“McDowell Comes to You” Planning Packet

2020-2021

McDOWELL ENVIRONMENTAL CENTER

Outreach Programs

www.mcdowellec.org
Phone: 205.387.1806

105 DeLong Road
Nauvoo, Alabama 35578

Welcome to the McDowell Environmental Center!

At McDowell Environmental Center (MEC), our philosophy is to teach students in the great outdoors and give them an experience impossible to have in an indoor classroom. However, we understand that this isn't possible for all schools right now and we want to COME TO YOU!

We offer the best in hands-on environmental science in any space. We also offer fun, team-building classes that work wonders for the group dynamics of your class and individual challenges that build students' self-confidence. Our instructors have been trained in a child-centered, experiential approach to teaching and are passionate about sharing the natural world with students and adults.

Once you contact us and confirm our trip to you, we will guide your planning process. **Please read through this packet very thoroughly as the first step in planning your trip.** If you want us to work with multiple grade levels, consult with us about how to provide different classes for each grade level. Each class variance allows students who are returning to receive new information and experiences. Also please think about what you want to accomplish with your students and where we will spend time with them.

We can't wait to meet you and your students!

Please email mecdirector@campmcdowell.org or call 205-387-1806 ext. 109 with any questions you have.

Beth Dille, Director &
Kim Corson, Program Coordinator

PROGRAM DETAILS

Services Offered

Our experienced staff handles the entire program for you. We plan, teach and supply materials for all classes. We are here to help with pre-planning, time at the school, and post-visit.

- Single Day Trips: Look at the contract and pick what you want us to teach your students. We are prepared to teach any of the listed classes as a part of our Outreach program.

- Multi-Day Visits: This can be due to the number of students and in order to assure that all students have the same program over numerous days OR that students get an in-depth lesson over numerous days (consecutive or spread out over the whole year)

- Family night: Have your families come to an evening full of MEC experiences. For example, the "Birds of Prey" program, Reptiles, making wood cookie nametags, campfire, and gift shop.

- Customize our visit: We want to be able to give you and your students the experience that YOU want. Chat with us about what you want and need. We can make it happen!

The Lead Teacher's Role

Most of the Lead Teacher's responsibilities deal with pre-trip preparations. The enclosed *Contract* lists your responsibilities and the Lead Teacher Timeline helps you to sequence them. During the program, we encourage you to be a participant, learning along with your students.

Making a Reservation

To make a reservation, call (205-387-1806 ext. 109) or email us (mecdirector@campmcdowell.org). We will send you a Reservation Confirmation after that initial contact.

Billing Policy

We will provide an invoice for you before your trip to make sure that the cost is clear for both parties. We ask that a check for the full amount be made available the day(s) we are at your school.

Learners with Exceptionalities

We can customize our classes to make them fun and accessible to all learners. Please discuss any needs with us **ahead of time** so that we can be prepared to meet them.

Teacher Credit

If you or anyone in your family is a teacher you can receive Professional Development hours for the programs that you attend with your students. Camp McDowell is an AMSTI affiliate and gives credits through PowerSchool. McDowell provides people of all ages the vital tools needed to understand the environment in which they live. Teachers are given a certificate, reflecting the time spent in classes and activities at The McDowell Educational Programs. These can be sent to you after the trip.

State Standards

Our curriculum is correlated to Course of Study standards for Science, Social Studies, Physical Education, and Language Arts, as well as the Next Generation Science Standards. Please see our website for detailed information about how our classes correlate to these standards: www.mcdowellec.org

TRIP COST:

For further information on pricing please contact Beth Dille at mecdirector@campmcdowell.org or 205-387-1806 ext 109 for a quote. Prices depend on travel distance, time, and programming.

LEAD TEACHER TIMELINE

As Soon As Possible

- Email ***Reservation Confirmation*** (email to mecdirector@campmcdowell.org)
- Arrange for payment from students/school

1 MONTH prior

- Email the completed and signed ***Contract*** (email to pc@campmcdowell.org)
- Collect the remainder of student payment

1 WEEK prior

- Contact us by email or phone to check for any last-minute updates and details on spaces

DAY of the TRIP

- Greet MEC instructors, show them the space, help set up if needed
- Receive invoice from MEC
- At the end of the day, provide payment to MEC staff

McDowell Environmental Center Outreach Contract

EMAIL to mecdirector@campmcdowell.org Please **email** ASAP.

School:_____ Grade(s): _____ Reserved date: _____

Address: _____ City:_____ State:_____ Zip:_____

Lead Teacher:_____ Email:_____

School Phone: (____)_____ Cell Phone:(____)_____

Secondary School Contact: _____ Email:_____

Best way to contact (circle one): School Phone / Cell Phone / Email Best Time to Contact: _____

Program Start Time:_____ **Program End Time**:_____

Do you want a Family Night? _____ Start Time: _____ End Time: _____

TOTAL # of STUDENTS: _____ TOTAL # of CLASSROOMS/GROUPS:_____

NOTE: Groups should be 10-12 students max. There will be one instructor per group.

