



**prototype:**

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## Mars Rover Model Celebration – Lesson Plan

### Introduction:

One of the new vocabulary words for this unit is “prototype”. A prototype is “the first model made of something used to test the design or to show what the actual item will look like”. A prototype is similar to a diagram but instead of being a drawing, a prototype is a real object.

Prototype is made up of the prefix “proto”. Proto comes from ancient Greek and means first. So a prototype is the “first type” or the first of its kind. Often breaking a word down into its component parts can help you understand its meaning.

People make prototypes for several reasons. They might want to avoid making an expensive mistake. For example, if a car company wants to make a new vehicle, it will create a prototype to test it first to make sure everything works before producing thousands of that particular vehicle. People also make prototypes so that they can see what a big object will look like before it is made. An architect might make a small prototype of a new building so that if changes need to be made, they can be done before construction begins. A prototype always looks like the real object. However, the prototype will not always be the same size or made of the same materials as the real item and the prototype might not actually work.

### Example:

Let’s look at a picture that will better help us to understand the word prototype. This is the prototype of the Mars rover Curiosity. Scientists built the prototype of the rover in order to test it on Earth. This was extremely important so that the scientists could make sure Curiosity was working correctly on Earth before sending it to Mars. It was much easier and less expensive to fix any problems with the rover on Earth than when it reached Mars.

### Reflection:

I am going to read you some sentences. If it would be useful to make a prototype of the object I name, put your thumbs up and say PROTOTYPE. If it is not necessary to create a prototype, put your thumbs down and remain silent.

- Your mother is cooking dinner. (thumbs down)
- A company is developing a new computer. (thumbs up)
- It snows and you make a snowman (thumbs down)
- A man creates a new computer game for Xbox or Wii (thumbs up)

### Make it personal:

Think about something that probably had a prototype before the real item was made. Tell your neighbor what the item is and why you think it had a prototype. Be sure to use the word prototype in your sharing. I will ask some of you to share your ideas.