

**ACTIVITY!****TILT  
SENSOR**

Make a simple tilt sensor with LED lights that indicate which way it's leaning.

**1. Fold the index card in half, long edges together.** On the outside, mark one side positive (+) and the other side negative (-). Unfold the card.

**2. Cut four strips of aluminum foil tape** that are each 2 inches long and ½ inch wide. Fold them over the long edges of the cards at the corners. Make sure the battery can touch the foil strips when it is inside the folded card.

**3. Cut a strip of craft foam the same length** as the card and about ¼ inch wide. Attach it to one long edge of the card.

**4. Fold the card closed.** Use clear tape to attach the positive (longer) lead of each LED to the foil tape pieces on the outside of the (+) side of the card. Do the same with the negative leads on the (-) side.

**5. Place the battery inside the card** with the (+) side facing the positive side of the card. Tape the ends closed. Then, try tilting the sensor back and forth. The LEDs should light up when the battery slides to their end.

**Try This!**

Can you improve the tilt sensor so it works better? Or, instead of LEDs, attach other small electronics such as a vibrating motor or buzzer.

**TOOLBOX!**

- index card, or thin cardboard about 3 X 5 inches
- aluminum foil tape or kitchen foil and glue stick
- peel-and-stick craft foam
- 2 LED lights
- 3V battery

