

THE AWARD WINNING  
**Museum of the Iron Range**  
EDUCATOR GUIDE



**Telling the Story of the Iron Range.**  
The Land. The Mines. The People. The Work.

# WELCOME

Thank you for choosing the MN Discovery Center for your field trip option! Please select your activities at least three weeks prior to your field trip. If the three week deadline passes without activities selected, the Museum Educator will select suitable activities for the group based on group size, age and material availability.



- Explore permanent and changing exhibits.
- Participate in the preservation of regional folk arts through demonstrations and workshops.
- Ride the historic trolley to see where miners and their families lived.
- Attend films and lectures in the theater.

## FOR TEACHERS

- Connect your students with historical objects and hands-on learning.
- Our programs are created to dovetail with Minnesota State Academic Standards.

## MDC FIELD TRIP OFFERINGS

Make your field trip both educational and fun! Explore the exhibits to learn about Iron Range history, or participate in a folk art demonstration. Minnesota Discovery Center offers fun and multi-sensory field trips for students of all ages. All programs are designed to meet Minnesota State Standards. Book a field trip for your class today by calling 1-800-372-6437.



## PALEONTOLOGIST IN THE CLASSROOM

Can't make an in-person field trip? No problem! We can bring the fossils and expertise to you! Our "Paleontologist in the Classroom" program offers you the chance to host an actual paleontologist in your classroom where students can get a hands-on lesson with Iron Range fossils! Discover what we can learn about the past and what life was like here during the Cretaceous Period. Please call 218-254-7959 for more information and availability.

## GIFT SHOP

- Students can spend time at the end of the trip at the Minnesota Discovery Center's Gift Shop. Just let us know to build it into your schedule. Unique gifts and educational toys that teachers, parents, and kids will love.



## TROLLEY AND GLEN LOCATION TOUR

- (Weather Permitting)
- Ride the historic trolley to the old Glen Location where miners and their families lived. Glen Location has an original location house, early 1900s boarding house, and large mining equipment that everyone can explore.

## DISCOUNTS FOR EDUCATIONAL GROUPS

For current group rates, fees and discounts please contact our education scheduling coordinator (contact info below), or visit our website at [www.MNDiscoveryCenter.com](http://www.MNDiscoveryCenter.com).

**Trolley Run:** Special for school groups ONLY: 25 riders or more - additional fee.

**Mini-Golf:** (seasonal) - additional fee per person.

**Meals:** MDC can provide lunch for classes for an additional fee. Call for pricing. Classes may bring a bagged lunch.

Some programs may require a small materials fee per class. A class is considered to be up to 30 students. Consult our Education Scheduler.

## CONTACT US

For more information, reservations or to schedule a school visit, contact:

Education Scheduling  
Minnesota Discovery Center  
1005 Discovery Drive  
Chisholm, MN 55719

[educationscheduling@MNDiscoveryCenter.com](mailto:educationscheduling@MNDiscoveryCenter.com)  
1-800-372-6437 or 218-254-7959



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# 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

(Available May – September)

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 (Available May – September)

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: Pre-K – up

Session length: 45 minutes

Materials fee

# ART

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

**Arts:** 0.1.15.1, 0.1.25.1, 0.2.15.2, 0.3.15.1, 0.3.15.2, 4.1.15.2, 4.1.25.1, 4.1.35.2, 4.2.15.1, 4.2.15.2, 4.3.15.2

**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: Pre-K – 6

Session Length: 30-45 minutes

## BOTANICAL ILLUSTRATIONS/LEAF RUBBINGS

(Available May – September)

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-6

Session Length: 30-45 minutes

## PRINTING

Design your own stamp from foam paper and create an abstract stamped picture with repeating patterns.

