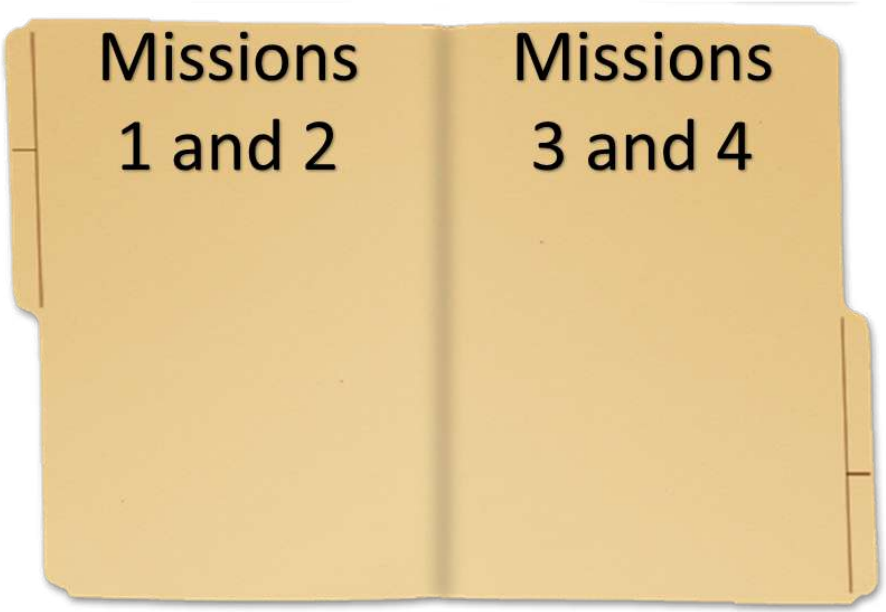
You Light Up My Life

Performance

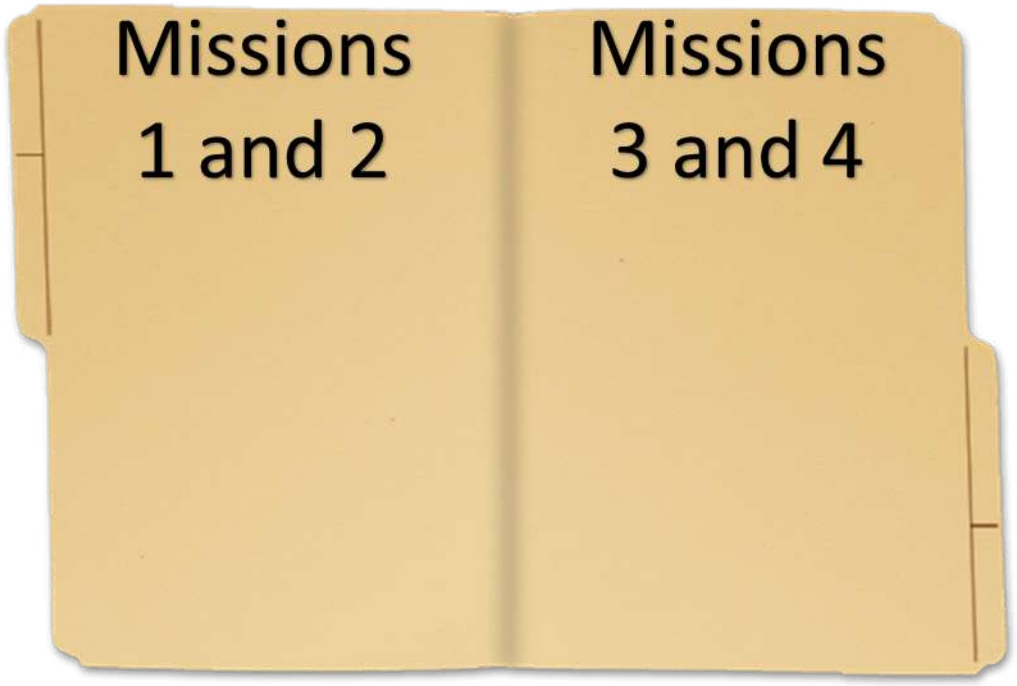
Group Performance: Mission 1

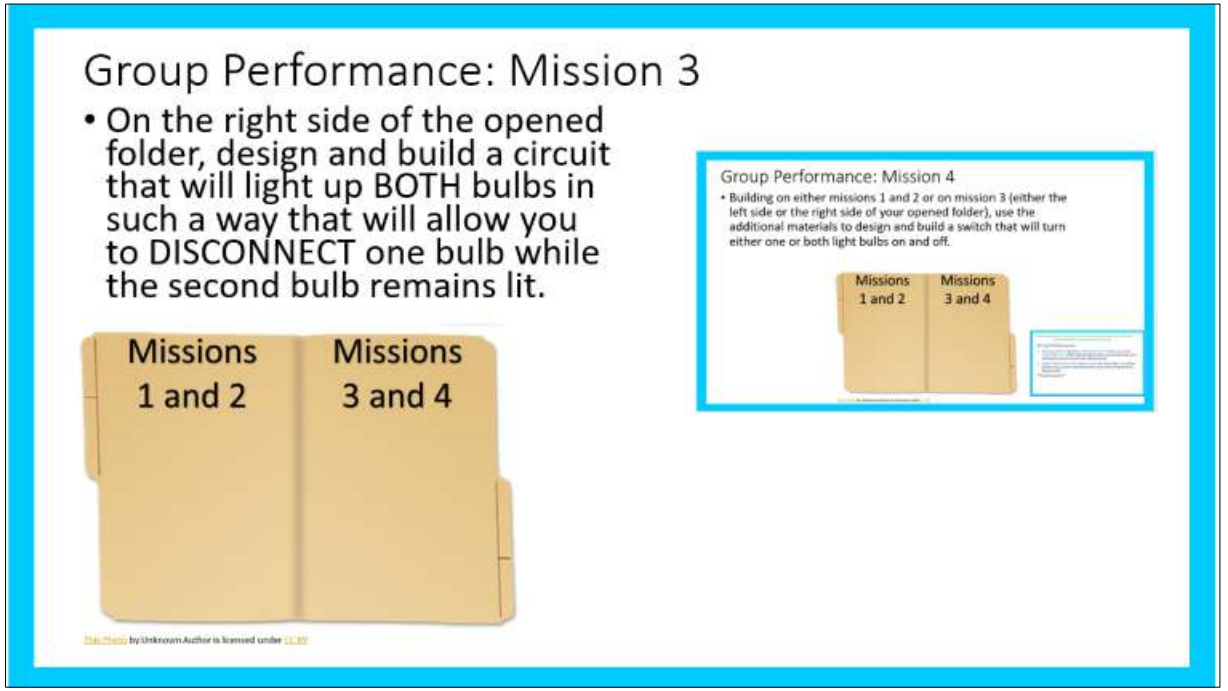
- Secure the materials you have been given onto the perimeter of the left side of the open file folder in such a way that 1 light bulb turns on.
  - File Folder
  - Aluminum foil
  - 9V battery
  - Christmas light bulb with wires attached.
  - Masking Tape