Class Selection

Class Descriptions found in packet or at www.mcdowellec.org

Skills-Based Classes
____Food for Thought
____Meet a Map/Navigation
____Survival Skills
____Team Building

Recreation & Humanities Classes
____Art in Nature
____Authors & Explorers
____Native Americans & Earth

Animal Classes:
____Hop, Slither, Slide
____Radical Raptors
(the ability to do this program during the day will be up to the Animal Care Director's discretion)

Science Classes
____Aquatic Adventures/Stream Studies
____Recycling Program
____Forest Connections
____Meet a Tree
____Rock Query

McDowell Experience Extras:

In-School Extras:
____ Wood Cookie Name Tags
____ Gift Shop
____ Virtual McDowell "Hike"/Tour
____ Any ideas that you have:

McDowell Family Night Extras:
____ Reptile Program
____ Birds of Prey Program
____ Campfire Program
____ Wood Cookie Name Tags
____ Gift Shop
____ Educational Activities/Games

Are there specific ideas that you have or designated activities you would like to have us do . . . be bold in your thoughts? What "crazy" idea do you have? (i.e. Maybe you're reading about the Big Leaf Magnolia in English and want to do a cross-curriculum lesson with science)

Does your school have an **outdoor classroom/access** to an outdoor space? If so, please describe (send a photo if you can):

What **experiences** have your students had with the outdoors, environmental education?

Please list any **objectives, themes, goals, vocabulary, teaching philosophies, or local environmental issues** that you would like for us to emphasize:

Have any of your students attended MEC before? _____ If so, approximately how many? _____

How would you characterize your school? (Choose all that apply)

___ Private ___ Public ___ Religious Affiliation ___ Open Classroom ___ Montessori

___ Self-contained classroom ___ Students move from class to class ___Block Schedule

Please include a description of the dynamics or your group:

What specific **student needs** should we be aware of? (i.e. social/emotional/behavioral concerns, severe allergic reactions, physical limitations, learning needs, etc...)

RESPONSIBILITIES OF THE CENTER: Assist with pre-trip planning; provide complete educational programming; inform participants of their responsibilities, camp rules, and emergency procedures; prepare meals and evening snacks; clean and maintain facilities and grounds, and provide a safe and wholesome atmosphere.

RESPONSIBILITIES OF THE LEAD TEACHER: Make a reservation (new schools- submit deposit) and return contract; arrange location/groups for lessons; participate in the program with students, and submit final payment.

INVOICE: Before the trip you will be given an invoice. Payment is due the day(s) we visit.

I agree to the terms of this contract and agree that my group will abide by all McDowell policies.

_____ _____

Signature of Lead Teacher Date

_____ _____

Signature of Principal Date

CURRICULUM GUIDE

Mission Statement
The Mission of McDowell Environmental Center is to connect people to the environment, teach respect for the Earth and its beings, and to promote a commitment to lifelong learning.

Program Objectives
- The students will increase awareness and understanding of the environment.
- The students will develop a sense of responsibility for the environment.
- The students will gain a better sense of cooperation and community.

Environmental education embraces teachable moments that happen regularly. MEC Instructors are professional educators. Each instructor will have their own teaching style and choose activities for classes that best suit their personality. Instructors will cover the key terms and principles of each class, which are correlated to multi-state Courses of Study, as well as Next Generation Science Standards.

HOP, SLITHER & SLIDE

Lesson Overview: Learners confront and dispel fears of reptiles by meeting snakes, other reptiles and amphibians, and touching/feeding/engaging with them. Instructors handle live animals and discuss conservation and human impacts on reptile and amphibian communities. Incorporation of various kinesthetic learning activities are included to cement the differences between reptiles and amphibians.

Learning Goals:
1. Describe, with evidence, the differences between reptiles and amphibians and relate those traits to habitat requirements.
2. Explore specific adaptations of observed reptiles and amphibians and describe the role each plays in Alabama's ecosystem.

Scientific Practices Highlighted: Developing and Using Models
Crosscutting Concepts: Structure and Function

RADICAL RAPTORS

Lesson Overview: Learners engage with our bird educators, live birds of prey - like a hawk or owl - to learn about their adaptations, habitats, and ecological significance.

Learning Goals: By the end of this session, learners will be able to consider birds of prey in the following ways:
1. Describe the specialized traits of birds of prey and how each adaptation contributes to the success of the bird.
2. Relate adaptations to habitat and behaviors.
3. Consider the impact of humans on birds of prey indigenous to our region.

