



Education Guide 2015

ACTIVITIES

Archaeology

For your reference, we have provided the Minnesota Core Curriculum Standards that are met by the following programs:

Arts: 0.1.1.5.1, 0.1.2.5.1, 0.1.3.5.1, 4.1.2.5.1, 4.1.3.5.2, 4.2.1.5.1, 6.1.2.5.1

History: 0.4.1.2.1, 1.4.1.2.1, 1.4.1.2.2, 1.4.2.4.1, 2.4.1.2.1, 2.4.2.4.1

Math: K.3.1.1, K.3.1.2, 1.2.1.1, 1.3.1.1, 1.3.2.1, 2.3.1.1, 2.3.1.2

Physical Science: 0.2.1.1.1, 2.2.1.1.1,

The Nature of Science and Engineering: 0.1.2.1.1, 1.1.1.1.2, 1.1.3.2.1, 2.1.1.2.1, 2.1.2.2.2, 3.1.1.1.1, 3.1.1.2.1, 3.1.1.2.2, 3.1.1.2.3, 3.1.1.2.4, 3.1.3.2.1, 3.1.3.2.2, 3.1.3.4.1, 4.1.2.1.1, 4.1.2.2.1, 4.1.2.2.2, 4.1.2.2.3, 4.1.3.3.1, 5.1.1.1.1, 5.1.1.1.2, 5.1.1.1.3, 5.1.1.2.1, 5.1.1.2.2, 5.1.1.2.3, 5.1.3.2.1, 5.1.3.4.1, 5.1.3.4.2, 6.1.2.1.4, 7.1.1.1.1, 7.1.1.1.2, 7.1.1.2.1, 7.1.1.2.3, 7.1.1.2.4, 8.1.1.2.1, 8.1.3.2.1, 8.1.3.3.1, 8.1.3.3.2, 8.1.3.3.3, 9.1.1.1.2, 9.1.1.1.5, 9.1.1.1.6, 9.1.1.1.7, 9.1.1.2.2, 9.1.3.2.1, 9.1.3.4.3

Social Studies: 1.4.1.2.1, 1.4.1.2.2, 1.4.2.4.1, 1.4.2.4.2, 2.3.1.1.3, 2.3.1.1.4, 2.4.1.2.1, 3.3.1.1.1

Bison Hunt

Learn how to hunt big game by using an atlatl, a hunting tool used by prehistoric groups around the world, including Minnesota. Take aim at our bison target and learn how essential group hunting was to early Minnesotans.

Grades: 3-up

Session Length: 30-45 minutes

Dirt Detectives: Monroe Location (Seasonal)

Ever wonder what an archaeologist does? Experience the thrill of archaeology by digging for replica artifacts at our mock dig site! Learn the basics of excavation, mapping, and artifact documentation and discover how archaeologists learn about the past from what they find in the ground.

Grades: 4-12 (can be tailored to younger groups if necessary)

Session length: 45-60 minutes

Pottery Design

Explore how prehistoric pottery designs help us answer questions about civilizations of the past. Students will get to make their own decorated pottery sherd using similar methods found in the archaeological record.

Grades: K-up

Session length: 30 minutes

Art

For your reference, we have provided the Minnesota Core Curriculum Standards that are met by the following programs:

Arts: 0.1.1.5.1, 0.1.2.5.1, 0.2.1.5.2, 0.3.1.5.1, 0.3.1.5.2, 4.1.1.5.2, 4.1.2.5.1, 4.1.3.5.2, 4.2.1.5.1, 4.2.1.5.2, 4.3.1.5.2

Life Science: 0.4.1.1.1, 0.4.1.1.2, 2.4.1.1.1, 2.4.2.1.1, 2.4.3.1.1, 3.4.1.1.1, 3.4.1.1.2, 3.4.3.2.1, 5.4.2.1.1, 5.4.2.1.2

The Nature of Science and Engineering: 1.1.1.1.1, 1.1.1.1.2, 1.1.3.1.1, 1.1.3.2.1, 2.1.1.2.1

Abstract Painting

Explore the point and line concept using a simple wooden tool. Learn how to mix paint to create new colors.

Grades: K-6

Session Length: 30-45 minutes

Botanical Illustrations/Leaf Rubbings

Botanical illustrations have long been an important part of human history. From Paleolithic carvings to the Lewis and Clark expedition, discover why these drawings can depict plants more accurately than a photograph.

