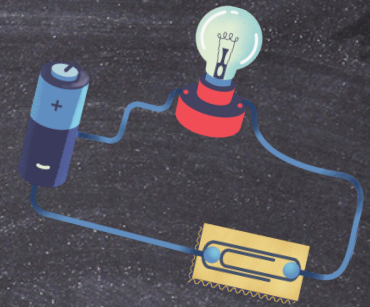


Game on! Circuitry in Our Classroom Arcade

Designed for learners in Grades 3-5



Course Description:

Let's play! This lesson sequence involves students in grades 3-5 acquiring knowledge and skills of electricity and circuitry using Snap Circuit kits. They design and build a functional arcade game with everyday materials as they experiment with circuitry elements and build their knowledge of energy, electricity, and circuitry. The theme of classic arcade gaming is woven throughout the 15 lessons and used to build the criteria for the final arcade game project.

Equipment, Curriculum, and Training Available:

- 15 Lesson Hours
- Curriculum and supporting materials
- Ongoing product and curriculum support
- Professional development
- Facilitation by a trained STEM instructor (optional)

Lesson	Learning Target Examples
1. How much energy do you have?	Observe and explore energy traveling through you!
2. It's Electric!	Experiment with energy flowing through everyday materials.
3. Conductors and Insulators	Compare how electrical energy flows through different materials.
4. Riding the Electrical Current	Model electrical currents and its movement through circuits.
5. It's a Snap! Your First Circuit	Apply energy and electricity concepts to your first functional snap circuit.
6. Series and Parallel Circuits	Determine different paths of electrical current through a circuit.
7. Play again? You can't resist.	Experiment with a resistor's role in circuitry.
8. Light it up!	Explore how light emitting diodes can play a pivotal role in circuitry.
9. Can you snap it?	Play with variations of snap circuits to test your knowledge of electrical circuitry.
10. Caution! High Voltage	Examine the role that total voltage plays in a circuit.
11. Design Your Mascot	Design the character that will be the basis for your arcade game.
12. Build Your Mascot	Build your arcade game's mascot with circuitry materials.
13. Arcade Game Design	Implement the engineering design process to design your own arcade game.
14. Arcade Game Build	Apply knowledge and skills of circuitry to test and assess your arcade game.
15. Game on! Let's play	Present your games and then: Game on! See who can win the most tickets!