**Grade 9 Electricity Task Rubric**

This rubric is designed to communicate details of assessment criteria. Students should focus on success criteria and the provided checklist.

| **Part 1: Designing a Circuit Thinking /10** | | | | |
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|  | **Level 4** | **Level 3** | **Level 2** | **Level 1** |
| **Success Criteria:**   * I designed a circuit diagram that neatly and accurately meets the minimum required number of appliances and loads: * At least 3 appliances * 2 lights where one is controlled from the entrance and one from a desk. * A combination of series and parallel circuits. * I drew the minimum required number of series and parallel circuits to suit my design. * I included a practical number of switches in the correct locations to control appropriate loads. * I researched the power (watts) for each appliance and load in my design and completed cost calculations as learned in class. | An extensively detailed designed circuit diagram clearly indicates how a light can be controlled from both the entrance and desk area of the dorm room.  More than the required 3 appliances plus 2 lights with appropriate number and location of switches are included in the circuit diagram.  A combination of several series and parallel circuits is drawn and makes proper use of both lights and small appliances.  Each load’s (lights and appliances) power usage (watts) has been researched and values accurately used to calculate cost. | A designed circuit diagram clearly indicates how a light can be controlled from both the entrance and desk area of the dorm room.  A required 3 appliances plus 2 lights with appropriate number and location of switches are included in the circuit diagram.  A combination of series and parallel circuits is drawn and makes proper use of both lights and small appliances.  Each load’s (lights and appliances) power usage (watts) has been researched and values accurately used to calculate cost. | A designed circuit diagram somewhat indicates how a light can be controlled from both the entrance and desk and may include some errors.  Less than the required 3 appliances plus 2 lights with appropriate number and location of switches are included in the circuit diagram.  A combination of series and parallel circuits is somewhat accurately drawn and may make proper use of both lights and small appliances.  Each load’s (lights and appliances) power usage (watts) has been researched and values somewhat accurately used to calculate cost. | A circuit diagram is not drawn clearly or accurately and does not indicate how a light can be controlled from both the entrance and desk area of the dorm room.  More than 2 required loads/appliances are excluded and the appropriate number and location of switches are not present in the circuit diagram.  A combination of series and parallel circuits may not be drawn.  Each load’s (lights and appliances) power usage (watts) has not been researched and/or values not accurately used to calculate cost. |

| **Part 2: Cost and Access to Electricity Communication /10** | | | | |
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|  | **Level 4** | **Level 3** | **Level 2** | **Level 1** |
| **Success Criteria:**   * I neatly drew a circuit diagram using electrical symbols learned in the unit. * I neatly communicated the steps necessary to determine kilowatts, kilowatt hours, and cost of electricity for each appliance and load. * In an organized way, I showed the steps necessary to calculate the cost of electricity for my dorm room for 1 month and 1 year. * I chose a region in Ontario using the Energy Poverty tool provided in class. * I researched and communicated the reasons and circumstances unique to this region that explain why access to electricity is more challenging. * I included references written in APA style. | Correct electrical symbols have been used to draw more than the required circuit diagram.  Calculations and steps required to determine cost (watts, kW, kWh, price, cost) have been clearly and accurately communicated, and use the correct units throughout.  A region of “high home energy cost burden” in Ontario has been chosen using the provided online tool.  A detailed paragraph explanation, communicating reasons why the chosen region experiences “high home energy cost burden” is clearly written.  More than 1 research reference has been provided in proper APA format. | Correct electrical symbols have been used to draw the required circuit diagram.  Calculations and steps required to determine cost (watts, kW, kWh, price, cost) have been clearly and accurately communicated, and use the correct units throughout.  A region of “high home energy cost burden” in Ontario has been chosen using the provided online tool.  A paragraph explanation, communicating reasons why the chosen region experiences “high home energy cost burden” is clearly written.  1 research reference has been provided in proper APA format. | Some correct electrical symbols have been used to draw the circuit diagram.  Calculations and steps required to determine cost (watts, kW,kWh, price, cost) have somewhat clearly and not accurately been communicated. Units may or may not have been used.  A region of “high home energy cost burden” in Ontario may have been chosen using the provided online tool.  A paragraph explanation, communicating reasons why the chosen region experiences “high home energy cost burden” has not been included or is missing detail.  1 research reference has either not been provided or not written in APA format. | Incorrect electrical symbols have been used to draw the required circuit diagram.  Calculations and steps required to determine cost (watts, kW,kWh, price, cost) have not been clearly and accurately communicated, and the correct units have not been used.  A region of “high home energy cost burden” in Ontario may or may not have been chosen using the provided online tool.  A paragraph explanation, communicating reasons why the chosen region experiences “high home energy cost burden” have either not been completed or very little detail has been given.  1 research reference has not been provided in proper APA format. |