The ability to do this program during the day will be up to the Animal Care Director's discretion

AQUATIC ADVENTURES/STREAM STUDIES

Lesson Overview: Learners will predict how different characteristics of freshwater environments impact the types of organisms found in the environment, observe adaptations specific to those aquatic environments, and identify macroinvertebrates.

For older students - Learners have the option to assess the water quality of a stream using **chemical testing and bioassessments** and discuss the human and natural impacts to stream quality.

Learning Goals: By the end of this session, learners will be able to conduct an experiment on a freshwater environment using observation of, an abundance of, and/or diversity of macroinvertebrates. They will gain skills in the following areas:

1. Making observations of and characterizing unfamiliar organisms.
2. Considering how changing conditions in freshwater environments (natural or human-induced) can change the composition of aquatic life in that environment.
3. Constructing a reasonable hypothesis about macroinvertebrates and their aquatic habitats, testing it, and discussing the results.

Scientific Practices Highlighted: Planning and Carrying Out Investigations
Crosscutting Concepts Addressed: Structure and Function, Patterns

FOREST CONNECTIONS

Lesson Overview: Students will observe the connections between Earth's spheres. Particular focus on specific adaptations and connections among plants and animals in the biosphere. Students will play games to better understand the reason for typical adaptations expressed by forest organisms.

Learning Goals: At the end of this session, learners will be able to relate the biosphere at Camp McDowell to other spheres in the following ways:

1. Articulate ways in which organisms in the forest are connected to one another through specific adaptations, integrated food webs, and by exploiting specific niches.
2. Link the non-living habitat (atmosphere, geosphere, hydrosphere) to the biosphere.
3. Understand that removing something - living or not - from the habitat can have major consequences for that area.
4. Insects display a wide variety of adaptations tailored to their environment, are vital to the health of ecosystems, and have changed over time to suit specific roles within that environment.

Scientific Practices Highlighted: Constructing Explanations, Planning and Carrying Out Investigations
Crosscutting Concepts Addressed: Structure and Function, Systems and System Models

MEET A TREE

Lesson Overview: Learners explore the relationship of Earth's four spheres to one of the forest's principal plants: the tree. Students discuss how energy cycles in trees, the structure and functions of trees in the forest ecosystem, and identify common Alabama tree species. **Note: this class will need an outdoor space**

Learning Goals: By the end of this session, learners will be able to describe the value of Alabama trees to the forest ecosystem in the following ways:

1. Tree species have unique physical characteristics that can be used to identify them, and all trees have specific parts that function together to transfer energy and nutrients, allowing the tree to grow.
2. Trees are an important component of forest ecosystems that impact and are impacted by the atmosphere, biosphere, geosphere, and hydrosphere.
3. Energy can be traced throughout the life cycle of a tree.

Scientific Practices Highlighted: Asking Questions, Developing and Using Models
Crosscutting Concepts Addressed: Energy and Matter, Structure and Function

RECYCLING PROGRAM

Lesson Overview: Learners will gain an understanding of why recycling is essential to the safety of our planet and inturn them as individuals. Depending on grade level they will understand how they can be advocates within their families and communities and learn how and what they can do to make a difference.

Learning Goals: By the end of the lesson, learners will:

1. Understand the difference between the terms reduce, reuse and recycle and develop ideas of how they can do each one of these terms.
2. Recognize the need for recycling within their families and communities as they are able to make a change in the world.
3. Understand what advocates are doing around the world to help them as individuals and the planet as a whole.

Scientific Practices Highlighted: Scientific Practices Highlighted: Obtaining, Evaluating, Communicating Information and Constructing Explanations
Crosscutting Concepts Addressed: Investigate, Make, Analyze, Reflect

ROCK QUERY

Lesson Overview: Learners will gain an understanding on how rocks form and engage with rock samples to discern the relationship between sedimentary, igneous, and metamorphic rocks. Learners will observe and consider the impact of the geosphere on local ecosystems, and, in turn, the role the hydrosphere, atmosphere, and biosphere play in shaping the geosphere.

Learning Goals: At the end of this lesson, learners will be able to think critically about the geosphere in the following ways:

1. Rocks have unique properties based upon their origin. They can cycle between igneous, sedimentary, and metamorphic as a result of processes like weathering, transport, and mountain building.
2. The geosphere is one of Earth's major systems that shapes and is shaped by all of Earth's other systems (biosphere, hydrosphere, atmosphere), revealing changes over time.
3. Different rock types are found throughout Alabama and allow us to predict places to mine for resources.

Scientific Practices Highlighted: Developing and Using Models, Obtaining, Evaluating, and Communicating Information
Crosscutting Concepts Addressed: Stability and Change, Scale, Proportion, and Quantity

ART IN NATURE

Lesson Overview: Learners will explore nature through the lens of an artist. They will learn about nature artists, develop an innovative approach to creating art, and present and share their creative expression. This class will be a unique experience for students to understand that art surrounds them in all places.

