; not easily modified for all abilities

Learning Goals: At the end of this session, learners will be able to use critical thinking skills and group decision making to:

1. Read and create topographic maps.
2. Use a compass and map to navigate off trail.
3. Describe the information contained in maps, the value of being able to interpret that information, and how maps are used for commercial and societal benefit.

Scientific Practices Highlighted: Engaging in Arguments from Evidence, Analyzing and Interpreting Evidence

Crosscutting Concepts Addressed: Patterns; Scale, Proportion, and Quantity

MEET A MAP

Themes: McDowell Stewards, Community

Lesson Overview: Learners practice their visual spatial skills creating and using a variety of maps, and work together to solve indoor and outdoor courses.

Total Time: 1.5 hours

Hiking Distance: Minimal hiking; walking over mild terrain without a trail is included

Activity Level: Low; can be universally accessible with prior notice but may omit outdoor portion of course.

Learning Goals: Upon completion of this session, participants will better understand mapping in the following ways:

1. Become familiar with using and interpreting the pieces of maps (e.g. scale, legend, contour intervals, rivers) using different scaled maps of Camp McDowell.
2. Create a map of an area at MEC.
3. Navigate a course to find locations specified on a map.
4. Gather spatial information about the distribution of resources in an area.

Scientific Practices Highlighted: Obtaining, Evaluating, and Communicating Information

Crosscutting Concepts Addressed: Patterns; Scale, Proportion, and Quantity

TRUST SWING**

Themes: Community; Energy

Lesson Overview: Learners work together to lift one another with a certified pulley system on a giant swing. Learners place trust in their group and control the amount of risk with which they are comfortable by setting personal goals for how high they would like to be lifted. Students must be 5th grade or older to participate.

*****Acknowledgment of Risk Forms are REQUIRED***

We charge an additional \$10.00 equipment fee per field group for this activity.

Total Time: 1.5 hours, Acknowledgement of Risk Form required

Activity Level: Strenuous mentally, physically low to moderate; accommodations can be made for some physical limitations as riding the trust swing involves minimal physical exertion.

Learning Goals: By the end of this session, learners will gain experience and skills in the following ways:

1. Trust is required in teamwork, and setting and achieving personal goals can result in self-confidence gains.
2. Using simple machines, like compound pulleys, changes the amount of energy required to move an object.
3. Learners will relate potential and kinetic energy concepts using the Trust Swing as a model.

POWER POLE**

Themes: Community; Energy

Lesson Overview: Learners challenge themselves to climb a 25-foot telephone pole and jump for a bell suspended nearby. This activity provides the most significant mental and emotional challenge for learners. The group setting offers emotional support for each participant, who is also supported by a trained ropes course facilitator to ensure physical safety. Students must be 7th grade or older to participate in this activity.

****Acknowledgment of Risk Forms are REQUIRED**

We charge an additional \$10.00 equipment fee per field group for this activity.

Total Time: 1.5 hours, Acknowledgement of Risk Form required

Activity Level: Very strenuous mentally, physically low to moderate; cannot be modified for universal accessibility

Learning Goals: By the end of this session, learners will gain experience and skills in the following ways:

1. Setting, working toward, and achieving personal goals takes confidence and support from their peers.
2. Gaining personal confidence requires taking (perceived) risks when success is not assured, and understanding that failure is an important part of growth.
3. Trusting in yourself, others, and safety systems are important components of personal growth.

CLIMBING WALL**

Themes: Community; Energy

Lesson Overview: Striving to climb a 40-foot wall with hand and foot holds, learners experience rock climbing and feel the exhilaration of attempting a daunting feat. Encouraged by their peers and led by a trained ropes course instructor, learners set and achieve personal goals, confront fears, and gain self-confidence in a unique outdoor experience. Students must be 5th grade or older to participate in this activity.

****Acknowledgment of Risk Forms are REQUIRED**

We charge an additional \$10.00 equipment fee per field group for this activity.

Total Time: 1.5 hours, Acknowledgement of Risk Form required

Activity Level: Strenuous physically and mentally; cannot be modified for universal accessibility

Learning Goals: By the end of this session, learners will gain experience and skills in the following ways:

1. Setting, working toward, and achieving personal goals takes confidence and support from their peers.
2. Gaining personal confidence requires taking risks when an outcome is not assured, and understanding that failure is an important part of growth and success.

TEAM ADVENTURE*/TEAM CHALLENGE**

****Team Adventure does not include low ropes elements, and therefore does not need Acknowledgement of Risk Forms.***

*****In Team Challenge, Acknowledgement of Risk Forms are REQUIRED***

Themes: Community

Lesson Overview: Learners will participate in a series of group problem solving activities that encourage cooperation, communication, and trust. Each class is tailored to the needs of the group and is a unique experience. The group is encouraged to review their experiences, link them to relevancy in their daily life, and extend these new ideas as they approach situations at home or in school. ***MEC facilitators will choose the activities based on the individual group's needs. Because of this, each student group will have a unique experience using different activities.***

Total Time: Team Adventure - 1.5 hours, no additional forms needed; Team Challenge - 3 hours, Acknowledgement of Risk Form required

Activity Level: Easy to strenuous; can be made universally accessible with notification

Learning Goals: By the end of this session, learners will be able to use the following skills to help them solve

problems:

1. Active listening and sharing of ideas are important components of success in group work.
2. Working with others to solve problems highlights the variety of solutions a problem may have.

Problem-solving skills need to be honed with practice, and are valuable in all aspects of life.

TRAIL OF DISCOVERY

Themes: Can be varied to match any theme.

Lesson Overview: Learners have an immersive, full day experience in nature. Aspects of MEC courses on forest ecology, geology, and Native American cultures, as well as those selected by the teacher, are highlighted on a full day hike. Learners practice appropriate behavior in the woods, enjoy a picnic lunch, and, because of the full day nature of the course, have opportunities to engage more fully with chosen concepts. ***A packed lunch will be provided. All participants need to bring a backpack, 2 water bottles, and comfortable hiking shoes.***

Total Time: Full day (morning and afternoon class session, lunch enjoyed in the field)

Hiking Distance: ~3 miles

Activity Level: Moderate to strenuous; experience cannot be adapted for all abilities, but modifications can be made to accommodate some different abilities.

Learning Goals:

Learning goals are dependent, in part, on the content choices of the teacher and other courses taken during the learners' trip. In addition to science content, learners can expect to become more independent in nature in the following ways:

1. Recognizing the behaviors necessary for thriving long-term in an outdoor situation and the ways humans can protect the environment around them.

Scientific Practices Highlighted: Planning and Carrying Out Investigations

Crosscutting Concepts Addressed: Systems and System Models, Energy and Matter, Patterns