

## 7G Levers in the Human Body

### Read:

Your skeletal and muscular systems work together to move your body parts. Some of your body parts can be thought of as simple machines or levers.

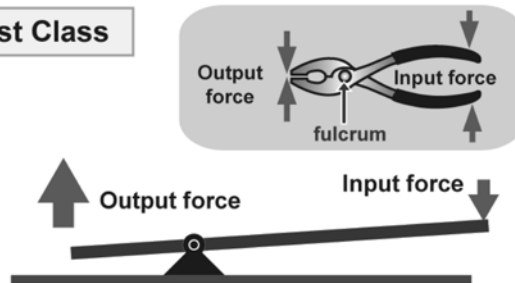
There are three parts to all levers:

- Fulcrum - the point at which the lever rotates.
- Input force (also called the *effort*) - the force applied to the lever.
- Output force (also called the *load*) - the force applied by the lever to move the load.

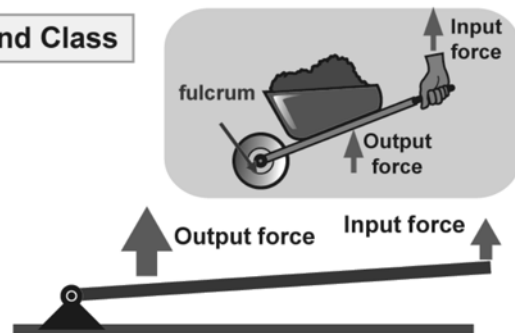
There are three types of levers: first class, second class and third class. In a first class lever, the fulcrum is located between the input force and output force. In a second class lever, the output force is between the fulcrum and the input force. In a third class lever, the input force is between the fulcrum and the output force. An example of each type of lever is shown below.

### The Three Classes of Levers

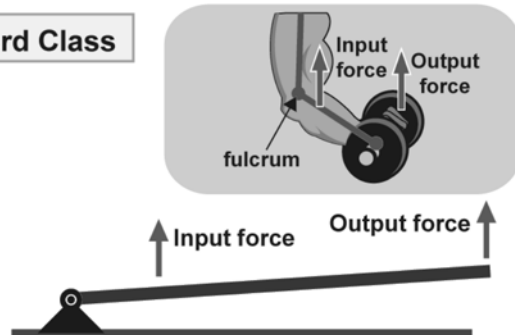
#### 1st Class



#### 2nd Class



#### 3rd Class



**Practice:**

The three classes of levers can be found in your body. Use diagrams A, B, and C to answer the questions below. Also label the effort (input force), fulcrum and load (output force) on each diagram.

**LEVER A**

1. Type of Lever: \_\_\_\_\_
2. How is this lever used in the body?

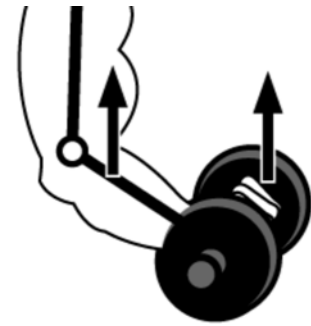
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**A**

**LEVER B**

3. Type of Lever: \_\_\_\_\_
4. How is this lever used in the body?

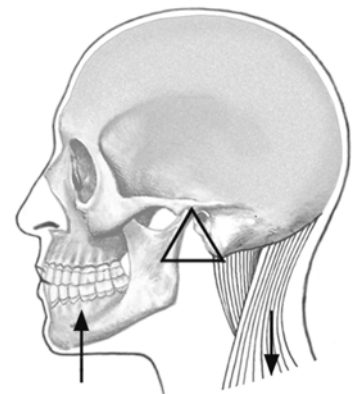
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**B**

**LEVER C**

5. Type of Lever: \_\_\_\_\_
6. How is this lever used in the body?

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**C**