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

1. Create art using natural and/or found elements and materials
2. Learn about nature artists such as Andy Goldsworthy, and understand how their art is an expression of themselves as well as how it affects those that observe what they have created.
3. Students will be able to identify how nature art can be used to bring significance to a place, person or experience.

Scientific Practices Highlighted: Scientific Practices Highlighted: Obtaining, Evaluating, Communicating Information and Constructing Explanations
Crosscutting Concepts Addressed: Investigate, Make, Analyze, Reflect

AUTHORS & EXPLORERS

Lesson Overview: Learners will connect with and be inspired by natural features. Learners will be prompted with sensory awareness and observation activities to record and share their experiences using sketches, poetry, and word art. Learners will gain knowledge about the scientific and artistic value of journaling and articulate written expression by relating their experiences to those of famous authors and naturalists.

Learning Goals: At the end of this session, learners will be able to use natural landscapes as inspiration for the following:

1. View and describe the world from different perspectives, including the perspective of a natural object, and consider how perspective impacts understanding of the world.
2. Details and analogies improve descriptive writing and help the author convey information to the reader.
3. Relating their experience to the ways authors, explorers, and scientists use sketching and writing in journals as tools to improve their trade.

Scientific Practices Highlighted: Developing and Using Models
Crosscutting Concepts Addressed: Patterns, Scale, Proportion, and Quantity

NATIVE AMERICANS & THE EARTH

Lesson Overview: Learners will engage with Native American artifacts and participate in activities and games to learn respect for natural resources and different cultures.

Learning Goals: By the end of this session, learners will be able to discuss the relationship between humans and the natural environment through the lens of Alabama's indigenous people in the following ways:

1. Compare the culture and resources of American Indians to today's culture.
2. Explain how American Indian culture changed over time because of the changing reliance on natural resources and environmental changes.
3. List and locate on a map the four major tribes of American Indians that lived in Alabama before European settlers, and describe how they were impacted by one another through trade.

Scientific Practices Highlighted: Constructing Explanations
Crosscutting Concepts Addressed: Stability and Change, Cause and Effect

FOOD FOR THOUGHT

Lesson Overview: Learners will learn conservation principles and learn how to put them into practice at the table. Students are empowered to make big changes through small, personal choices.

Learning Goals:

1. Become familiar with the production and delivery of food and the energy and natural resources it requires.
2. Know the impact of our choices to reduce food waste and conserve energy.
3. Create solutions to reduce food waste and the demand for natural resources needed for food distribution.

Key Terms: Food Waste, Choice, Conservation, Energy, Compost, Landfill, Recycling, Natural Resources, Energy, Impact

Scientific Practices Highlighted: Using Mathematics and Computational Thinking, Analyzing & Interpreting Data

Crosscutting Concepts Addressed: Patterns

MEET A MAP *- map skills*

Lesson Overview: Learners practice their visual-spatial skills creating and using a variety of maps, and work together to solve indoor and outdoor courses. **Note: this class will need an outdoor space**

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 your school.
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

NAVIGATION - compass skills

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. **Note: this class will need an outdoor space**

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

SURVIVAL SKILLS

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. **Note: this class will need an outdoor space**

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

TEAM BUILDING

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.***

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

Scientific Practices Highlighted: Defining Problems, Designing Solutions
Crosscutting Concepts Addressed: Patterns

Family Night

Bring your family to an evening full of MEC experiences at your school that you might not experience during the day. Here are some things to expect:
- learn about birds of prey and reptiles
- make wood cookie name tags to take home
- sing songs and listen to stories with us around a campfire
- purchase camp gear from our gift shop.

** If you have any ideas about what you would want this night to look like, please let us know **

PARENT LETTER

McDowell Environmental Center
105 Delong Road
Nauvoo, AL 35578

Dear Parent or Guardian,

McDowell Environmental Center's philosophy is to teach students in the great outdoors and give them a lifetime of memories and experiences. Your child will be learning through hands-on environmental science classes. Our instructors have been trained in a child-centered, experiential approach to teaching and are passionate about sharing the natural world with students and adults.

We are sad that your student(s) will not be able to visit McDowell with your school this fall, however, we are excited to be able to come to your place to visit. We are offering Family Field Trips at Camp McDowell which is a very special field trip that encompasses both the Farm School and the Environmental Center. Please contact Beth at mecdirector@campmcdowell.org if you would like more information on this trip.

Your child's school teachers will send home all information about our visit to your students' school. If you have any questions regarding our program or personnel, please feel free to call us or visit our website at **www.mcdowellec.org**.

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