

**Project FOCUS
Best Lessons
FIFTH GRADE**

Title of Lesson: Series and Parallel Circuits

Theme: Physical Science

Unit Number: B **Unit Title:** electricity and Magnetism

Performance Standard(s) Covered (enter codes):

S5P3

Enduring Standards (objectives of activity):

Habits of Mind

- Asks questions
- Uses numbers to quantify
- Works in a group
- Uses tools to measure and view
- Looks at how parts of things are needed
- Describes and compares using physical attributes
- Observes using senses
- Draws and describes observations

Content (key terms and topics covered):

Parallel Circuit, Series Circuit, Insulator, Conductor, Current

Learning Activity (Description in Steps)

Abstract (limit 100 characters): Students understand the difference between Paralel and Series Circuit

Details: Seperate the necessary components per group into individual plastic baggies before the lesson. Hand one bag to each group of students (4-5 per group). Instruct the students to build a series circuit with no initial input (1 wire will not be used). They should be able to do this. Help individual groups as needed. Instruct the students to unscrew 1 lightbulb. After this task is completed, instruct the students to build a parallel circuit. After all groups have constructed a parallel circuit, then instruct the students to remove 1 bulb and keep the other one light. A proper parallel circuit should be able to demonstrate this. If time permits clip the plastic bag inbetween wire to act as an insulator.

Materials Needed (Type and Quantity):

Per Group: Wire (4), Light bulbs (2), Battery (D cell), Battery holder

Notes and Tips (suggested changes, alternative methods, cautions):

Start by asking the students to name common household series and paralel circuits. Also possible ask the students to make a hypothesis about a series circuit. Battery holder can be made with

paperclips taped to the side of the battery with part of the clip touching the electrodes. A minor safety concern is that the students may pinch their fingers with the alligator clips on the wire.

Sources/References:

- 1) Georgia HSP Science 5th Grade Textbook**
- 2)**
- 3)**