

Facilitation Guide



Embodied Circuit Game Lesson 12

EXPERIENCE OVERVIEW

In this role-play circuit activity, students are divided into groups representing the parts of the circuit: the battery, wire, and light bulb. Students act out the flow of electricity, with the battery providing power, the wire forming a circuit, and the light bulb lighting up, demonstrating the circuit's completion using body percussion. *Note: Extensions and adaptations to this activity are also provided.*

Standards

SCIENCE

- Science & Engineering Practices-SEP2: Developing and Using Models: ES4: Develop and/or use models to describe and/or predict phenomena.
- Disciplinary Core Ideas
 - PS3.A: Definitions of Energy- ES2: Energy can be moved from place to place by moving objects or through sound, light, or electric currents.
 - PS3.B: Conservation of Energy and Energy Transfer- ES3: Energy can also be transferred from place to place by electric currents, which can then be used locally to produce motion, sound, heat, or light. The currents may have been produced, to begin with by transforming the energy of motion into electrical energy.
- Crosscutting Concepts-CCC4: Systems and System Models- ES1: A system can be described in terms of its components and their interactions.

MARYLAND STATE ARTS STANDARDS

- Anchor Standard 6: Convey meaning through the presentation of artistic work.
- Anchor Standard 10: Synthesize and relate knowledge and personal experiences to make art.

Getting Ready

SABES LEARNING OBJECTIVES

- Lesson 12- Simple Circuits: Students will develop a model of a simple circuit using a light bulb, wire, and battery to identify how energy flows.

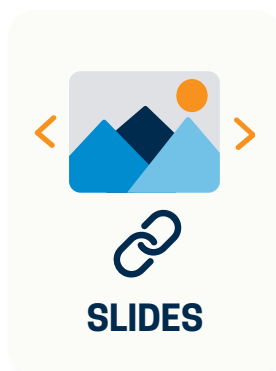
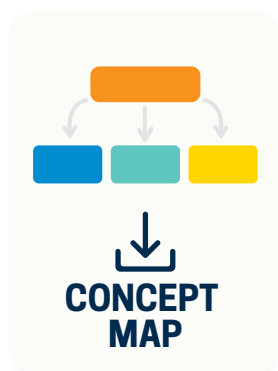
MATERIALS

- Circuit Game Slides

STUDENT PRIOR KNOWLEDGE SUPPORT

- How Electricity Works (Circuit Examples and Visuals)

ARTS INTEGRATION MATERIALS



TEACH

Engage

Role Play Circuit with Body Percussion

Students are divided into groups representing battery, wire, or light bulb. They act out the flow of electricity, with the battery providing power, the wire forming a circuit, and the light bulb lighting up, demonstrating the circuit's completion.

1. Divide the class into groups and assign each group a role: battery, wire, or light bulb.
2. Arrange students in a circle.
3. Have the "battery" start by clapping their hands to represent providing power.
4. The "wires" then join hands to form a circle.
5. A "wire" student closest to the "battery" group places a hand on one of these students' shoulders, representing the formation of a circuit.
6. Finally, as the final "wire" student approaches the "light bulb" group at the end of the circuit, the "light bulb" group demonstrates lighting up by tapping their shoulders or heads, representing the flow of electricity and the light turning on.
7. Encourage the students to repeat this sequence and switch roles to understand how each component contributes to the circuit.

Assess

Assess: To assess students' learning in this lesson, a combination of the following strategies can be used:

- Formative Assessments/Observations:
 - Problem-Solving Skills: Observe how students adapt and problem-solve if the cups are not moving as expected. Do they adjust their shaking technique or try different approaches?
 - Peer Interaction (SEL Observation): Observe how well students work together in their groups. Are they collaborating effectively to achieve the goal?
- Ongoing Checks for Understanding: Following the game, ask students to explain how their actions with the body percussion circuit relate to real circuits. Do they understand the role of energy in this process?
- Performance Assessment: Evaluate how well students complete the task. Do they successfully act out the aspects of the circuit?



VIDEO TUTORIAL



SLIDES