Automobile Directional Turn Signal and Park Lighting

INTRODUCTION: This activity is designed to introduce the students to a basic turn signal and lighting system found on all automobiles.

OBJECTIVES: After completion of this activity, the student should be able to construct, diagnose, and understand the principle of an electrical lighting system.Voltage, Amperage and Resistance are all factors that should be measured and considered.

MATERIALS:

1. 2'* 2' piece of 1/2" plywood.
2. 5' 14 gauge wire.
3. Male and Female solderless wire connectors.
4. Electrical wire strippers.
5. Staple gun.
6. 4 - 1157 bulbs and bulb sockets w/ pigtail wires.
7. Heavy duty 12 volt flasher.
8. 3-way 12 volt switch.
9. 12v power supply.
10. 12v 20 amp circuit protector.
11. Wire nuts and black electrical tape.

PROCEDURES:

1. Design your circuit on paper.
2. Use Ohm's Law to calculate voltage drops, resistance, etc.
3. Prepare wiring harnesses and wire ends.
4. Assemble circuit and secure harnesses and other components w/ staple gun.
5. Attach power supply.
6. Turn on right and left turn signals (include front and rear).
7. Turn parking lights on.
8. Turn off circuit and disconnect power supply.

GRADING PROCEDURES:

1. First test successful = A
2. Second test successful = B
3. Third test successful = C
4. Fourth test successful = D
5. Fifth test successful = adds 10 points to next lab activity.
6. Incomplete testing = F