

MODULE

Electronics

- Identify the following electronic components: transistor, diode, capacitor, LED, and resistor.
- Understand the function of various electronic components after wiring each component on a circuit board.
- Demonstrate knowledge of electronic components by assembling and soldering an electronic kit to produce a working circuit.

SESSION FOCUS

- 1 Solderless Circuits: Night-Light
- 2 Solderless Circuits: Invisible Beam Alarm
- 3 Solderless Circuits: Police Siren
- 4 Solderless Circuits: Touch Switch
- 5 Soldering Practice
- 6 Kit Assembly
- 7 Kit Assembly

Dear Parent,

As parents and teachers, we realize it can be hard to get a child to discuss what he or she is learning in school. We hope the information provided on this page will assist you in communicating with your child about what he or she is learning.

Your participation in the learning process is extremely important, as you are your child's best teacher.

For the next few days, your child will be learning about common electronic components and basic electronic circuits used today while completing the *Electronics* Module.

Words students will learn in this Module include:

- capacitor
- circuit
- circuit board
- light-emitting diode
- ohm
- resistance
- resistor
- schematic
- solder
- voltage

Questions for Discussion

During the course of this Module, your child will be assessed on key concepts and activities. You might want to discuss these concepts and activities with your child. He or she will be asked to:

- Identify the two metals that make up solder. (*Solder is an alloy made from tin and lead.*)
- Identify and describe a printed circuit board. (*A printed circuit board is a thin, nonconductive material, which is coated on one or both sides with a conductive material such as copper. Circuits are placed on the board using a photographic, etching, or plating process.*)
- Describe the correct method for applying solder to the electronic component. (*Carefully place the hot tip of the soldering iron onto the wire. The wire should be heated within a few seconds. Add the solder to the heated wire by touching the solder along the edge. Apply just enough solder so the bare wire is coated.*)

Student: \_\_\_\_\_

Parent: \_\_\_\_\_