



inference:

something you think is true, based on the information you have and what you already know

Mars Rover Model Celebration – Lesson Plan

Introduction:

One of the new vocabulary words for this unit is “inference”. Inference means “something you think is true based on the information you have and what you already know”. When we infer something, we use the clues that are provided to us in along with our background knowledge to try to figure out something else. To make an inference, we need to use all the information that we know and think deeply about what that information might mean.

Let’s look at a picture that will help us understand the meaning of the term “inference” (Point to the first picture.) The woman in this picture is crouched on the floor and is feeling the ground. That is the information we have. From our background knowledge, we know that sometimes, people who can’t see well must search with their hands. So, we can make an inference that the woman may have lost her glasses or contacts or may be in a very dark room and is looking for a lost object using her hands.

Inferences are very important in science. The inferences that scientists make are the basis of their hypotheses in experiments. Look at the second picture on this card. Scientists have noticed that parts of the surface of Mars look very similar to places on Earth that suffer from water erosion. Even though there is no water visible on Mars, the inference scientists have made is that water once did flow on the surface of Mars and may still exist on Mars underground. They have used this inference to design experiments for the Mars Rover Curiosity that will try to detect water in the Martian soil.

Example:

People make inferences all the time. You can make an inference about dinner based on smells coming from the kitchen. You can make an inference about your parent’s mood based on their tone of voice and facial expressions.

Reflection:

I am going to tell you some information. I want you to think about the information I give you and what you already know to make an inference. Talk with a neighbor about an inference you can make from the information provided. (Teachers; A suggested answer is given, but accept any reasonable inference.)

- **One of your classmates is looking out the window during class.** (Inference: He is daydreaming, not paying attention.)
- **Your teacher is handing back the test you took last week. Adam has a big smile on his face.** (Inference: Adam was pleased with his grade on the test.)
- **A manned roundtrip to Mars will take two years.** (Inference: it could be hard to find volunteers to go on a trip that long; the space ship will have to be big enough for two years of food and other supplies, etc...)

Make it personal:

Think about the Mars Rover mission you chose and the information you have learned about Mars. What inference can you make (what do you now think is true) about Mars that you might want to test during your mission. Discuss this with your neighbor. Be ready to share your ideas with the group.