Grades: 1-up

Session Length: 30-45 minutes

Collage

Create a picture by gluing items such as paper, foam, and string to a surface. Find new ways to use collectible materials.

Grades: K-up

Session Length: 30-45 minutes

Printing

Create your own design and learn to make repeating patterns with shapes created from foam and paint.

Grades: K-6

Session Length: 30-45 minutes

Engineering

For your reference, we have provided the Minnesota Core Curriculum Standards that are met by the following programs:

Physical Science: 0.2.1.1.1, 2.2.2.1.1, 2.2.2.1.2, 2.2.2.2.1, 2.2.2.2.2, 5.2.2.1.2, 5.2.2.1.3, 6.2.2.2.1, 6.2.2.2.2, 6.2.2.2.3, 6.2.3.1.1

Nature of Science and Engineering: 1.1.1.1.1, 1.1.1.1.2, 1.1.3.2.1, 2.1.1.2.1, 2.1.2.2.1, 2.3.2.2.1, 3.1.1.2.1, 3.1.1.2.2, 3.1.1.2.3, 3.1.1.2.4, 3.1.3.2.1, 3.1.3.2.2, 3.1.3.4.1, 4.1.3.3.1, 5.1.1.1.1, 5.1.1.1.2, 5.1.1.1.3, 5.1.1.1.4, 5.1.1.2.1, 5.1.1.2.2, 5.1.1.2.3, 5.3.4.1.1, 7.1.1.2.1, 7.1.1.2.2, 8.1.1.2.1, 8.1.3.2.1, 8.3.2.1.3, 8.3.2.2.2, 9.1.3.1.2,

History: 0.4.1.1.1, 0.4.1.2.1, 1.4.1.2.1, 2.3.4.9.1, 3.4.1.2.1, 3.4.1.3.1, 5.4.1.2.1, 6.4.4.20.2, 7.4.4.20.1,

Geography: 4.3.1.2.1, 4.3.4.9.1, 4.3.4.10.1, 6.3.4.10.1, 8.3.2.3.1

Build a Rain Gauge

Ever wonder how a weatherman knows how many inches it rained after a storm? Discover this on your own! Build a rain gauge to collect your own measurements and compare them to the weatherman's.

Grades: K-6

Session Length: 20-30 minutes

Materials fee: \$10

Can You Canoe?

Practice boat building skills and create a model size canoe. Try to make it float in water for 3 minutes without having it sink or fall apart.

Grades: 1-6

Session Length: 30-45 minutes

Move That Location!

Learn about the history of Locations (towns) on the Iron Range and why they had to be moved. Students will assemble their own Location out of assorted boxes and attempt to move it 10 feet without the "town" collapsing.

Grades: K-6

Session length: 30-45 minutes (better with more time)

Snow Snake Game (Seasonal)

Discover the history of the Snow Snakes and why indigenous groups who lived in the snow played this game. Students will make their own snow snake to try and slide it the farthest.

Grades: K-up

Session length: 40 minutes minimum

Material Fee: \$10

Twirling Top

Learn about the history of spinning toy tops. Become part of a team to draw and design a top that can spin for 10 seconds.

Grades: 2-6

Session length: 30-45 minutes

History

For your reference, we have provided the Minnesota Core Curriculum Standards that are met by the following programs:

Arts: 0.1.1.5.1, 0.1.2.5.1, 0.1.3.5.1, 0.2.1.5.1, 0.2.1.5.2, 0.3.1.5.1, 0.3.1.5.2, 0.4.1.5.1, 4.1.1.5.1, 4.1.1.5.2, 4.1.2.5.1, 4.1.3.5.1, 4.1.3.5.2, 4.2.1.5.1, 4.2.1.5.2, 4.3.1.5.2, 6.1.1.5.1, 6.1.1.5.2, 6.1.2.5.1, 6.1.3.5.1, 6.1.3.5.2, 6.2.1.5.1, 6.2.1.5.2, 9.4.4.5.1, 9.1.1.5.2, 9.1.2.5.1, 9.1.3.5.1, 9.1.3.5.2, 9.2.1.5.1, 9.2.1.5.2

Social Studies: 1.2.3.5.1, 1.4.1.2.2, 1.4.2.4.2, 2.2.3.5.1, 2.4.1.2.1, 2.4.2.4.1, 2.4.2.4.2, 3.3.1.1.1, 3.3.3.8.1, 3.4.1.2.1, 4.3.4.9.1,

