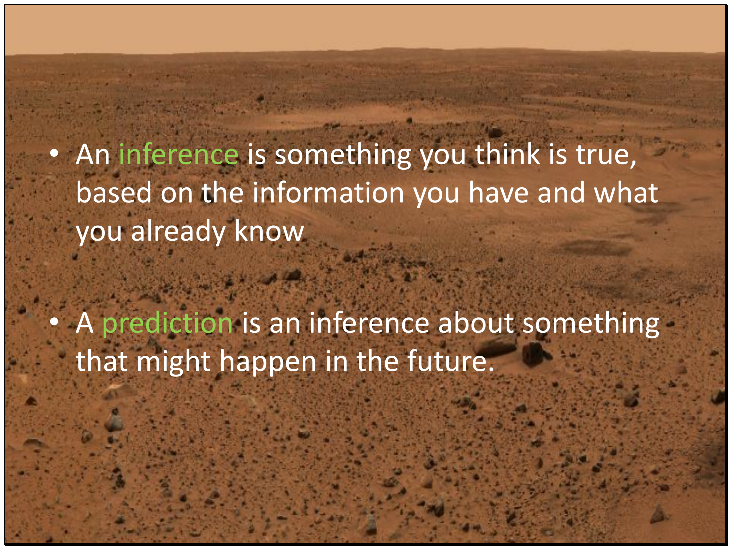
Slide 1

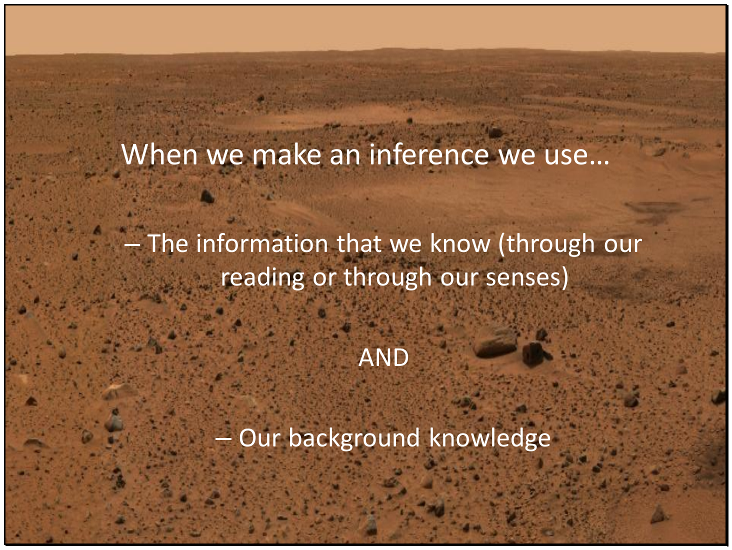

Making Inferences and
Predictions
Mars Rover Celebration
Lesson 7

Slide 2



Paraphrase the information on this slide.

Slide 3



Inferences have two parts. The first is the information we know. We may have found this information in our reading or research. We may observe this information. We might see it, hear it, smell it, touch it or taste it.

We combine this information with our background knowledge (the stuff we already know) and make a good guess about what we think is true. Let's look at some examples.

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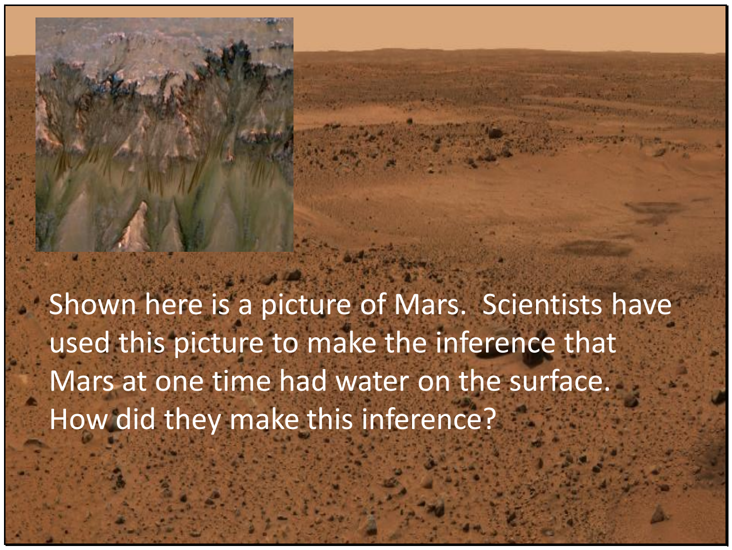
Paraphrase the information on this slide.

We also know that whatever the man has lost, it cannot be very big because it would not fit under the sofa.

