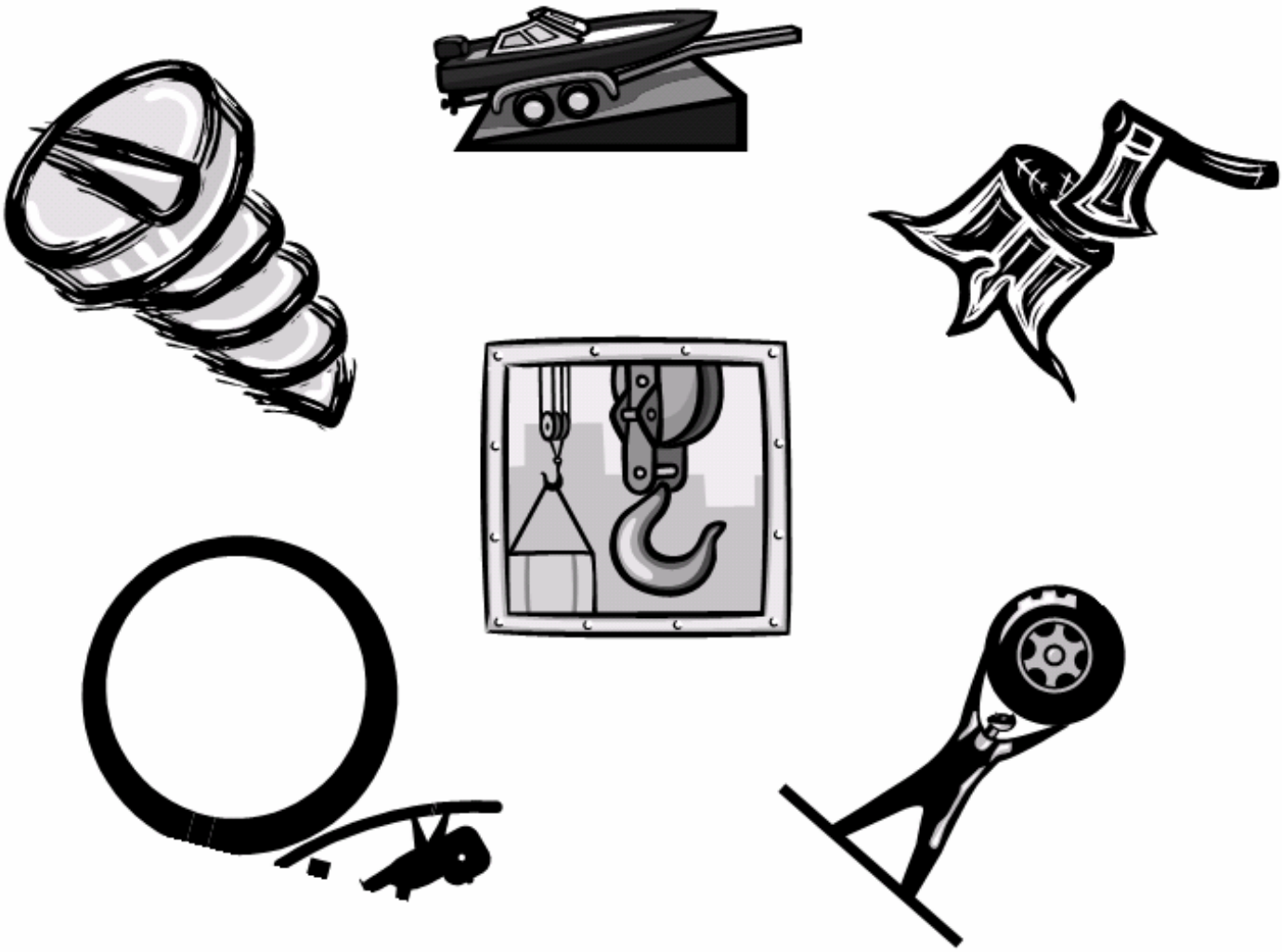
Simple Machines



My Investigation Journal

By _____

THE LEVER

Materials:

- ruler
- steel washers
- pencil
- tape

Procedure:

1) Tape the pencil to a desk or table. This will be the **fulcrum** of your lever. Place the ruler over the fulcrum at the 6 inch mark. This will be the **lever**.
2) Place 5 washers on the 12 inch end of the lever. This will be the **load**. *Record* the distance from the fulcrum to the load.
3) Place washers one at a time on the 1 inch end of the lever (the **force arm**). How many washers does it take to balance the load? *Record* the number.
4) Take the washers off the lever and move the lever so that the fulcrum is at the 9 inch mark. Place 5 washers on the 12 inch end of the lever. *Record* the distance from the fulcrum to the load.
5) Place washers one at a time on the 1 inch end of the lever (the **force arm**). How many washers does it take to balance the load now? *Record* the number.
6) Take the washers off the lever and move the lever so that the fulcrum is at the 3 inch mark. Place 5 washers on the 12 inch end of the lever. *Record* the distance from the fulcrum to the load.
7) Place washers one at a time on the 1 inch end of the lever (the **force arm**). How many washers does it take to balance the load now? *Record* the number.

THE LEVER

Results:

Fulcrum Location	Distance from Load	# of Washers Needed
6 inch mark		
9 inch mark		
3 inch mark		

Condusions:

1) Which distance took the most washers to balance the load?

_____

2) Which distance took the least washers to balance the load?

_____

3) If you needed to lift a heavy object using a lever, where should you place the fulcrum in relation to the effort end?_____

_____

Why would you place the fulcrum there? _____

_____

4) Draw a picture of the most effective type of lever for lifting heavy objects: