



**NATURAL HISTORY
MUSEUM OF UTAH**

Rio Tinto Center | The University of Utah

What Happened Here?

Field Trip	Enduring understanding:	Alignment to Utah Core Curriculum
Grade Level: 8	Students will come to understand that there are many ways to report scientific understandings and observations.	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: <ul style="list-style-type: none">• Observation• Recording• Reporting		

Field Trip in a Flash

Students will observe dioramas and exhibits and make inferences about what happened before and after that moment captured in time.

Before the Museum

Do a Science Process Lesson

Do the “Facts and Inferences” lesson found at www.nhmu.utah.edu/lessonplans Other lessons that would support this field trip are: Igniting Inquiry, Recording Stars as well as The Art of Recording.

Practice Inference

Share a picture of a moment in time. It should be dynamic- something moving, people or animals engaging in interesting behavior, something that would be easy to make many different types of inferences about. It could be a cartoon, a picture or an illustration.

Discuss what students notice about the picture. Have them record their ideas about what was happening just before this moment in time and just after this moment in time.

Share and discuss ideas. Prompt students for evidence from the picture that can justify their inferences about the past and their predictions/inferences about the future. Make sure to remind them that in science an inference has to be based on observable features as well as what a scientist knows and his or her personal experiences. It can't just be random.

Introduce the Field Trip Plan

Explain at the Museum students will be selecting a diorama or exhibit to observe. Their job is to record all of the facts about the display or diorama and then use those facts to make inferences about what was happening before this moment in time, and what they think will come after. You could visit the habitat dioramas in Life, the dioramas in Lake, the Pit House in First Peoples, or exhibits in Past Worlds.

Select a Gallery or Galleries

You can have your students select a gallery or galleries to focus their search based on their interests, or you can assign a purpose for the field trip (understanding indigenous peoples, rocks, animals, etc.) and the students can select the exhibit or exhibits that would be most likely to help them meet the purpose.

When selecting exhibits, review the names of the exhibits 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.

Have the students record which exhibit(s) they need to visit to complete the assignment on their field trip paper or in their science notebooks.

Logistics

Divide students into groups- you can group them based on the galleries they have selected, or in any way that seems to make sense for your class. Determine if you want the students to do this activity by themselves or with partners. Make sure you communicate this to your students.

Make sure students have science journals or notebooks or sheets for recording.

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
- inform them of the exhibits that they will need to visit first
- provide them with a bag that can hold all of the students' field trip supplies

At the Museum

Make sure students have their field trip papers or science journals, writing utensils, 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 galleries they have selected or have the groups explore the Museum until they find a gallery and diorama that is interesting to them. Give them time to observe, draw, write, and infer. Walk around, talk with the students about what they are noticing and what they are thinking.

When all of the students in the group have collected information and made inferences about a diorama, they can give their supplies to their chaperone and explore the Museum further. Of course, if they find other objects they would like to observe, record and infer about, by all means, encourage them!

After the Museum

As a chaperone or teacher, if you saw something you thought was really interesting, you could share what you observed and inferred with the class.

Have the students share their inferences. When more than one student has selected the same diorama or exhibit, take time to compare their ideas. Discuss how different people have different life experiences and that affects the types of inferences that they make. It doesn't mean one is better than the other, or that one is right. It just means the same facts can be seen in many different ways. In science, if there is a big discrepancy between inferences, it probably means more observation and discussion needs to occur.