Name: _____ Date: _____

How a Lever Works

Circle group

A lever is a simple machine. It helps people lift and move things. It is a stiff bar that turns on a point. The point is called the fulcrum.

A seesaw is a lever. The board is the bar. The fulcrum is the point in the middle. One child pushes down on one end. The other end goes up.

Each lever has a load and an effort. The load is the thing you want to move. The effort is the push or pull you use to move it.

Where you put the fulcrum changes how much effort you need. Set the fulcrum close to a heavy load. Push down on the far end of the bar. A small push can lift a big load. The longer the bar is on your side, the less force you need.

Levers are all around us. A crowbar, a wheelbarrow, and scissors all work in the same way.

Questions

1. What is a lever?

_____

_____

2. Where is the fulcrum on a seesaw?

_____

_____

3. What is the load?

_____

_____

4. How can a small push lift a big load?

_____

_____

5. Name two levers.

_____

_____

6. Why might a crowbar be long?

_____

_____

Words to know

lever: a stiff bar that turns on a point and helps lift things
fulcrum: the point that a lever turns on
load: the thing you want to move
effort: the push or pull you use to move something
simple machine: a tool with few or no moving parts that makes work easier

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

How a Lever Works

Triangle group

A lever is a simple machine that helps people lift and move things. It is a stiff bar that turns on a point called the fulcrum.

A seesaw is a lever. The board is the bar, and the fulcrum is the point in the middle. When one child pushes down on one end, the other end goes up.

Every lever has a load and an effort. The load is the thing you want to move. The effort is the push or pull you use to move it.

Where you put the fulcrum changes how much effort you need. Set the fulcrum close to a heavy load, and push down on the far end of the bar. A small push can lift a big load. The longer the bar is on your side, the less force you need.

Levers are all around us. A crowbar, a wheelbarrow, and a pair of scissors all work by the same idea.

Questions

1. What is a lever?

_____

_____

2. Where is the fulcrum on a seesaw?

_____

_____

3. What is the load?

_____

_____

4. How can you use a lever to lift a heavy load with a small push?

_____

_____

5. What are two levers?

_____

_____

6. Why might a crowbar be long?

_____

_____

Words to know

lever: a stiff bar that turns on a point and helps lift things
fulcrum: the point that a lever turns on
load: the thing you want to move
effort: the push or pull you use to move something
simple machine: a tool with few or no moving parts that makes work easier

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

How a Lever Works

Square group

A lever is a simple machine that helps people lift and move objects. It consists of a rigid bar that pivots on a point called the fulcrum.

A seesaw is a familiar example of a lever. The board serves as the bar, and the fulcrum is the point in the middle. When one child presses down on one end, the opposite end rises.

Every lever involves a load and an effort. The load is the object you intend to move, and the effort is the push or pull you apply to move it.

The position of the fulcrum determines how much effort you need. Place the fulcrum close to a heavy load, and then press down on the far end of the bar. With this arrangement, a small push can lift an enormous load. In general, the longer the bar is on your side of the fulcrum, the less force you need.

Levers surround us in everyday life. A crowbar, a wheelbarrow, and a pair of scissors all operate according to the same principle.

Questions

1. What is a lever, and what does it consist of?

_____

_____

2. Where is the fulcrum located on a seesaw?

_____

_____

3. How does the passage define the load?

_____

_____

4. How should you arrange a lever to lift a heavy load with a small push?

_____

_____

5. Identify two everyday levers named in the passage.

_____

_____

6. Why might a crowbar be designed with a long bar?

_____

_____

Words to know

lever: a stiff bar that turns on a point and helps lift things
fulcrum: the point that a lever turns on
load: the thing you want to move
effort: the push or pull you use to move something
simple machine: a tool with few or no moving parts that makes work easier

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

For the teacher: How a Lever Works

Each student sheet carries a shape, not a level. The same topic and facts, written three ways.

Circle: How a Lever Works

Easier · 154 words · Flesch-Kincaid grade 1.4

1. A stiff bar that turns on a point called the fulcrum. It is a simple machine that helps people lift and move things.
2. In the middle.
3. The thing you want to move.
4. Set the fulcrum close to the load. Push down on the far end of the bar.
5. Any two of: a seesaw, a crowbar, a wheelbarrow, scissors.
6. A long bar lets you lift a heavy load with less force.

Triangle: How a Lever Works

This passage · 157 words · Flesch-Kincaid grade 2.8

1. A stiff bar that turns on a point called the fulcrum. It is a simple machine that helps people lift and move things.
2. In the middle.
3. The thing you want to move.
4. Set the fulcrum close to the load and push down on the far end of the bar.
5. Any two of: a seesaw, a crowbar, a wheelbarrow, a pair of scissors.
6. A longer bar lets you lift a heavy load with less force.

Square: How a Lever Works

Harder · 174 words · Flesch-Kincaid grade 5.8

1. A simple machine that helps people lift and move objects. It is a rigid bar that pivots on a point called the fulcrum.
2. In the middle.
3. The object you intend to move.
4. Place the fulcrum close to the load and press down on the far end of the bar.
5. Any two of: a seesaw, a crowbar, a wheelbarrow, a pair of scissors.
6. A longer bar lets you lift a heavy load with less force.