Gains and Losses of a Lever

Remember, a **200-pound** (817-newton) rock creates a **200-pound** (817-newton)

Instructions

Close X

A **first-class lever** is shown lifting a 200-pound (817-newton) rock.

- The gain of simple machines is having the ability to lift a 200-pound (817-newton) object by only exerting a force of 50 pounds (204 newtons). This is demonstrated with the Effort Force and Resistance Force.

- The loss of simple machines is that you have to exert that force for a longer period and over a longer distance. For instance, you would have to push down 48 inches (120 centimeters) to raise the rock 12 inches (30 centimeters). This is demonstrated with the Effort Distance and Resistance Distance.

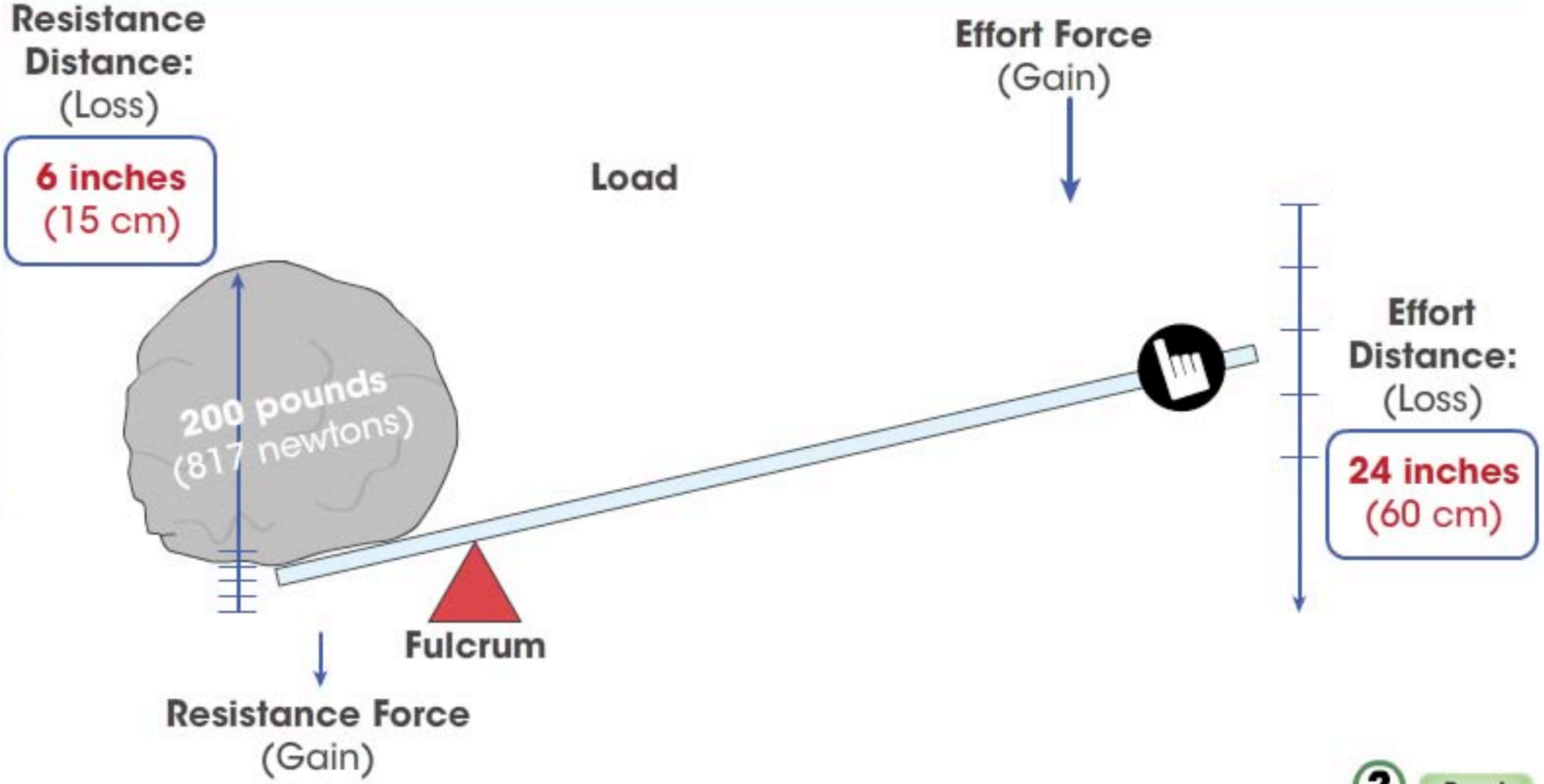
- Grab the drag icon to see the gain and loss of the lever.

