



SURVIVE THE LAKE / ACTIVITY GUIDE

Introduction

Nestled between the desert and mountains of northern Utah, Great Salt Lake is the largest saltwater lake in the Western Hemisphere.

Its high salinity creates a unique ecosystem that supports brine shrimp and attracts millions of migratory birds each year. As a vital natural resource, the lake plays a key role in regional climate regulation, industry, and recreation.



Map of Utah



STORIES ON THE STONES / ACTIVITY GUIDE

From the Film

Humans have lived in Utah for over 13,000 years. From prehistoric indigenous groups to modern day, Great Salt Lake has provided food, medicine, and salt to the cultures that call it home.

In the film we see clues from the past in the petroglyphs found on Newspaper Rock and Stansbury Island. This rock art contains over 650 designs and has been added to for over 2,000 years. So what are the meanings behind the markings?



A pronghorn stands watch—echoing ancient marks etched in stone nearby.



STORIES ON THE STONES / GRADE LVL. 3-5 / ACTIVITY GUIDE

Activity Overview

Learners will gain a better understanding of early human history at Great Salt Lake by exploring how pictographs and petroglyphs were created and preserved over time.

By interpreting the petroglyphs and pictographs that are found around Great Salt Lake, learners will hypothesize about what these images represent and what they tell us about the people and cultures that created them.

Through artistic exploration of natural pigments and binders, learners will create pictographs that represent their culture and imagine how they might be remembered for generations.

Estimated time for Interpreting the Past: 40 minutes

Estimated time for Creating pictographs: 60 minutes

Materials:

Interpreting the Past

- Image of Newspaper Rock (petroglyphs)
- Field Note sheet (one per participant)
- Sticky notes
- Pens/pencils
- Tape/tack (wall attachment method)

Creating pictographs

- Paper (minimum one sheet per learner) cardstock, watercolor or white construction paper would work best, but printer paper will also work
- · Cups for mixing paint
- Containers to hold pigment
- Containers to hold binders
- Natural materials to create the paint: charcoal, clay, turmeric, tea, coffee, paprika, berries, soil
- Natural binding agents to create the paint: oil (ex. linseed, walnut) egg white or egg yolk

NOTE: There is a salmonella risk with raw eggs

- Water
- Brushes

paintbrushes can be natural items such as sticks, grass, pine straw . Fingers can also apply paint.

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Preparation



Interpreting the Past

- Print a copy of Newspaper Rock sheet
- Print *Field Notes* sheets (one per participant)
- Display full-size images around the room

Creating Pictographs

- Gather and prepare materials needed for making paint
- Pour materials into smaller containers for learners to utilize
- Crush materials like berries or charcoal to make a powder/paste to mix with binders

Optional Extension

• Take learners outside to collect natural materials

They could collect

- Materials to make pigments, i.e. soil, clay, rocks, tree bark, leaves, flowers, etc.
- Materials to make tools to apply the paint., i.e. sticks, twigs, pine straw, grass, etc.

Note that if you choose to allow learners to collect natural materials, ensure that they do this in a way that does not harm the environment. For example, have them collect fallen leaves instead of pulling leaves off a plant.



Guide

Interpreting the Past

1. In *Secrets of Great Salt Lake*, we learn that humans have lived in the unique ecosystems surrounding Great Salt Lake for more than 13,000 years. Some cultures like the Fremont no longer inhabit the area, but others, like the Shoshone continue to call Great Salt Lake home as they have for many years.

How have humans not only survived around Great Salt Lake, but also thrived? These answers are found in the clues each culture has left behind. From artifacts to petroglyphs, archaeologists study clues and use them to build a better understanding about life in the past.

So, what is an **archaeologist?** (pause and take some answers from learners) Archaeologists study ancient and recent human past through material remains. In the Americas, archaeology is a subfield of anthropology, which is the study of humans.

Are archaeologists and paleontologists the same? (take some answers from learners) Let's fill in our Venn Diagram together to see their similarities and their differences.

There are some similarities because both archaeologists and paleontologists study physical remains to understand the past, but they focus on and study different things.

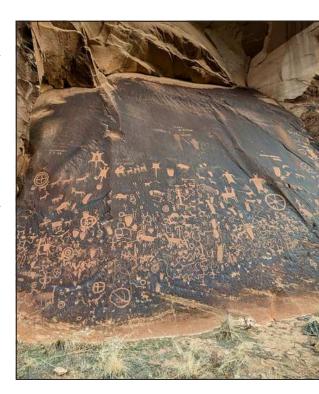
Paleontologists study life on Earth based on fossils including dinosaurs, ancient plants and animals, and even bacteria. The key difference is that archaeologists study the human past (sometimes plants and animals, but only in how they relate to humans) and paleontologists study ancient organisms through fossils.

- 2. Two types of clues from past cultures that archaeologists study are petroglyphs and pictographs.
- Petroglyphs are carved, chipped, or ground into the rock's surface using handheld rock tools.
- Pictographs were painted on rocks using brushes, sticks, hands, or by blowing colored powder through hollow bird bones—the earliest form of spray paint.