Group Performance: Mission 2

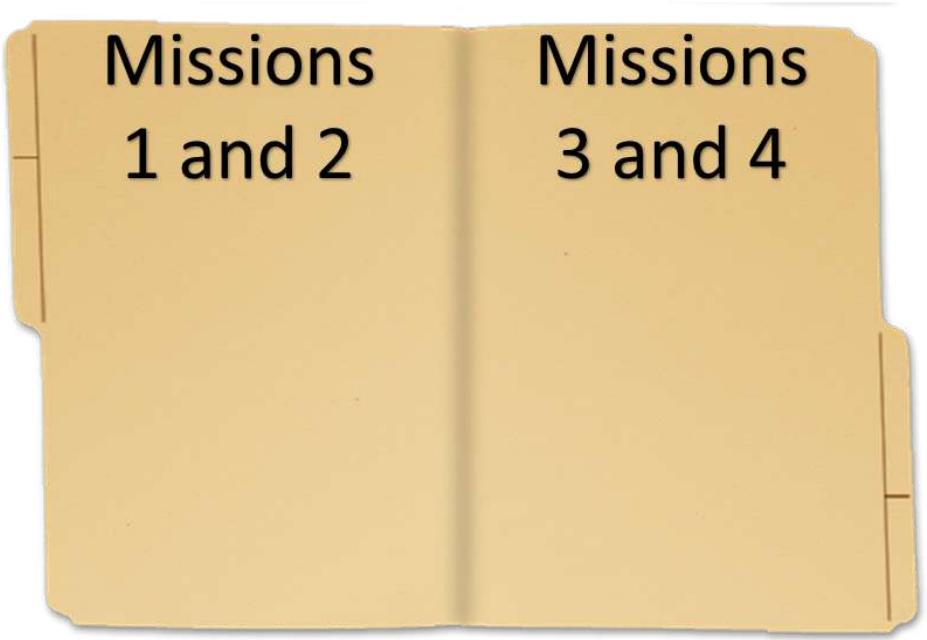
- Once you are able to light ONE light bulb, modify your circuit so that a SECOND bulb will also turn on.
  - File Folder
  - Aluminum foil
  - 9V battery
  - Christmas light bulb with wires attached.

