

Electric House Project

Your task is to create a model house with fully complete circuits as outlined below. You will be working in groups of 2-3 students and will be assessed according to how well you met the criteria.

Criteria:

Each “house” must include a minimum of the following:

- Four rooms with at least one light bulb per room (each room should have its own design/theme)
- A switch that will turn each light in each room on or off
- A main switch that will turn all four lights on or off at once
- All decorative materials used MUST be environmentally friendly, recyclable, and DIYed

You will be supplied with the following by your teacher:

- Wires
- Paper clips
- Scissors
- Light bulbs
- Fasteners
- Pencil crayons

Your group must supply your own 9 V battery and house-building materials (i.e. cardboard box, decorative materials, etc.)

Draw your schematic diagram (USE A RULER!) for this circuit below:

TEACHER CHECK: _____ (Must be checked and stamped/initialled before you can begin; DO NOT LOSE THIS SHEET! This will be handed in as part of your final assessment)

DUE DATE: _____

MARKING OF ELECTRIC HOUSE:

	Emerging	Developing	Proficient	Extending
Circuit Construction	<p>Circuit does not work and/or is not the correct circuit</p> <p>Master switch does not work or is missing</p> <p>Circuit diagram is incomplete and/or not correct</p>	<p>Circuit has a difficult time turning on and needs to be adjusted in order to turn the light(s) on</p> <p>Circuit only works once or twice</p> <p>Master switch controls most of the light bulbs, but not all</p> <p>Circuit diagram is done in pen</p>	<p>Each light bulb is controlled by a switch located in the room</p> <p>Circuit works, but switches are tough to manipulate</p> <p>Master switch controls the light bulbs, but are difficult to manipulate</p> <p>Circuit diagram is done with a ruler and pencil</p>	<p>Each light bulb is controlled by a switch located in the room</p> <p>Circuit works smoothly and lights can be turned on and off multiple times without needing to be adjusted</p> <p>The master switch controls all of the light bulbs and can be used multiple times without needing to be adjusted</p> <p>Circuit diagram is done with a ruler and pencil and is an accurate depiction of the circuit built</p>
Presentation	<p>Most wires are not trimmed and it is difficult to understand how the circuit is built</p> <p>Switches are located outside of the rooms and are difficult to access</p>	<p>Some wires are trimmed, but many can still be seen when looking at the house</p> <p>It is somewhat difficult to figure out which wire corresponds to which part of the circuit diagram</p> <p>Switches are located outside of the rooms</p>	<p>Most wires are trimmed, but can still be seen when looking at the house</p> <p>The electron pathway is somewhat easy to follow along with</p> <p>Switches are located in the rooms, but are difficult to access</p>	<p>Wires are trimmed and hidden from sight</p> <p>The electron pathway can easily be followed</p> <p>Switches are located in each of the rooms and are easy to access</p>
Creativity	<p>There is minimal or no design elements within the rooms of the house</p> <p>Design elements are taken from other places and cannot be recycled</p>	<p>Only one or two of the rooms have a design</p> <p>Some design elements are DIYed, but some are taken from other places</p>	<p>Each of the rooms have their own design</p> <p>Most pieces within the house are DIYed and can be recycled</p>	<p>Each of the rooms are well designed and have their own unique theme</p> <p>Both the inside and outside of the house is well decorated</p> <p>All pieces within the house are DIYed and can be recycled</p>
Conduct	<p>Student is often off task and requires many reminders to stay on task</p> <p>When faced with set-backs, student often asks for assistance from the teacher and/or stops participating in the assignment</p> <p>Student does not complete their part of the assignment and requires assistance from their group members to finish</p>	<p>Student is on task, but requires reminders from the teacher to stay on task</p> <p>When faced with set-backs, student often asks for assistance from the teacher</p> <p>Student does their part in the group assignment, but does not provide additional contributions</p>	<p>Student is on task, but can be distracted by either their group members or those around them</p> <p>When faced with set-backs, student tries to work together with their group but will ask the teacher for assistance</p> <p>Student participates in their group assignment and provides some contributions to their assignment</p>	<p>Student is always on task and makes effective use of class time</p> <p>When faced with set-backs, student tries to work together with their group in order to come up with a solution</p> <p>Student is hands-on and contributes fully to their group assignment. They provide various solutions and/or ideas to their project</p>

Individual assessment portion

***Occurs on the day that the assignment is due

/8

/40

For this project, I will be responsible for bringing to class...

My group members are...

1.) _____

Contact information: _____

2.) _____

Contact information: _____

For each of the days that we work on this project, students will be responsible for cleaning up their workstation at the end of the class. Please ask the teacher to check your workstation. This must be completed at the end of each work block before students can leave the classroom.

Day 1 Teacher Initial: _____

Day 2 Teacher Initial: _____

Day 3 Teacher Initial: _____

Day 4 Teacher Initial: _____

Day 5 Teacher Initial: _____