

DEDUCTIVE REASONING THROUGH ARCHAEOLOGY:

OBSERVATIONS USING COINS

In order for students to be able to extend and refine their knowledge, they need opportunities to use thinking skills such as inductive reasoning. Inductive reasoning is the process used to make general conclusions from specific observations or information. It is an especially important skill for social studies and science. The following activities use archaeology as a springboard to develop this skill.

MATERIALS:

- pennies (one per person or group)
- hand lenses
- foreign coins (if available)
- large sheets of construction paper
- markers
- book: Motel of the Mysteries

METHOD:

1. Provide each group of three with a penny. Have the students examine the pennies as though they were archaeologists from the year 3000. What kind of evidence as to the values of this "ancient civilization" can they find? What kinds of inferences can they make based on these observations? Are there any patterns that emerge? Warn students not to jump to conclusions based on what they know to be true about the symbols and features on the pennies. Their inferences need to be based on the evidence on their coins. For example, one might draw the inference that the person on the coin is significant to the culture, and might even be named "Liberty" since this word appears near his profile. An example that could not be drawn from the coin is that the person is Abraham Lincoln since his name does not appear. Note that the inferences may or may not actually be true. Have students create charts to show the evidence and the corresponding inferences that they have made. I always have the students make 8-10 inferences. The first few might be easy, but the last couple are always the most creative.
2. If you have access to foreign coins, use the first activity as a demonstration. Then pass out a foreign coin to each group of three. Two students should work on developing the evidence and inferences. One volunteer per group should draw a large representation of the front and back of the coin. Have the students present their inferences to the rest of the class, using the coin illustration to highlight their evidence. If you have access to an opaque projector, use it for sharing the coin images.

Share the amusing book by David Macaulay, [Motel of the Mysteries](#). In this tale set well into the future, an archaeologist named Howard Carson discovers an ancient burial chamber from 1985 (actually a room from the Toot n' C'mon Motel). He and his team excavate the site and determine all sorts of silly conclusions about the function of the devices they find and customs practiced by the people of that time. To share this book with an entire class, I've made overhead transparencies of several pages to use as I share selected passages.