Is it possible the man is doing something else? Most certainly. Perhaps he is lifting up the cushion to vacuum underneath. We won't always be correct when we make an inference. However, if we think deeply about the information we have and we use our background knowledge, we will make good inferences and we will often be right.

Slide 5

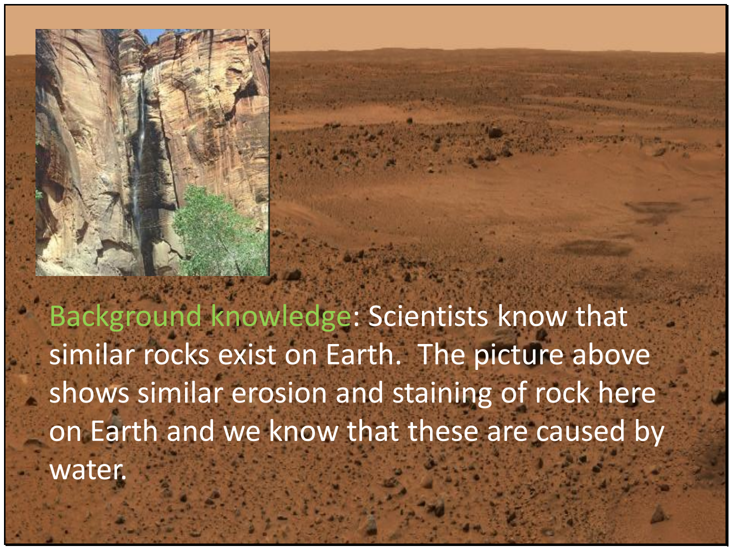


Read the information on this slide.

Slide 6


What we know: We see that there are ravines and crevices in the rock. We can see long streaks of colored soil under the crevices.

Slide 7



Paraphrase the information on this slide.

Slide 8

The scientists put together what they know about Mars and their background information from Earth to make an inference. (Read the inference.)

Slide 9

Let’s now practice what we have learned about inferences. Read the information on the next few slides. Then I will ask you to make an inference. You will base this inference on what you know and on your background knowledge.

(Allow the students to read this slide.)

Slide 10

(Allow the students to read this slide.)

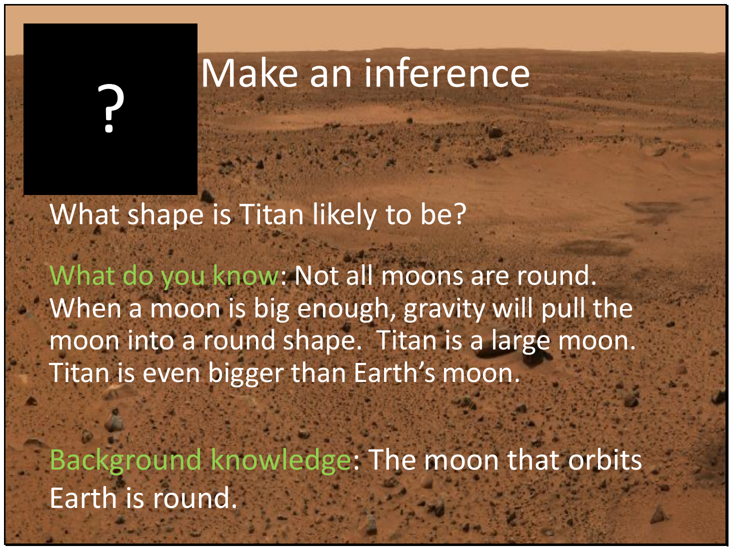
Slide 11

(Allow the students to read this slide.)

Slide 12

(Allow the students to read this slide.)

Slide 13



This slide has 2 CLICKS of animation.

Allow students to answer the question and explain their thinking. Guide them by asking: What do you know? What is your background knowledge? CLICK to bring up the "What do you know" animation. Discuss

CLICK to bring up the "Background Knowledge" and discuss. Allow students to make their inferences then move on to the next slide.

Slide 14

This slide has one CLICK of animation.

Your students should have come to the inference that Titan is probably a round moon. If not, help them to arrive at that inference.

“Let’s see if your inference is correct.” Then CLICK to bring up the image of Titan.

