



refine:
to improve something over time by making
small changes to it

Mars Rover Model Celebration – Lesson Plan

Introduction:

One of the new words for this lesson is **refine**. Refine has several meanings, but in today's lesson, refine means "to improve something over time by making small changes to it". The word refine has the prefix "re" which means "again" or "over and over". The root fine can mean to "make fine". So when you put the two parts together, refine means "to make fine over and over" which is close to the definition I gave you. Looking carefully at words for roots and prefixes (and suffixes) can often help you figure out the meanings of new words.

Let's look at two pictures that will help us understand the meaning of the word refine. In the first picture, this man is refining the position of the wheel on this machine. He will continue making small adjustments so that the wrapping paper he is printing turns out right. Since the paper is almost coming out right, he will only want to make small adjustments. In the second picture, the doctor refines the way this machine is measuring his patient's vital signs (vital signs are things like heart rate, temperature and so on). He will continue to refine the machine so that it gives him the information he needs to properly treat the sick man.

Example:

Writing the uppercase letter G in cursive is often hard for many students to do well. If you generally knew how to write the letter G, but you had difficulty writing it well, your teacher might work with you on refining how you write that letter. She will help you make small adjustments in the way you form that letter so you will be able to write it neatly and correctly.

Reflection:

I am going to say some sentences. If what I am saying means that I am refining something (or making small adjustments), I want you to put your thumbs up and say REFINE. If I am making a very large adjustment, I want you to put your thumbs down and remain silent.

- Re-writing one sentence of a story so that it reads a little better (thumbs up)
- Tearing down a house and building a new one (thumbs down)
- Going over the line on a drawing so that it is the same thickness as all the others (thumbs up)
- Writing a story, crumpling up the sheet of paper, throwing it away and starting over (thumbs down)

Make it personal:

Think about why people spend time making small changes to their work even when it may look great to you. Then share your idea with your neighbor. Start your sentence with "I think people refine their work because..."