Physical Science: 2.2.2.1.1, 2.2.2.1.2, 5.2.2.1.2, 5.2.2.1.3, 6.2.2.2.1, 6.2.2.2.2, 6.2.2.2.3, 6.2.3.1.1

Nature of Science and Engineering: 4.1.3.3.1, 9.1.3.1.2

Life Science: 0.4.1.1.1, 0.4.1.1.2, 1.4.1.1.1, 1.4.2.1.1, 1.4.2.1.2, 1.4.3.1.1, 1.4.3.1.2, 3.1.1.2.3, 3.4.1.1.1, 3.4.1.1.2, 3.4.3.2.1, 3.4.3.2.2, 5.4.1.1.1

Math: K.2.1.1, 1.2.1.1, 2.2.1.1

Design a Canoe Crest

Canoe crests helped identify different families throughout Minnesota's past. Design your own crest to represent your family and place it on the front of your canoe.

Grades: K-up

Session length: 30 minutes

Journaling

Examine pages from Lewis and Clark's journals and discover the importance of journaling. Design a cover for your own journal and learn how this activity has helped record information about nature over the centuries.

Grades: K-6

Session Length: 30-45 minutes

Material Fee: \$10 per class of 30

Traps and Snares: Life in the Fur Trade

Learn how to trap and snare animals with simple tools and techniques. Find out why furs were so important for Voyageurs during the Fur Trade while examining real fur pelts.

Grades: 3-up

Session Length: 30-45 minutes

Voyageur Friendship Bracelet

Make a friendship bracelet using a finger-weaving technique like the Voyageurs used during the Fur Trade era.

Grades: K-up

Session Length: 30-45 minutes

Washing Clothes/Soap Making

Travel back in time before modern machines and learn how to wash clothes by hand. Go from soaking to scrubbing to wringing and then hanging. Optional traditional soap making activity as well!

Grades: K-12

Session Length: 30-45 minutes

Nature and Geology

For your reference, we have provided the Minnesota Core Curriculum Standards that are met by the following programs:

Nature of Science and Engineering: 0.1.1.2.1, 1.1.1.1.1, 1.1.1.1.2, 1.1.3.1.1, 1.1.3.2.1, 2.1.1.2.1, 3.1.1.1.1, 3.1.1.2.1, 3.1.1.2.1, 3.1.1.2.3, 3.1.1.2.4, 3.1.3.2.1, 5.1.1.1.1, 5.1.1.1.2, 5.1.1.1.3, 5.1.1.2.1, 5.1.1.2.2, 7.1.1.1.1, 7.1.1.1.2, 7.1.1.2.1, 7.1.1.2.3, 7.1.1.2.4

Life Science: 0.4.1.1.1, 0.4.1.1.2, 0.4.1.1.3, 0.4.2.1.1, 1.4.1.1.1, 1.4.2.1.1, 1.4.2.1.2, 1.4.3.1.1, 1.4.3.1.2, 3.4.1.1.1, 3.4.1.1.2, 3.4.3.2.1, 3.4.3.2.2, 5.4.1.1.1, 5.4.2.1.1, 5.4.2.1.2, 5.4.4.1.1

Animal Tracking

Take a walk on the wild side and investigate what types of animals live on MDC's grounds. Learn to recognize tracks of animals that live in Northern Minnesota and even make a cast of a footprint.

Grades: K-6

Session length: 30-45 minutes

Materials fee: \$10

Animal Tracking Jr.

Learn about animal tracking by creating a piece of art. Dip a sponge into paint and place on a piece of paper to create an accurate animal track! (Intended for younger audiences)

Grades: Pre K-1

Session Length: 20 minutes

Deep Freeze Over Minnesota

Investigate Minnesota's cold past by eating ice cream! Learn about glaciers and how they completely changed Minnesota's landscape through an ice-cream scooping activity.

Grades: K-6

Session length: 30-45 minutes

Materials fee: \$10

Engineers of the Wild

Learn about Northern Minnesota's animal engineers. Discover objects and items they used and go for a walk on MDC's grounds with binoculars.

Grades: K-8

Session Length: 30 minutes

Is There a Crocodile in Your Backyard?

Learn about how crocodiles used to thrive in Minnesota 70 million years ago! Examine real fossils from the Cretaceous Period and discover how reptiles and amphibians have survived in Minnesota's harsh environment.

