



Topic: Petroglyphs: Snippets of Data

Learning Targets/Objectives

- Through card sorting activity, I can describe at least two criteria for what makes something data.
- By etching a petroglyph and interpreting others' petroglyphs, I will be able to explain why one cannot conclude the true meaning of a petroglyph and provide at least one reason for the need for multiple perspectives in science on the exit ticket.

Success Criteria:

- Complete card sorting activity with a partner
- Etch a petroglyph on a tablet
- Participate in a discussion related to themes within interpreting petroglyphs (need multiple lines of evidence and cannot conclude the true meaning of a petroglyph)
- Complete elephant exit ticket

Duration:

- 45 minutes (ideally in the first week of school)

Standards: None

Science and Engineering Practices:

- Obtain, evaluate, and communicate information
- Analyze and interpret data

Materials:

- Clay tablets
- Etching tool (nail)
- Presentation

## Outline

Time	Task Analysis	Teaching Strategy	What are the students doing?
5 min	Card Sorting Activity What is data?	Bell work	Students are working with a partner to sort cards into the following categories: Data, Not Data
5 min	Card Sorting Activity Discussion	Facilitate a class discussion by using random calling, such as spinning a wheel. Ask students how they arranged their cards and to explain their justifications for each card.	Students are sharing their answers when called on.
5 min	Data and Petroglyph Background	Start by explaining what data is and provide some background. When interpreting data, encourage students to consider the question: What story is the data telling us? Then, explain that petroglyphs are carvings in rock and describe how researchers use them to gather data.	Students are looking at the slides and listening.
10 min	Carve a tablet	Please distribute a tablet and a toothpick to each student. Instruct them to carve a design into their tablet by answering the prompt: "What is your favorite	Students are carving their designs into their tablets.  Students are quiet.

		memory?" Remind students to remain silent and not to share their designs.	
15 min	Interpretation of classmates' petroglyphs	<ol style="list-style-type: none"> <li>1. Distribute whiteboards and markers to each student.</li> <li>2. Instruct students to lay out their petroglyphs in the middle of the classroom.</li> <li>3. Instruct students that you, the teacher, will choose one petroglyph. They need to pass the chosen petroglyph around for everyone to view. Each person should only look at it for 15 seconds.</li> <li>4. On their whiteboards, students must write what memory they see and who carved it.</li> <li>5. After everyone has finished writing their answers, ask them to hold up their whiteboards for you to check.</li> <li>6. Afterwards, ask the person who carved it to raise their hand and ask if the class' interpretation was correct.</li> <li>7. Repeat this process at least four times.</li> </ol>	Students are writing their interpretation on their whiteboard.
5 min	Interpretation Debrief	After the	Students are

		<p>interpretation activity, please ask students to reflect on their experience by discussing with their partner. They can consider the following three questions:</p> <ol style="list-style-type: none"> <li>1. Can one determine the true meaning of a petroglyph?</li> <li>2. Is science a static or evolving process?</li> <li>3. In archaeology, they use multiple lines of evidence. What does that mean to you?</li> </ol>	discussing with their partner.
10 min	Petroglyph Exit Ticket	Distribute the Petroglyph Exit ticket and instruct students to complete it. If students are having difficulties, provide support by initiating a class discussion on the comic's topic.	Students are completing the exit ticket.