Inquiry: Identifying Simple Machines Activity

Physical Science  
Grade 9

1. Put students into groups of 2-3, and have them make a list of all the different machines that they use in everyday life.
   1. Allow them a minute or two to start compiling their lists, and then ask them to consider if the machines they’ve listed could be broken down into smaller machines.
2. Have each student group share a few of their ideas. Ask them, as a group, to come up with the definition of a machine. Have each group share their definition (with explanation) and debate some of the properties of machines and what their uses are:
   1. Does a machine have to be electrical or powered by a motor?
   2. What is the purpose of a machine? Why do we use them?
   3. If they are stuck on the idea of machines being complex, try to focus their discussion toward looking at the simple machines that make up more complex machines. You may even ask if there are simpler machines that are commonly used.
3. As a class, come up with a single definition for a machine.
4. Ask the class how their definition of a machine would compare to the definition of a “simple” machine
   1. What constitutes “simple”?
5. Based on this definition, have groups compile a new list of simple machines they use in everyday life.
6. Once again, have each group share a couple of their ideas; you could make a class list on the board.
   1. Ideally, a few students may notice that some machines are similar to others. If not, you can ask the class if they notice any similarities.
   2. Have each group organize the class list into categories. They should have a reason for each category!
7. Have each group share their categories, along with their justifications for grouping them a particular way.
8. Discuss the different types and class of simple machines.