Grades: K-6

Session

Length: 30-45



# 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

## CAN YOU CANOE?

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

Grades: 3–6

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: Pre-K – 6

Session length: 30-45 minutes

## SNOW SNAKE GAME (Subject to snowfall)

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-6

Session length: 40 minutes minimum

Materials fee



# HISTORY

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

**Arts:** 0.1.15.1, 0.1.25.1, 0.1.35.1, 0.2.15.1, 0.2.15.2, 0.3.15.1, 0.3.15.2, 0.4.15.1, 4.1.15.1, 4.1.15.2, 4.1.25.1, 4.1.35.1, 4.1.35.2, 4.2.15.1, 4.2.15.2, 4.3.15.2, 6.1.15.1, 6.1.15.2, 6.1.25.1, 6.1.35.1, 6.1.35.2, 6.2.15.1, 6.2.15.2, 9.4.45.1, 9.1.15.2, 9.1.25.1, 9.1.35.1, 9.1.35.2, 9.2.15.1, 9.2.15.2

**Social Studies:** 1.2.35.1, 1.4.12.2, 1.4.24.2, 2.2.35.1, 2.4.12.1, 2.4.24.1, 2.4.24.2, 3.3.11.1, 3.3.38.1, 3.4.12.1, 4.3.49.1

**Physical Science:** 2.2.2.1, 2.2.2.2, 5.2.2.1, 5.2.2.3, 6.2.2.1, 6.2.2.2, 6.2.2.3, 6.2.3.1

**Nature of Science and Engineering:** 4.1.3.1, 9.1.3.2

**Life Science:** 0.4.1.1, 0.4.1.2, 1.4.1.1, 1.4.2.1, 1.4.2.2, 1.4.3.1, 1.4.3.2, 3.1.1.2, 3.4.1.1, 3.4.1.2, 3.4.3.1, 3.4.3.2, 5.4.1.1

**Math:** K.2.1, 1.2.1, 2.2.1

## DESIGN A CANOE CREST

Canoe crests helped identify different families throughout Minnesota's past. Design your own crest to represent your family.

Grades: K-up

Session length: 45 minutes

## VOYAGEUR FRIENDSHIP BRACELET

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

Grades: 4-12

Session Length: 30-45 minutes

## WASHING CLOTHES/DETERGENT MAKING

(Available May – September)

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 homemade laundry detergent making activity.

Grades: K-6

Session Length: 30-45 minutes



# NATURE & 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

Learn to recognize the tracks and furs of common animals that live in northern Minnesota, and find out what kinds of information tracks convey about the animals that leave them behind. Create a track in clay to take home using a realistic rubber animal foot stamp.

Grades: Pre-K – 6

Session length: 45 minutes

Materials fee

## 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

## ENGINEERS OF THE WILD

Learn about Minnesota's animal engineers. Try your hand at building a beaver dam out of sticks and clay and see if you can make it hold water.

Grades: 4 – up

Session Length: 45 minutes

## IS THERE A CROCODILE IN YOUR BACKYARD?

Measure out the lengths of some prehistoric reptiles that lived in Minnesota and find out how Minnesota's environment used to be a warmer place for crocodiles.

Grades: K-4

Session Length: 30-45 minutes

## CREEPY CRAWLIES

Learn the differences and similarities between insects, spiders and other creepy crawly creatures. Make an insect out of pipe-cleaners and buttons to take home.

