



# #13. Simple Machines

Class: \_\_\_\_\_

Type Instruction: Whole Class

**Learning Objective(s):** Students know the basic relationships between force and motion demonstrated through simple machines, including pulleys and levers.

**Length of Time:** 10 Minutes

**Ignite! Movies:**

- Simple Machines in Action
- Simple Machines

**Teacher Instructions:** Play Ignite! movies with students and complete the following activity.

**Part One:** Students complete and label the diagram.

**Part Two:** Diagramming Mechanical Advantage is an original individual diagram.

**Target Vocabulary/Key Terms:**

- *first-class lever*
- *load*
- *second-class lever*
- *lever*
- *pulley*
- *third-class lever*

**Notes:**

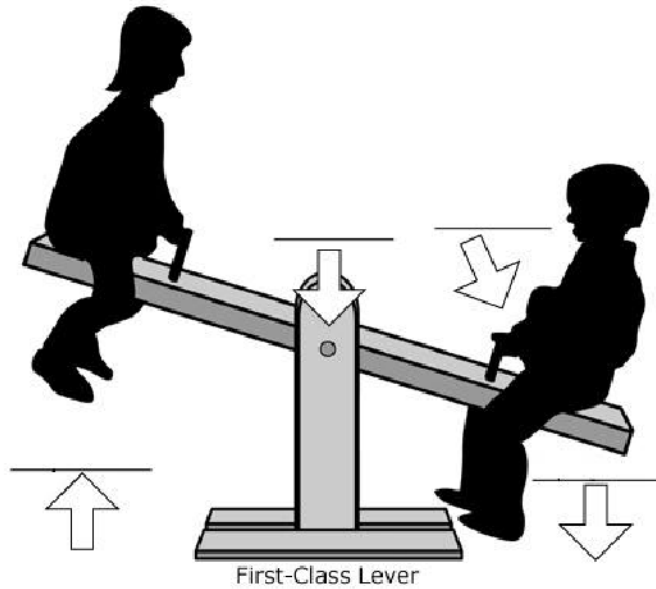


Name: \_\_\_\_\_



### Labeling a Lever

Directions: Label the terms below on the diagram. Then, in the space provided, write definitions for each term.



A. fulcrum: \_\_\_\_\_

B. input force: \_\_\_\_\_

C. load: \_\_\_\_\_

D. output force: \_\_\_\_\_

### Diagramming Mechanical Advantage

Directions: The important part about simple machines is understanding mechanical advantage. Using a pulley as a model, create a diagram showing mechanical advantage. Be sure to add a caption explaining your diagram and defining mechanical advantage!