Grades: K-4

Session Length: 30-45 minutes

Plate Tectonics and Sedimentary Rocks

Explore how moving tectonic plates form mountains by experimenting with different colors of Play-Doh.

Grades: Pre K-2

Session length: 20 minutes

Worm Jar

Worms come out when it rains or when they're needed for fishing, but what do they do in the meantime? Build a home for a worm and see what they do below ground.

Grades: K-6

Session Length: 30-45 minutes

GUIDED MUSEUM TOUR

Minnesota Discovery Center offers groups a guided museum tour to experience everything our multi-sensory exhibits have to offer. Below is a listing of our permanent and temporary exhibitions. A more focused tour can be arranged should a class/group want to learn more about a particular area.

Permanent Exhibits:

Prehistoric Minnesota

Explore how the first Minnesotans experienced living here 10,000 - 1,000 years ago. Learn about the past through archaeology and discover how artifacts can tell us how people once lived.

The Ojibwe Seasonal Cycle

Learn about the history and culture of the Ojibwe. Step inside a replica *waaginagon* and learn how the Ojibwe lifestyle centers around the four seasons.

The Fur Trade Era

Embark on a trek with the French Voyageurs and discover what life was like during the Fur Trade. Touch a variety of animal pelts while examining different trade goods from this time period and learn how this era impacted both European and Native American lifestyles.

The Emigrant Journey

Experience the excitement and hardships that people of all ages faced as they left their homes, sometimes forever, and made their journey to America. Decide what personal objects you would bring with you to the "Land of Opportunity".

Hall of Geology

Travel back five billion years in the past to explore Minnesota's earliest geologic formations. Touch various rocks from around the state and examine dozens of fossils collected right here on the Iron Range!

The Saloon

Find out how saloons acted as social hubs when Minnesota was first being settled. Learn about the dangers of the Iron Range frontier towns and how these saloons played an important political role in labor organization.

The Schoolhouse

Enter a recreated classroom to hear actual stories from early Iron Range students. Discover why schools served as a sense of pride for the Iron Range towns and were an important resource for Minnesota's early immigrants.

Temporary Exhibit (March-October 2015):

Out of the Shadows: The Rosalee Goddard Vogel Collection

Minnesota Discovery Center is home to the entire collection of local artist Rosalee Goddard Vogel. Born in 1918 in Virginia, Minnesota, Vogel created an extraordinary array of art in the areas of photography, painting, drawing, collage, and sculpture. Walk through the exhibit and celebrate over five decades of her life's work.

SPECIAL GROUP TOURS

The following tours can be scheduled upon request and are separate from the standard museum tour.

Behind the Vault Tour

Ever wonder what a museum curator, archivist, or genealogist does? Now is your time to find out! Take a behind the scenes tour of MDC's library, collections, and archives storage areas while learning what the museum collects and how we preserve history. **Note: participants must stand throughout the tour**

Grades: 3-up

Group size: Limit 20

Session Length: 45 Minutes (can be shortened if necessary)

Cuyler in the Classroom

Bring the historical character Cuyler Adams and his dog Una to your classroom! Founder of the Cuyuna Range, Cuyler will explain his life on the Iron Range while bringing real logging and mining equipment for students to touch. Cuyler can be booked for museum groups and classroom performances.

Grades: K-4

Session Length: 30-45 minutes

The Emigrant Journey

Find out why ordinary people would pack a trunk, board a ship with little money, and travel across the ocean to a foreign land. Embark on this voyage with one of our tour guides and find out if you would be able to stay. Grab a passport for your journey to begin!

Grades: 2-up

Session Length: 20 minutes

Group Size: Limit 15-20

Minerals Rock! Tour

Learn all about Minnesota's geology with MDC's Geologist! Travel through time and see the dramatic events of Minnesota's geologic past that helped formed the landscape we see today. Experiment with rocks that fizz, glow, or float!

Grades: K-12

Session Length: 30 minutes (can be 60 minutes with additional experiments)

Trolley and Glen Location Tour (Seasonal)

Take a trip to the past on the Discovery Center Line trolley and tour the Glen Location, a recreated mining town. Ride the trolley and listen to stories of the Iron Range mining, transportation, and daily life. Tour our historic buildings, explore the vintage mining equipment, and enjoy your trip back in time. Available May through October; weather permitting.

Grades: K-12

Session Length: 60 minutes

Additional cost: \$3.00 per person