

Sci-Map Site

Westside Park

Name of Activity

Playground Physics While You're There - Seesaw Lever Lift

Materials

Access to at least one seesaw

Heavy objects for students to practice lifting, such as big dictionaries or plastic bins

Procedure

For this two-part activity, you'll need a heavy object that students can safely lift — such as a big dictionary — and a seesaw, which will act as a lever.

First, ask pairs of students to predict which will require more force: lifting the object up into the air with their hands or lifting it by using a lever. Have pairs test their predictions. The students should place the object on the lowered end of a seesaw and push down on the other end. They should discover that using a lever to raise an object requires less force than directly lifting the object. Next, challenge students to test, and then answer, why it matters where you sit on the seesaw. What happens if you sit close to the center?

The Science Behind It

It is easy to lift a piece of paper or a feather, but could you lift a sack of rocks? When you try to lift something heavy, gravity pulls against it. The more mass that you are trying to lift, the harder the pull. People have learned to outsmart gravity by using simple machines such as levers.

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