



$$\begin{array}{r} 23 \\ \times 9 \\ \hline \end{array}$$

calculate:
to solve a problem or figure out
an answer using numbers

Mars Rover Model Celebration – Lesson Plan

Introduction:

One of the new vocabulary words for this unit is **calculate**. The word calculate has several meanings. The meaning we are focusing on today is “to solve a problem or figure out an answer using numbers”.

Let’s look some pictures that will help us understand the meaning of the word “calculate”. Evelyn is taking a math test. Often, in order to figure out the answer on a math test, she has to add, subtract, multiply or divide. When Evelyn does this, she calculates her answer. For example, to figure out the answer to the multiplication problem 23 times 9, Evelyn will have to figure out or calculate the answer that solves that problem.

Example:

Here is another example: Suppose you were having a birthday party and you were going to buy pizza. In order to figure out how much pizza to buy, you would have to know how many kids were coming to your party and how many slices each of your friends will eat. You also have to know how many slices come on each pizza. Once you have this information, you can calculate how many pizzas you will need to buy for your party. First you would calculate how many slices you need by adding up how many each person will eat. Then you would calculate the number of pizzas by dividing the total number of slices you need by the number of slices on each pizza. *(If necessary, work out an example for your students.)*

(If you have students who speak Spanish, read this paragraph) If you speak Spanish, look carefully at the word “calculate”. This word looks very similar to the Spanish word “calcular” which means the same thing as calculate. When two words look and/or sound almost the same in two languages and have similar meanings, we call these words cognates. Knowing about cognates can often help us figure out the meanings of new words in English.

Reflection:

I am going to say some sentences. If you have to figure out the answer using numbers, I want you to put your thumb up and say CALCULATE. If you do not have to figure out the answer using numbers, put your thumb down.

- I have to figure out what color shirt to wear to my friend’s house. (thumbs down)
- I have to figure out how much three toys will cost if I buy them. (thumbs up)
- I have to figure out the number of computers in our school. (thumbs up)
- I have to figure out how to get my cat out of a tree. (thumbs down)

Make it personal:

When you design your Mars Rover, you will have to calculate many numbers. Talk with a neighbor about what kinds of information you might have to calculate. Begin your sentence with “I think we will have to calculate” Try to come up with several ideas. I will then ask some of you to share your thoughts.