Our inference is

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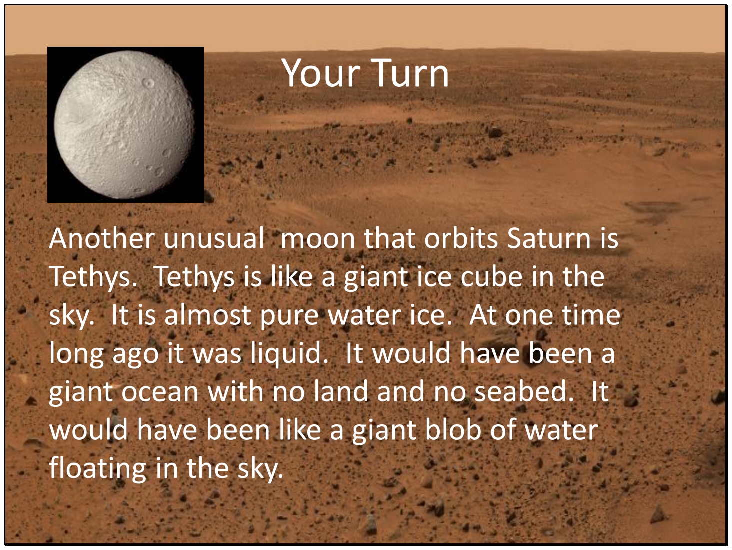
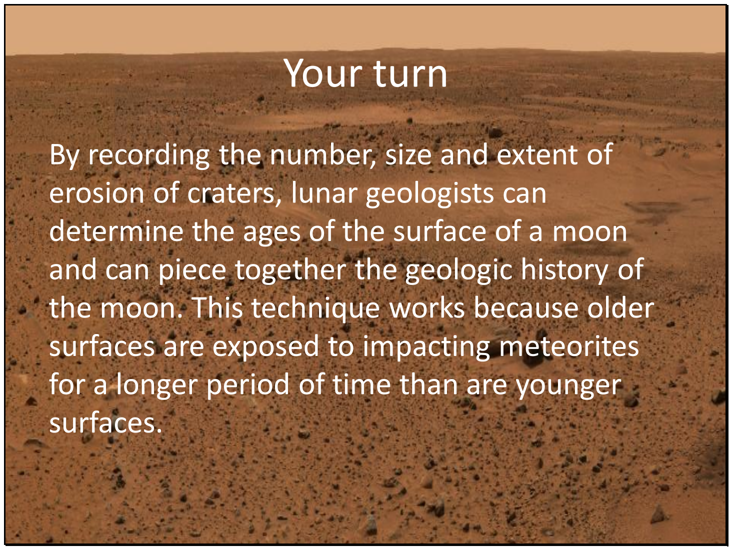
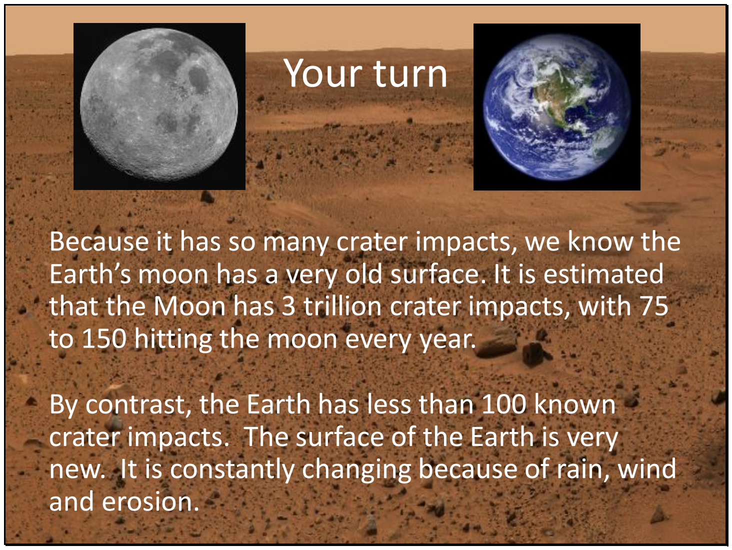


Allow students to read the selection on the next several slides. Provide as much or as little support as you feel your students need.

