**Power – Assessment**

***Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Due Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***

***Task Sheet***

**Design a game board**

Plan an electronic game

* + Draw a circuit board layout
  + Design a series circuit
  + Game must include at least one of each of the following LED (or light bulb), Switch, battery, resistor
  + Create a list of possible materials you could use in your design, highlight the positives and negatives of each material
  + An explanation of all the components, their specifications and functions, included in the plan

**Construction of your game**

* Your game can be of any design you like. Some hints to get you started could be the game ‘Operation’
* Write a procedure list of how you constructed your game. The procedure list should include a materials and tools you would use in construction.
* Write a list of safety issues of all the tools and materials in your game design and how you would minimise these risks.

**Reflection**

* Describe your game and how it works
  + Discuss the conductors, resistors and insulators you have used and why
  + Discuss the energy transfers and transformations that occur in your game.
* Explain its good points and bad points
* What did you learn while you were planning and designing? What modifications did you need to make?
* Use illustrations to show the design of the game if you were to build it commercially.
* Evaluate the effectiveness of your design. How could you improve it? What are the limiting factors in your design?