

Simple Machines
They are all around us!!

Introduction:

Intended Audience: Linda Heath's 3rd Grade Class

Time: 1 hour

The class was a Gifted Class with an even mixture of boys and girls. The desks were set up in a horseshoe shape that was a bit altered. Although it is Linda Heath's Class, she had a student teacher at the time. When deciding on a lesson idea, Linda suggested that we do something on Simple Machines to fit into the Science curriculum. Although the students had not yet studied Simple Machines in class, she thought it would be a good introduction for what they would learn later in the year.

Objectives:

- Students will view the PowerPoint created and listen to the teachers explain the 6 simple machine types (screw, lever, wheel and axle, wedge, pulley, inclined plane).
- The students will participate in class discussion of Simple Machines while giving examples of each of the 6 Simple Machines when called upon.
- Students will divide into groups assigned by the teacher, walk with their assigned group and teacher around the school and grounds.
- Students will be able to identify a screw, wheel and axle, inclined plane, wedge, lever, and pulley in everyday life and need to know characteristics of each in order to find them.
- Students will be able to use technology (digital camera) in the classroom to apply to a content area and therefore enhance the learning experience and knowledge.
- Students will complete the booklets started by the teachers, by writing the simple machine on each picture that they took in their group.

Materials:

PowerPoint
Digital Camera
Computer
Scissors
Yarn
Glue
Plastic Sandwich Bags
Hole punch
Construction Paper

Description:

-Begin the lesson by asking students what a simple machine is. Example: What does the word simple mean? What does the word machine mean? Therefore, what does simple machine mean?

- Go over each slide.
- Describe each simple machine, how it is linked to history, and real life examples.
- Once teachers give examples of each machine, ask the students for other examples of simple machines, before moving onto the next simple machine.
- After all 6 simple machines are covered, describe the next part of the lesson.
- Introduce the idea of their scavenger hunt.
- Tell students that they will be divided into groups so that each group has one teacher.
- Once students are divided into groups, have each teacher explain that they will be taking pictures of the 6 simple machines with a digital camera.
- Explain that the students must use the camera to take pictures in the school and around the grounds until they find one of each simple machine.
- Remind the students that they have only half an hour to walk with the teacher and look for their simple machines.
- Once all the groups are back, teachers take the disks from each digital camera and print out the pictures.
- Teachers then cut out the pictures for their group and glue each on a sheet of construction paper that will fit inside a plastic sandwich bag.
- Teachers will somewhat put together a booklet for each group. In the booklet, there are 8 plastic sandwich bags with a piece of construction paper in each.
- There is a front bag for the title and a last page for a picture of the group, with six middle pages, one for each simple machine.
- Once the teachers have glued a picture on each piece of paper in each bag, hole punch the bags with two holes.
- Tie all 8 bags together with two strands of yarn, forming a booklet.
- Once all this is done, the students will label each picture in the booklet, identifying which simple machine each is.
- The students had to complete this part of the lesson at a later date with the teacher because the original time we had been given had been changed. Originally, the students were to create the booklets on their own, but because of time constraints, the teachers out together the booklets.

Evaluation Procedure:

Since the activity had to be shortened, we could not evaluate the students the way we originally had planned. We were able to observe the students' responses and participation in classroom discussion. Their agreeableness and cooperation in looking for the simple machines around the school, was also evaluated. We had wanted to evaluate the students on how they put together the booklets, but all we could do is give the booklets that we had almost completed to the teacher and ask that she have the students identify the simple machines they took pictures of and write the name of each machine under the picture.

Rubric

Simple Machine Guru	Simple Machine Technician	Simple Machine Mechanic
Pictures of all 6 simple machines are present and labeled correctly.	3 or 4 pictures of different simple machines are present and labeled correctly.	Less than 3 different simple machines are present and labeled correctly.