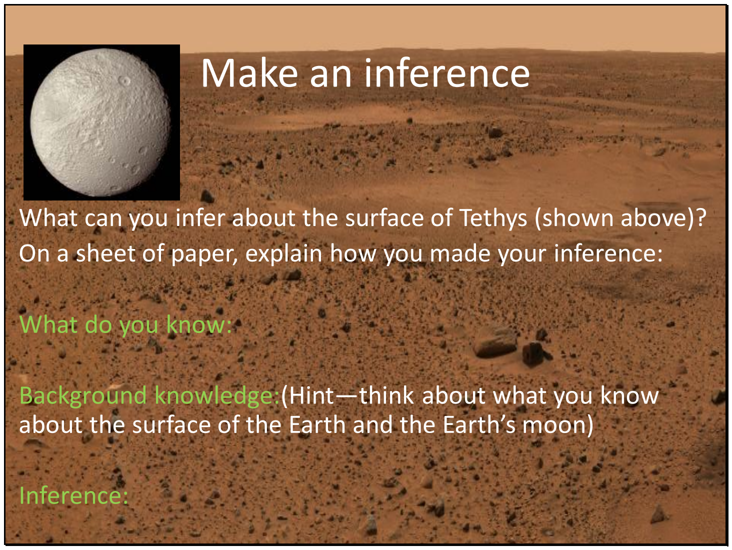
Slide 16


Your turn
By recording the number, size and extent of erosion of craters, lunar geologists can determine the ages of the surface of a moon and can piece together the geologic history of the moon. This technique works because older surfaces are exposed to impacting meteorites for a longer period of time than are younger surfaces.

Slide 17


Your turn
Because it has so many crater impacts, we know the Earth’s moon has a very old surface. It is estimated that the Moon has 3 trillion crater impacts, with 75 to 150 hitting the moon every year.
By contrast, the Earth has less than 100 known crater impacts. The surface of the Earth is very new. It is constantly changing because of rain, wind and erosion.

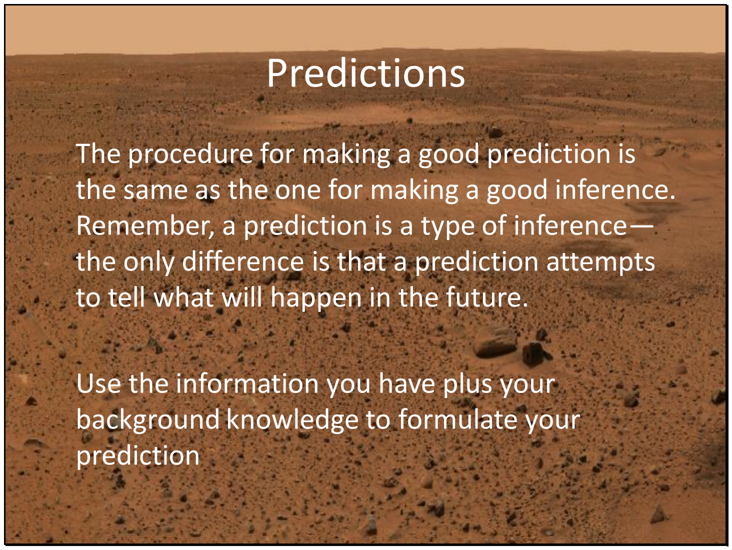
Slide 18



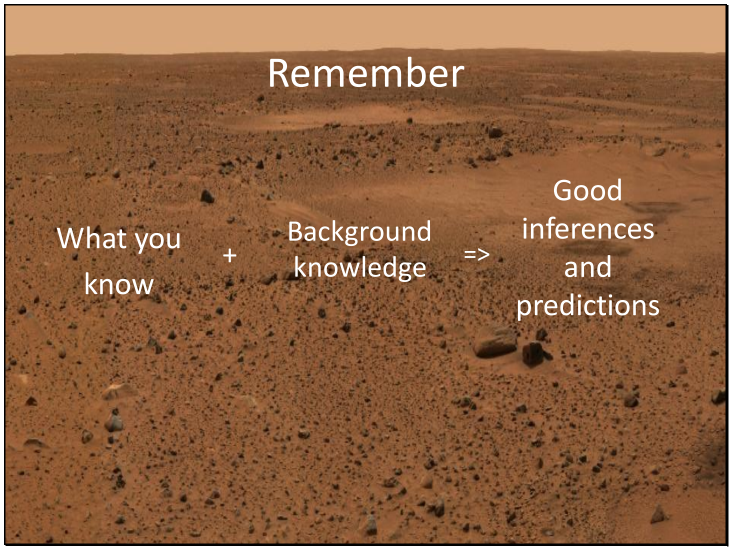
Have students work individually or in groups to make an inference that answers the question posed at the top of the page. Have them answer the three questions in green on a sheet of paper. If this question is too difficult for your students, pose this as an alternative, "What can you infer about the age of the surface of Tethys?

Students should be able to make the inference that Tethys has an old surface. Have students share their answers to the questions on this page. Be certain they explain how they arrived at their inferences. Accept any reasonable inference if the students can explain their inference using what they know and their background knowledge.

Slide 19


Predictions
The procedure for making a good prediction is the same as the one for making a good inference. Remember, a prediction is a type of inference—the only difference is that a prediction attempts to tell what will happen in the future.
Use the information you have plus your background knowledge to formulate your prediction

Slide 20



Remember, in order to make good inferences, you should use what you know (what you read and what your senses tell you) plus your background knowledge.