



## SUPER FAB LAB INVESTIGATION:

# Lever Investigation



**Episode:** Lever Investigation

**Cycle:** Simple Machines

### **Purpose** (What We're Going to Explore and Learn)

- We're going to explore a simple machine - the lever..
- We'll test different ways of lifting a basket full of blocks to observe for ourselves how levers make lifting easier.

### **Materials** (The Stuff We Need)

- Large Box
- Willing child volunteer
- Some people to move the box
- Wagon that can safely hold the box and the volunteer

### **Procedure** (What to Do)

1. Fill the container with the heavy items.
2. Place the item you are using as a fulcrum under the middle of the board.  
That's our lever.
3. Have children try to lift the heavy container. Can one child lift it? Is it easy or hard to do?
4. Now put the basket or box on one end of the lever.
5. Now we're going to push down on the other end, but first let's predict what will happen to the heavy box (or basket) when we push on the other end of the lever.
6. Have a child push the other end of the lever. What happens? Can one child lift the box using the lever? Is it easy or hard to do?

### **Other Stuff You Might Want to Know or Do**

- By having one child try to lift the heavy box with and without the lever, we've set up a simple experiment. We contrast a child's lifting power under two conditions.
- Try moving the position of the fulcrum under the body of the lever. Is the box easier to lift when the fulcrum is close to the box or far away from it?
- In this episode, Sid "invents" a lever as a catapult for lifting his toys and sending them flying through the air. Although most of those toys could be lifted and tossed without the catapult, it's not nearly as much fun! Set children up with various blocks and small soft toys and let them make and explore levers.