Resistance Force
(Gain)

Reset

Gains and Losses of a Lever

Remember, a **200-pound** (817-newton) rock creates a **200-pound** (817-newton) **Resistance Force.** If you give an **Effort Force** of **50 pounds** (204 newtons), you would have to push down **48 inches** (120 centimeters) on the lever. This is your **Effort Distance.** However, the lever would only raise the rock **12 inches** (30 centimeters). This is the **Resistance Distance.**



Reset

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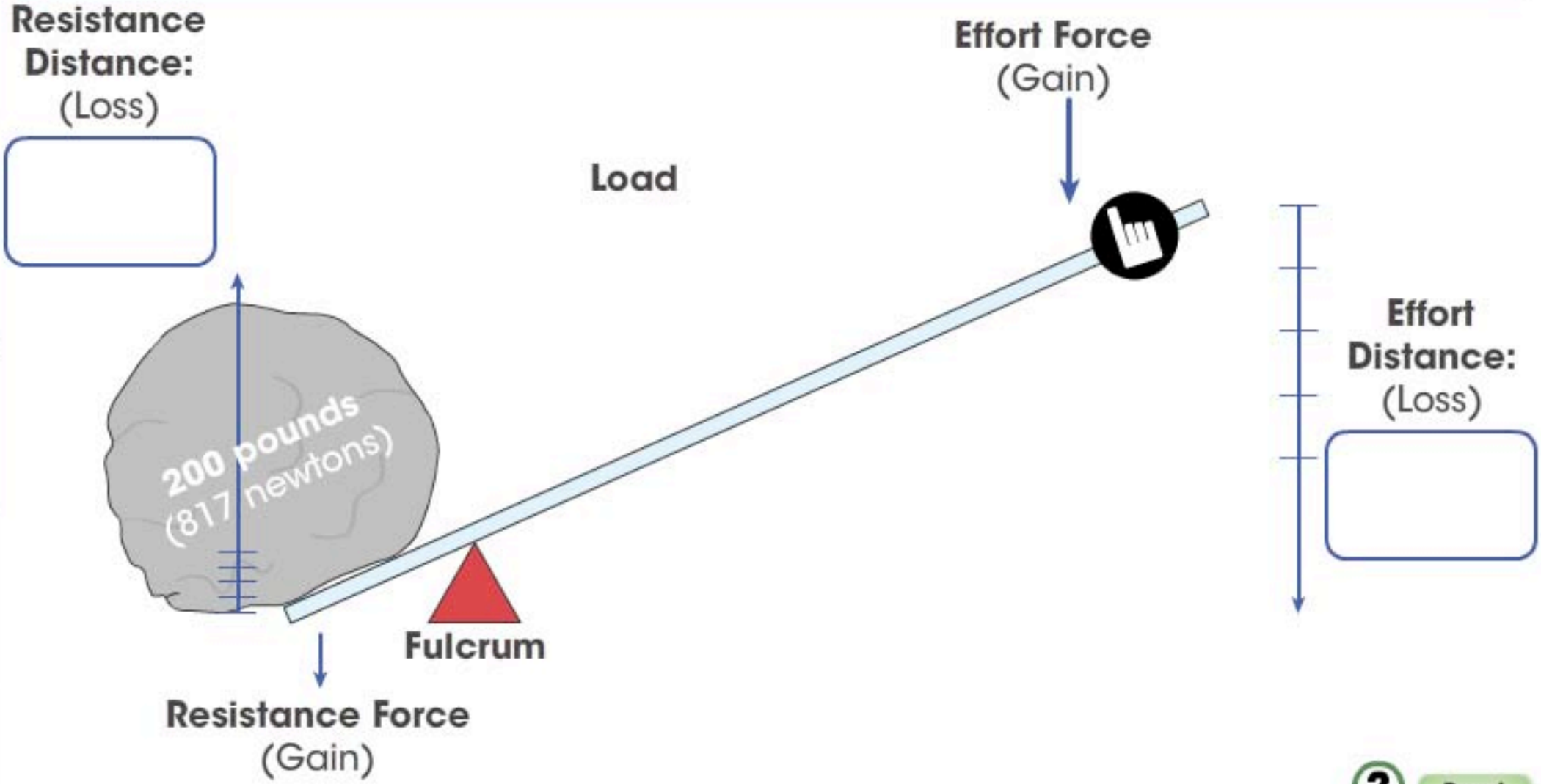

Reset