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Series and Parallel Circuits

Download Full Lesson Plan

(Full teacher resource documents are included)

Lesson Focus

Demonstrate and discuss simple circuits and the differences between parallel and serial circuit design and functions. Note: This lesson plan is designed for classroom use only, with supervision by a teacher familiar with electrical and electronic concepts.

Lesson Synopsis

The Series and Parallel Circuits activity encourages students to test two different circuit designs through the use of low voltage light bulbs. Students work in teams to predict the difference between the two circuit designs, and then build examples of the two different circuits using wires, bulbs, and batteries. After testing several predictions about each circuit type, the groups will compare results and discuss findings.

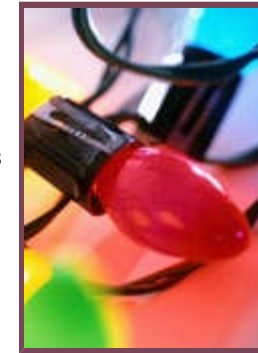
Age Levels: 8-14

Objectives

- Learn that different circuit designs result in different electrical behaviors.
- Learn about current flow and the operational differences between series and parallel circuits.
- Learn to predict outcomes and draw conclusions.
- Learn about teamwork and working in groups.

Anticipated Learner Outcomes

As a result of this activity, students should develop an understanding of:



- parallel and series circuits
- circuits and current flow
- making and testing predictions
- teamwork

Lesson Activities

Students perform experiments using two different types of circuit arrangements: series and parallel circuits. Students compare a set up of series and parallel bulbs, make predictions about how the circuit will function, record results, and discuss the circuits as a group.

Resources/Materials

- Teacher Resource Documents (attached)
- Student Worksheet (attached)
- Student Resource Sheets (attached)

Alignment to Curriculum Frameworks

Curriculum alignment sheet is included in [PDE](#).

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