

“ACT OUT A HUMAN CIRCUIT”

YOU WILL NEED

- Marbles (Such as the ones used in the “Mix-the-Heat” activity)

Procedure

1. Have students stand and form a circle. (Depending on the number of students in the class, you may have to form two circles.) Tell students that they represent a wire conductor. Designate one student in the circle to represent a battery.
2. Distribute marbles (from the heat transfer activity) to each member of the circle. The marbles represent electrons.
3. Remind students which student is playing the part of the battery, and that all batteries have a positive end, represented by the student’s left hand, and a negative end, represented by the student’s right hand.
4. Tell each student to pass his or her “electron” to the student on his or her right. The student receiving the “electron” should in turn pass the one he or she is holding to the right. Have students continue passing on “electrons” to the person to their right until the “electrons” complete at least one entire pass around the circle.



Sense-Making

Lead a discussion about the similarities and differences between what students did in the activity, what they did in the *Monster Music*, and what they learned during your instruction. Ask the following questions:

- What does the circle represent? (A circuit.)
- What does your object (ball, eraser, etc.) represent? (An electron.)
- In which direction should you pass your object? Why? (To the right, because the negative charge moves toward the positive charge.)

- What keeps the “electrons” moving along in the same direction? (Electrons share the same negative charge; they repel one another, which keeps them moving along in the same direction.)
- What would happen if we created a gap in the circle that is too wide across for the “electrons” to pass? (The electrical energy would no longer move.)