

Simple Machines **5th Grade**

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References:

- "Introduction to Work" by Meghan Knapp
- "Gadget Anatomy," "Simple Machines Scavenger Hunt," "Story Stations" by Mary Gilstrap

Benchmarks:

SLC 6: Recognize the advantages and/or disadvantages to the user in the operation of simple technological devices.

Benchmark: Students will identify the differences between work and force as it relates to each of the six simple machines.

SLC 5: Evaluate conclusions based on scientific data.

Benchmark: Students will interpret data and answer questions about the information on tables, graphs, charts and/or text information.

Objectives:

Students will be able to define work and force and calculate the work done. They will also be able to identify the utility of each of the six simple machines and how each one "exchanges" force for distance.

Materials:

- Machine Shop
- Machine Story Lesson Plan
- Machine Story Lab Packet
- Simple Machines Scavenger Hunt

Initial Demonstration:

Relate this story to the students: Bob is working in a factory. One day his boss comes up to him and says, "Bob, do you see those heavy boxes there? I want you to put them on the shelf in the corner before lunch." So Bob goes to the boxes, pulls on them, pushes and shoves, straining with all his might. But the boxes are too heavy. At lunch time, Bob's boss comes back and says, "Bob! You haven't done any work today!" Is Bob's boss right?

Target Observations:

- Students may suggest that Bob did no work, because he didn't accomplish anything or that he did do work because he tried and was very tired.