Exhibit Explorers

3rd-5th Grade Teacher and Chaperone Guide

Dear Teachers,

This guide is intended to be a deep dive into the exhibits, a way for students to further explore the objects and information in the galleries. **We encourage assigning no more than a couple pages to each group instead of the entire packet.** Once back at school, use this guide as a way for students to share their discoveries.

Best,
NHMU Field Trip Team

Science and Engineering Practices

Asking Questions
Analyzing and Interpreting Data
Constructing Explanations
Engaging in Argument from Evidence
Obtaining, Evaluating, and Communicating Information

Crosscutting Concepts

Patterns - Past Worlds, Land
Systems & System Models - Great Salt Lake
Structure & Function - Past Worlds, First Peoples, Life
Stability & Change - Sky

Disciplinary Core Ideas

Life Sciences
Earth and Space Sciences

LEAD EXPLORER GUIDE

Chaperone Name: _____

Lead Explorers guide students on a journey of discovery and help students make observations using their senses. We appreciate your help in making the students' experience a success!

STUDENTS

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

NHMU Expectations

As a Lead Explorer it is your job to help the students **make observations.** During their field trip, we want students to get **M.O.R.E.** out of their experience. We ask them to:

Model museum mode by using quiet voices and displaying calm bodies

Observe using their senses (see, touch, smell, and hear)

Respect each other, museum staff, the building, and Lead Explorers

Explore and engage in exhibits while staying with the Lead Explorer

ARRIVAL TIME: _____

LUNCH TIME: _____

DEPARTURE TIME: _____

Encourage students to look closely at the horns, frill, and beak.

Need help identifying the different ceratopsians? There are guides located below the bridge near the Utah Ceratops full skeleton.

Past Worlds

Ceratopsian Wall

Find a ceratopsian on the wall and draw it below. Pay attention to details! How is your ceretopsian similar to one other ceratopsian? How is it different from one other ceratopsian? Give specific examples. Why do you think they are different?

Dinosaurs are animals with amazing adaptations! Make sure students are choosing a prehistoric animal from the Past Worlds Gallery for this activity.

An adaptation is a physical trait or a behavior that helps a plant or animal survive in its habitat. Pick one animal and draw two adaptations that helped it survive. How did these adaptations help this animal?

If you cannot see the lake due to inversion, talk with students about this phenomenon. What types of weather clear out the inversion? (Rain and snow.) What can families do to help with the inversion? (Walk or ride bikes to school if possible instead of driving.)

Great Salt Lake

Can you see the Great Salt Lake out of the window? If no, why not? If yes, what does the lake look like today?

Wetlands help filter the water runoff before it reaches the open water. Plants absorb the excess nutrients.

eat Salt Lake is shown on the floor. What do you notice about the map?

Play the wetlands game. Draw your observations below. What does the game show you about the importance of wetlands?

For the Great Salt Lake specifically the shoreline is very salty where as the wetlands are half water and half land. Plants and animals have adaptations specific to these environments. Both provide habitats for many animals.

Talk as a group: What are the differences between the Shoreline and Wetland environments? Why are they both important for plants and animals, including humans?

Explorations of the First Peoples and Native Voices galleries are a great way to bring in Social Studies standards. These galleries help students make connections between the past, present, and future.

Continue the footwear exploration by looking at the *Setting A Date* display near the ramp by Median Village archeology site. Read about the mystery of these shoes and come up with some ideas together.

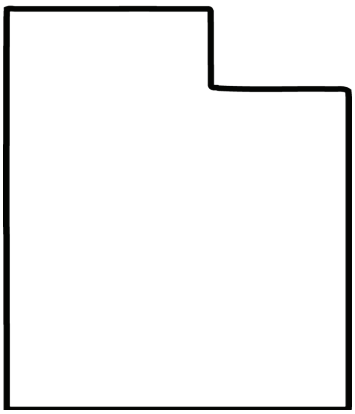
First Peoples

Footwear

In the center of the room is a display table that shows footwear. Choose two shoes and compare and contrast. Draw both shoes. Use arrows to label the differences.

To help with this activity, have students think about the characteristics of shoes they wear in different seasons.

Based on your observations, what environment were these shoes made for?
What do you think they are made of?



Explore the maps on the wall to find out where people lived in Utah during different time periods. Mark on the map the sections of Utah where people often lived.

Talk as a group: Why do you think some natural places might be more welcoming to people? What do humans need to survive?

In the Rock Cycle any rock can become another. Discuss with students which rock type would be most likely to have fossils. Why? (Answer: Sedimentary since these rocks are formed at a temperature and pressure that do not destroy fossils).

Have students share the different rock types that they chose and the classifying characteristics (ex. igneous has interlocking crystals that grew randomly; sedimentary has grains of sediment compacted together; metamorphic has rocks recrystallized and deformed - often sparkly with wavy bands).

Land

Rock Cycle

The diagram of the Rock Cycle on the wall shows how rocks go through cycles of formation and change. Find a rock on the wall that you like and record your observations below. Be sure to include color, texture, grain/particle size, and more.

Colorado Plateau

Analyze the soils of the Colorado Plateau by the erosion table. Look for plant material in the soil. Use the flip books to identify one of the plants in the soil. Write an interesting fact about this plant below and then draw a picture of the plant.