Grades: 2 – 4

Session length: 45 minutes





# SPECIAL EDUCATION PROGRAMS

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

## BEHIND THE VAULT TOUR

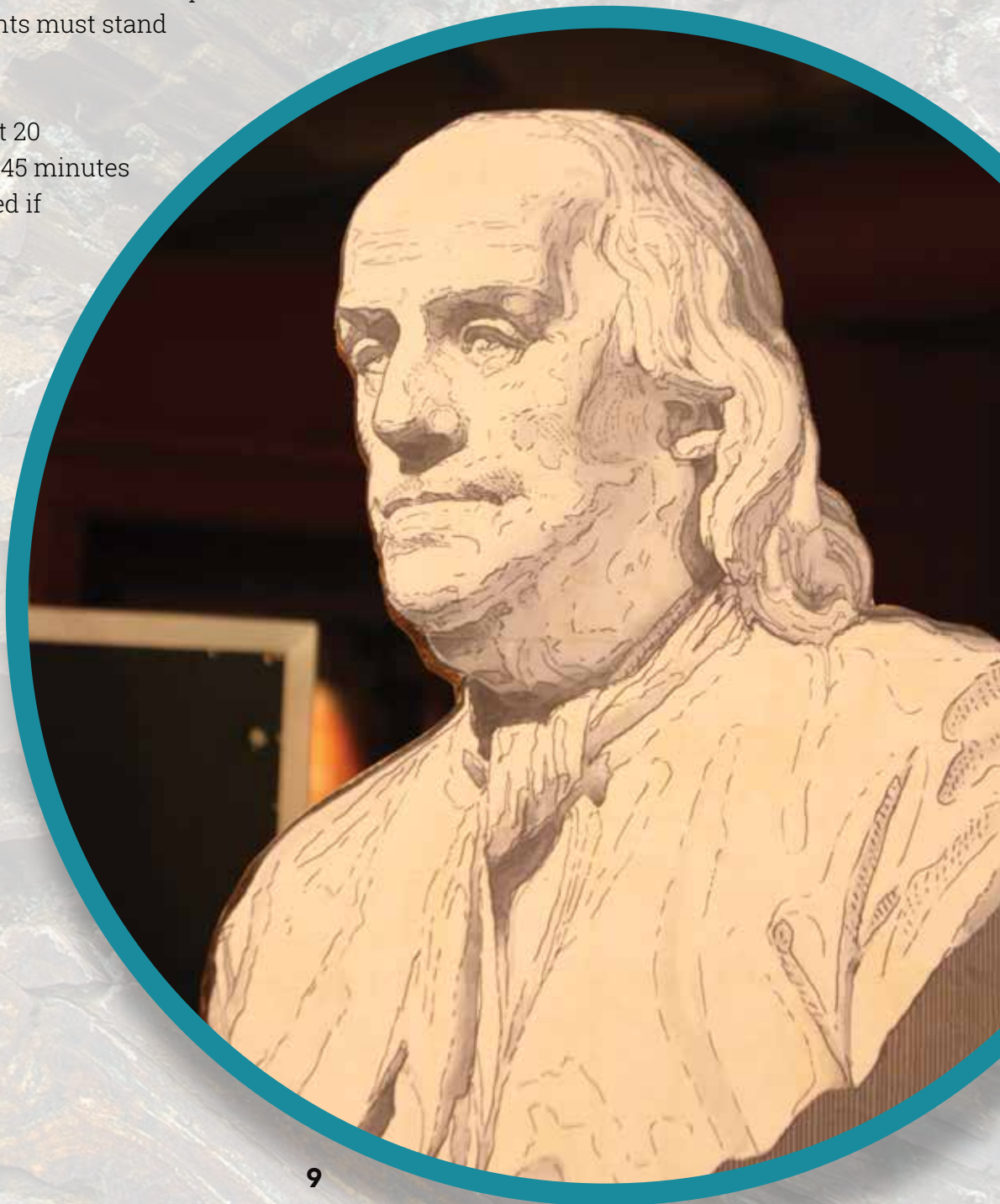
Ever wonder what a museum curator, archivist, or genealogist does? Now is your time to find out! Take a behind the scenes tour of MDC's library, collections, and archives storage areas while learning what the museum collects and how we preserve history. Note: participants must stand throughout the tour.

Grades: 3-up

Group size: Limit 20

Session Length: 45 minutes

(can be shortened if necessary)





## MINERALS ROCK! TOUR

Learn about the fascinating properties of minerals, how they help us identify the minerals, and why they make the minerals useful to us. Try some of the actual field tests geologists use to observe mineral properties, and explore Minnesota's geologic history in our Hall of Geology.

Grades: 2 – 6

Session Length: 20-30 minutes



## 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



## OUR MISSION:

To collect, preserve, interpret, educate and promote Iron Range history and cultural heritage. To serve, manage, promote, sustain and develop the MDC assets for the long-term benefit of regional Iron Range residents and visitors.

## OUR VISION:

Provide sustainable and responsible stewardship of community assets. Serve and cultivate learning experiences for people of all ages on the story of the Iron Range.



[MNDiscoveryCenter.com](http://MNDiscoveryCenter.com) 800.372.6437  
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(Located just off Hwy. 169, Chisholm)