



**NATURAL HISTORY
MUSEUM OF UTAH**

Rio Tinto Center | The University of Utah

Hall of Wonders

Field Trip	Enduring understanding: Wondering is engaging in the scientific process.	Alignment to Utah Core Curriculum
Grade Level: 9-12		Intended Learning Outcomes (ILO's): 1. Use science process and thinking skills. 2. Manifest scientific attitudes and interests. 3. Understand science concepts and principles. 4. Communicate effectively using science language and reasoning.
Process Skills: • Questioning • Observing		

Field Trip in a Flash

Students will use the Museum as a resource to answer their own questions about the natural world.

Before the Museum

Do a Science Process Lesson

Do the “Why Wonder?” Lesson found at the Natural History Museum of Utah’s website. Other supporting lessons are: Facts and Inferences, and Wow, This is Science? These can be found at www.nhmu.utah.edu/lessonplans

Determine Your Questions

There are several ways you can go about determining which question the students want to explore at the Museum.

After the students have done “Why Wonder” you should have recorded many questions on the board. The students should also have recorded some of their own questions. You can use these questions for the field trip, you will just have to help the students select one that you feel can be answered, or at least have information to discover, at the Museum. That means it will need to connect in some way to what is on exhibit at the Museum.

You could choose to write down all of the curricular content areas that will be studied throughout the year, (sun, moon, living things, rocks, etc.) that are connected to the exhibits

and have students decide what they are interested in and write questions regarding that topic.

You could choose to write down the curricular topic you are studying at that time and brainstorm all the questions you have about it. Students could then select the question(s) they want to research from the bank of brainstormed questions.

Introduce the Field Trip Plan

Explain that the students are going to go to a place to explore ideas about and answers to their questions. They are going to the Natural History Museum of Utah. The Museum has a lot of information, so they are going to need to make a plan. They can visit galleries, they can find someone in a gallery to talk to, or they can watch or participate in programs offered during their visit. They need to observe, read, discuss with their group, and record their information. Make sure the students record their questions and their plans on field trip papers or in their science journal.

Select a Gallery or Galleries

Have your students select a gallery or galleries to focus their search based on the questions they have asked. Help them determine which would be most likely to help them meet their purpose. Or, you could select the galleries for students based on their questions.

When selecting galleries, review their names and their content. The permanent exhibits are:

First Peoples- The story of Great Basin's prehistoric peoples is told while putting visitors in the shoes of archaeologists who use science to interpret the past. Explore Median Village, a reconstruction of an actual archaeological dig site excavated in the 1960s in Sevier County, Utah. Stop in the Dry Caves Learning Lab to learn more about what makes Utah so spectacular for preserving archaeological evidence.

Gems and Minerals- Rough mineral forms are juxtaposed with elegant cut gemstones, all in brilliant colors. Peer in to see minerals that fluoresce and take in 12 vertical feet of minerals suspended before you.

Lake- The compelling narrative of the Great Salt Lake, a remnant of ancient Lake Bonneville is brought to life through hands-on interactives, sounds, smells, and a spectacular view of the Lake itself. Take a "walk around" this large terminal body of water in the midst of a vast inland desert. Get an up-close view of some of the lake's smaller inhabitants.

Land- A journey through three distinct physiographic regions formed over millions of years, the Land showcases Utah's Middle Rocky Mountains, Basin and Range, and Colorado Plateau. While navigating the switchbacks, touch real rock specimens and explore interactive exhibits on earthquakes, plate tectonics, erosion and much more. Be sure to venture out onto the outdoor terrace for an up-close look at the foothills of Utah's Middle Rocky Mountain region.

Life-The web of life is illustrated in a series of exhibits exploring complexity from DNA to Ecosystems, with a focus on Utah's extraordinary biological diversity. This exhibition is rich with images, sounds of the landscape, hands-on experiences, live animals, and research stories.

Native Voices- The traditions of Utah's five native nations—Shoshone, Goshute, Paiute, Ute, and Navajo—are featured in this circular gallery nestled in the hillside at the top of the building. Designed in consultation with Utah's Indian community, this exhibition depicts Native American art and culture and interprets the deep memory and contemporary presence of Utah's indigenous people. Visit the Storytelling circle where you can listen to stories of origin and connection to the land.

Past Worlds- A sequence of snapshots in time spanning 500 million years depicts a range of Utah's ancient environments and their changing life forms. Utah's Late Cretaceous and Eocene are brought to life in displays that capture plant and animal diversity, sights, sounds and smells of the time. Participate in the Cleveland-Lloyd Dinosaur Quarry mystery by "casting your vote" on the theory you agree with most, be a paleontologist for a day in our dinosaur dig, and be a guest at an Ice Age dinner party. In this gallery there are over 30 skeletal reconstructions on display, including a Gryposaurus (duck-billed) dinosaur made of original fossil material, and the world's only display of 14 Ceratopsian (horned) dinosaur skulls.

Sky- Weather, climate, astronomy, and the sun are interpreted in this gallery with its adjacent rooftop terrace. Check out the views of the Salt Lake Valley and learn about some of the Museum's "green building" features from the Sky terrace.

Utah Futures- This thought-provoking environment—the Museum's crystal ball—is a place to explore pressing contemporary issues with local and global implications for the future. You are encouraged to participate in an engaging interactive game where you can see the results of your everyday individual choices play out and learn more about how they might affect Utah on a broad scale.

Logistics

Divide your students into groups in any way that seems to make sense for your class- it could be based on the questions students have, the galleries that the students have selected to explore, or any other way.

Prepare your chaperones- communicate the purpose of the field trip to them, provide them with a chaperone sheet with the names of the students in their groups, and the goals of the field trip. Also provide the chaperones with a bag that can hold all of the students' field trip supplies.

At the Museum

Make sure students have field trip papers or science journals, something to record with, and their chaperones.

Determine a meeting time and space, and communicate that clearly to the students and chaperones.

Have the student groups go to the exhibits they have selected. Give them time to observe and explore. Students can work singly, in pairs or as a group. When anyone finds something that might help answer their questions, they should have everyone gather up so that they can share, observe and discuss. Walk around, talk with the students about what they are noticing and what they are thinking. Give them time to write down their observations, draw pictures and ask new questions.

When all of the students in the group feel they have been successful in investigating their question, they can give their supplies to their chaperone and explore the Museum. Of course, if they find other objects they would like to observe and ask questions about, by all means, let them!

After the Museum

Have the students take time to share the questions they had, the answers and ideas they discovered, and new questions that came up. Do this in small groups or as a whole class.

As a class, in groups, with partners, or as individuals:

Select a question you asked at the Museum to research. Make a plan on how to explore this question- it could be going outside to observe, reading a book, talking with an expert, looking on the internet, or even visiting the Museum again!