- 3. These images may appear familiar, but their meaning remains a mystery. Archaeologists must use clues such as setting, archeological remains, ethnographic evidence, and known stories and traditions to hypothesize the meaning behind these images. Clues about meaning could come from:
- Setting where the images are located
 - Track moon, sun, stars
 - Mark routes or destinations, such as transportation corridors or water sources
- Stories and traditions passed down through generations
 - Records of events, memories, and stories
- Plants and animals native to the area
- 4. Give each participant a Field Notes sheet. Learners will record their observations and hypotheses about what their image represents on this sheet like an archaeologist would record their notes in the field.
- 5. Allow learners to brainstorm and record their notes on the Field Notes sheet.

Optional: take learners to the library or utilize the internet to research Utah and the Great Salt Lake area.

- 6. While learners are working, float throughout the room asking questions, providing guidance as needed, and keeping learners on task. Possible questions include:
- Do these images look familiar?
- Have you seen anything locally that looks like these images? If possible, mention a local indigenous archeological site in your home state or province.
- Do these images have any connection to where you live?



Newspaper Rock State Historic Monument

7. Post larger copies of the images around the room. Once learners have made their hypothesis, they will write them on a sticky note and place it with the larger image on the wall.

- 8. Once all the hypotheses are posted, invite learners to go on a gallery walk and read the different hypotheses.
- What do they notice?
- How similar or different are the hypotheses?
- Are there any surprises?
- Did any of the images resonate with the group or an individual?
- Does the group understand the culture better through these images?
- How would we know about these cultures if weathering erased these images?
- What images would learners create to illustrate their culture?

Creating Pictographs

1. Petroglyphs are engraved pictures, that were carved, etched, or scraped into layers of stone with tools. This revealed the lighter layers below and created the image. Why might petroglyphs be found almost anywhere, but pictographs are often found in caves?

Carving into the rock created a more permanent image that can withstand the elements like rain and wind. The natural pigments used to make pictographs are more likely to wash away or fade with age. Caves have a cool, dry climate that allows for the preservation of pictographs.

2. Pictographs and petroglyphs give us a glimpse into the past through drawings of wildlife, humans, geographic features, geometric and abstract shapes, handprints, and more. What can these images tell us about what life was like when they were created?

Images likely depict themes that were common during the time they were created, for example, animals that humans saw regularly/hunted, what humans might have been depicted doing (hunting, dancing), provide an idea of the average size of families/communities, or give us insight into different tools or weapons that might have been used.

Pictographs may also be able to tell us what humans were using to create pigments, what plants or stones were common, and what materials might have been used as binding agents.

3. Now learners will create natural paints that they will use to create their own pictographs to illustrate their culture.

- 4. Natural paints can be made by grinding minerals or plant material and mixing them with a binder to form a paste. The materials chosen will determine the color.
- 5. Depending on the age and ability of learners, adjust how much freedom they have to experiment with creating the paint. Younger learners will need more direction on amounts, but older learners could have more autonomy to select and tinker with their mixtures.
- Provide a variety of natural materials to create the pigment (color) of the paint: charcoal, turmeric, tea, coffee, paprika, berries, soil
- Provide a variety of natural binding agents to create the paint: oil (ex. linseed, walnut), water, egg white and egg yolk

NOTE: THERE IS A SALMONELLA RISK WHEN WORKING WITH RAW EGGS.

- 6. While learners are creating their paint, float through the room asking questions and ensuring everyone stays on track. Possible questions include:
- What color are you planning to make?
- What can you use to achieve that color?
- How are you going to bind your paint?
- Why did you choose those materials?
- If you're struggling to make the color , what color could you make as a substitute?
- 7. Once the paint is ready, give each participant paper to use as their painting surface. Remind them that they are painting an aspect of their culture or life that they want to communicate to future generations. Reference the images from Great Salt Lake to highlight the images can be simple and symbolic in nature. While learners paint, float through the room asking questions. Possible questions include:
- What images do you think best represent our world today?
- Why do you think so?
- What inspired you to paint this image?
- What are you trying to tell future generations?

Debrief

- 8. When the paintings are complete, if possible, hang them on the wall or arrange them in a way that shows them together as a mural or collage.
- 9. Let's hear what the learners thought went well, what's been tricky, and anything that may have surprised them. Possible questions include:
- What colors did you find were most successful?
- What did you use to bind your pigment?
- What images did you decide to include?
- How do your images depict modern culture?
- What does it say about us as a society?
- How might archaeologists in the future interpret (or misinterpret) our drawings?
- How would the animals and plants of Great Salt Lake made 10,000 years ago be different than ones made today?
- What is it that makes them different?

Field Notes

Petroglyph Analysis & Interpretation



Describe the Images:

What is the Story?:

Newspaper Rock



Location: Newspaper Rock, Utah

ACTIVITY GUIDE CREDITS

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SECRETS OF GREAT SALT LAKE