Encourage students to pay attention to details for their illustration of the plant. What shapes do they see? What textures?

If some students finish early, encourage them to share their picture and fact with each other.

This is a great time to practice creative writing and using decriptive details in narrative writing. Some students will feel more comfortable with this task than others. Encourage students to talk through their story before writing if that helps.

Life

Habitat Dioramas - Alpine, Montane Forest, Cold Desert, and Hot Desert

Choose one of the four dioramas and write a short story (3-5 sentences) about how an animal survives in its habitat. Include at least two adaptations that help it survive!

Encourage students to be creative. This can be an adaption from any animal or one completely made up! Keep in mind that anything electric is not an adaptation.

What adaptation would you like to have? Why? Draw yourself with this adaptation.

Extend the learning by using the Sky Deck if it is open. What can students see from here? If it's not clear talk with students about what the phenomena of inversion, air quality and air pollution. Making sure the air we breathe is safe has been a top concern for many Wasatch Front residents. What ways can residents reduce their contribution to air pollution?

Sky

Use the "Our Changing Climate" wall exhibit and the questions below to find evidence of how our climate is changing.

Looking at the blue part of the graph (winter) - which years have temperatures below -20° F? Are these years a long time ago or recent?

What years did the temperature not drop below 0°? Name at least 5. Are there more years that it drops below 0° before 1970 or after?

There are many actions students can take to help protect the Earth! Some easy actions are recycling at home and school, biking to school or a friend's house if possible, turning off the water while washing hands or brushing teeth, and only turning on lights when you need them.

e is changing - fast! The Earth is warming faster today than any previous
s have studied. Global climate change means warmer temperatures over
r, and more intense weather events and natural disasters (for example:
snowstorms, rainstorms, wildfires, and hurricanes).

group: What patterns do you see in the "Our Changing Climate" data? How
change affect plants and animals, including humans? Many people are
hard to help protect the earth. What can you do in your life to help?

Along with the First Peoples gallery, the Native Voices gallery provides connections with Social Studies standards. Specifically this gallery can be used to dive into Standard 2: Students will understand how Utah's history has been shaped by many diverse people, events, and ideas.

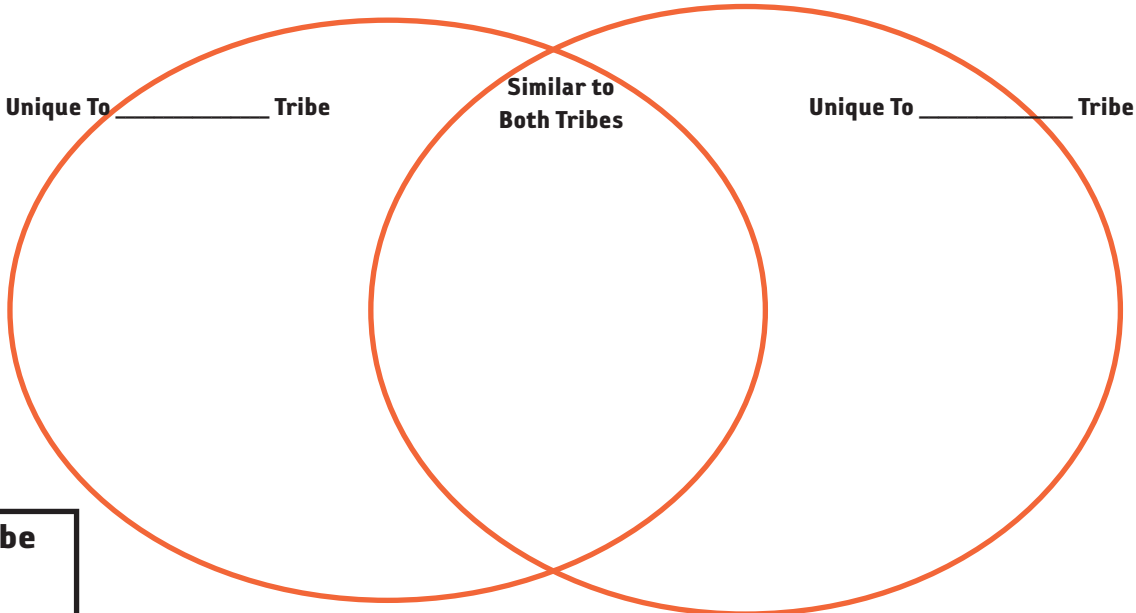
Do any of the students have younger siblings or cousins? How were they carried when they were babies? Are there any traditions from their families for caring for babies (special blankets, songs, etc.)?

Native Voices

Some students may not have used a Venn Diagram before. Work together as a group if needed.

gallery celebrates the traditions of the Tribal Nations of Utah. Today's Tribal Nations communities are vibrant and incredibly diverse, and each Tribe has a distinct and ue heritage.

tradition of carrying infants in a cradleboard has been practiced for generations, and each dleboard reflects the beliefs and values of the people that use it. Compare the different dleboards from different Tribal Nations. How are they similar and different? **Use the Venn Diagram to compare cradle boards from two different Tribes.**



Encourage students to be creative! Their pattern does not have to be similar to the ones on display. Students can use their pattern to tell a story about their family. Is there a place or tradition that is important to their family?

t the different patterns. Each pattern has a meaning or tells a story. Draw a pattern that uld put on a cradleboard to represent your family and culture.