

ELECTRIC HOUSE PROJECT

Project Due Date: _____

For this project, you will construct and wire a model house according to the requirements below. *Most materials will be provided and excess should be returned to your teacher.*

A. The Building

Construct your building in any way you like, *as long as it meets these criteria:*

- has two rooms connected by a doorway or passage
- structural materials can include but are not limited to: cardboard, foamboard, shoeboxes
- your house must be *at least* 4" x 6" x 1' (close to the size of a shoebox)

B. Decorating

Your building is to be decorated neatly and:

- should reflect the purpose of the room (i.e. a refrigerator should not be in a bedroom)
- all inside surfaces of your box (walls, floors, etc.) must be covered
- some kind of 3D objects (tables, chairs, beds, etc) must be present in each room
- *you may **not** use premade furniture, toys, people, Legos, etc. **Everything must be made for this project.***
- all outside surfaces of your box must be covered; the outside should match the purpose of the building

C. The Wiring

To earn *full credit*, each circuit below must be present and working in class:

1. A series circuit room: two lights in parallel with each other and in series with two other lights (four lights total) with a switch in one room
2. A parallel circuit room: three lights in parallel with a switch in one room
3. A single outside light with a switch

Specifics:

- Switches can be made from brads and paper clips.
- Your house will be powered by a 9V battery so make an obvious **two leads** to attach your battery to during testing if you do not supply your own battery.
- Each circuit must be able to work independently from the other but both must be able to be on at the same time *without moving the battery.*
- Insulated wire and lights from holiday lights will be provided.
- You will need access to scissors, wire cutters and wire strippers.

D. The Circuit Diagram

You must provide one diagram for the complete circuit in your building. It must:

- be labeled and be complete including all electrical parts for each circuit
- use accurate circuit symbols
- be neat & drawn with a straight edge ruler
- fill an entire piece of 8.5"x11" paper

Switches made from 2 brass brads and one paperclip

