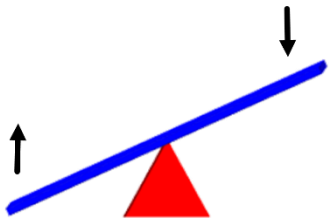
Name:



Levers

Simple Machines

Levers are used to help lift heavy objects

Lever: a simple machine that is used to change the direction of **force** needed to move an object over a **fulcrum** (pivot point)

- The different kinds of levers depend on where the **fulcrum** is located
- They work by using a strong **beam** that pivots at a point called the **fulcrum**
- The **beam** spreads the weight of the object across a longer distance
- The **fulcrum** is where the beam pivots, creating **leverage**, making it easier to lift objects on other side

Draw a diagram of a **lever**: label the **beam** and **fulcrum**

Name 3 levers you might see in everyday life:

1._____
2._____
3._____

- Levers are used when objects are too **heavy** to pick up by hand
- Using a **lever** allows you to change the direction you apply **force** to move an object over a pivot point
- Instead of trying to lift an object from the side, a lever will allow you to lift it across a **beam**
- This allows you to lift the object up with more strength because you can get all of your weight behind it!
  - The **longer** the beam, the greater the **mechanical advantage!**

Types of Levers

- **First Class Lever:** the **fulcrum** is located in between the **effort** and **load**
- **Second Class Lever:** the **load** is located in between the **effort** and **fulcrum**
- **Third Class Lever:** the **effort** is located in between the **fulcrum** and **load**

Draw diagrams of the **3 classes** of levers: label the **fulcrum, load,** and **effort**

Build your own **levers**!

Draw diagrams of all the different types of levers you and your group can create with the lever kits:

- Label all the parts with the correct vocabulary!
- See how much weight each can lift!
- What functions could they serve?