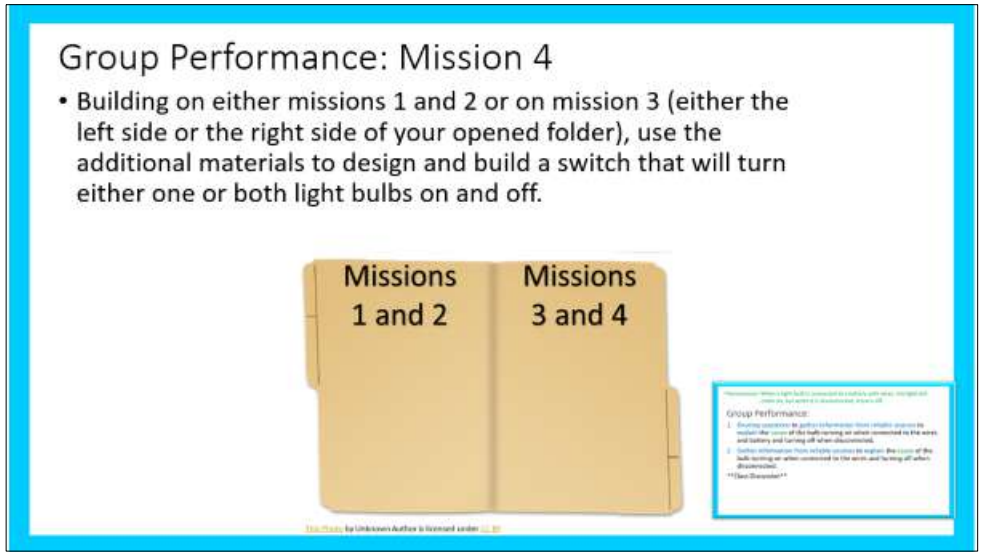




Group Performance: Mission 3

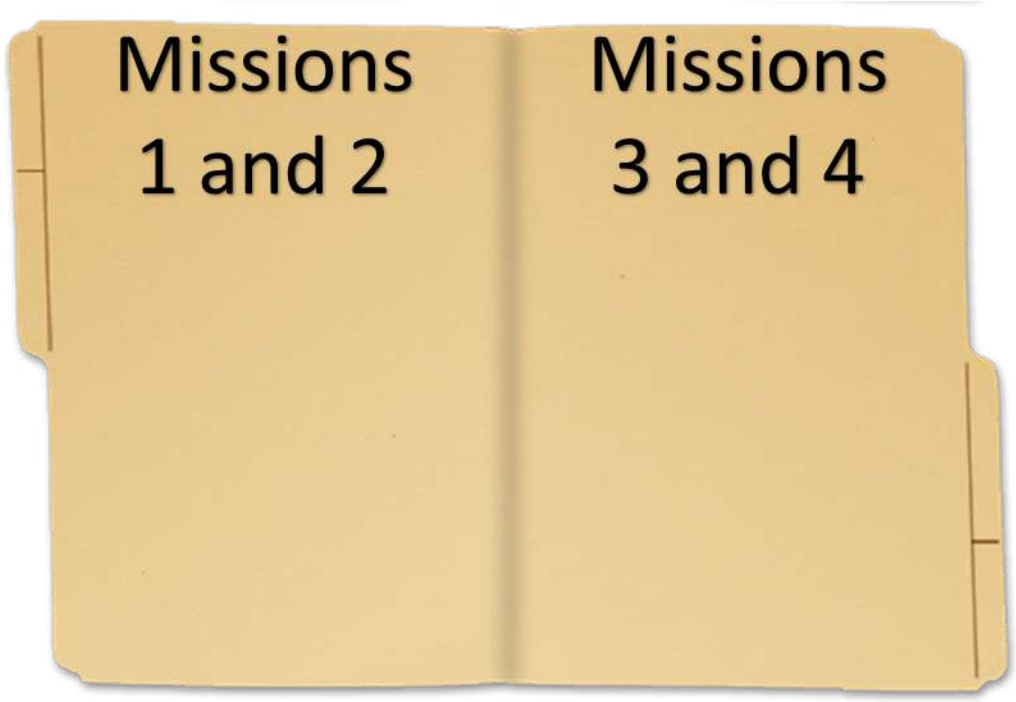
- On the right side of the opened folder, design and build a circuit that will light up BOTH bulbs in such a way that will allow you to DISCONNECT one bulb while the second bulb remains lit.

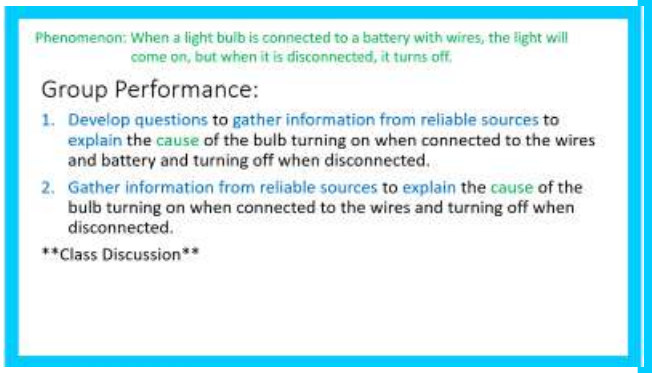




Group Performance: Mission 4

- Building on either missions 1 and 2 or on mission 3 (either the left side or the right side of your opened folder), use the additional materials to design and build a switch that will turn either one or both light bulbs on and off.





Phenomenon: When a light bulb is connected to a battery with wires, the light will come on, but when it is disconnected, it turns off.

Group Performance:

1. Develop questions to gather information from reliable sources to explain the cause of the bulb turning on when connected to the wires and battery and turning off when disconnected.
2. Gather information from reliable sources to explain the cause of the bulb turning on when connected to the wires and turning off when disconnected.

Class Discussion

Phenomenon: When a light bulb is connected to a battery with wires, the light will come on, but when it is disconnected, it turns off.

Group Performance:

3. Develop a model and use it to explain the cause of the lightbulb turning on when connected and turning off when disconnected.

Individual Performance:

4. Construct an explanation for the cause of the lightbulb turning on when connected and turning off when disconnected.

https://connected.mcgraw-hill.com

1. Chemical energy is stored in the battery.
2. When the wires are connected to the battery terminals in a closed loop (circuit), a reaction happens that pushes electrons through the wire.
3. When electrons pass through the bulb, electrical energy is transformed into light and thermal energy.