

Item #: \_\_\_\_\_

Electrical Circuits

Name: \_\_\_\_\_

- 1) Complete this activity sheet using the website: <http://www.learningcircuits.co.uk/learning.html> or google search: "learning circuits uk" and click the first link then click the "start" button.
- 2) Click the "play" button in the middle of the screen.
- 3) Select "your" character then click the green arrow on the right side of screen.
- 4) Type YOUR name in the box then click the green arrow on the right side of screen.
- 5) You will be using the buttons at the bottom of the screen.
- 6) Click "Electricity Basics" found at the bottom of the screen.

Electricity Basics: Complete the following by reading/scrolling through the pages.

Read the top gray speech bubble. Then below, the picture is an example of a European outlet.

1) Using inferencing skills and prior experiences, what do you think "mains" electricity means? Describe.	2) What would happen if we did not have a major power source (like Duke Nuclear Power Plant).	3) Batteries are another power source we use. List an advantage to using batteries:
		4) List a disadvantage to using batteries:

- 5) Sort the pictures into the correct boxes. Click the "check my answers" button to see if you are correct. Once you are correct fill out the table below, (you can just write the examples instead of draw)

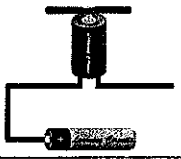
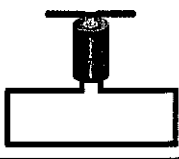
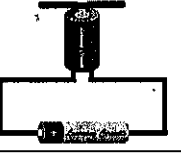
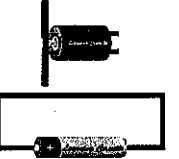
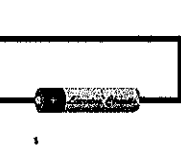
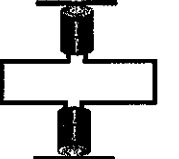
"Mains" Powered	Battery Powered

- 6) List three ways to be safe when around electricity:

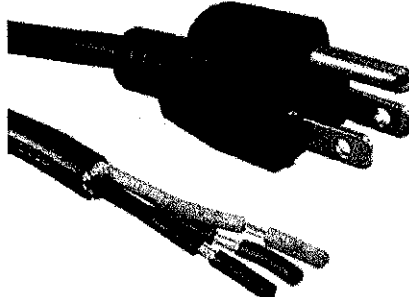
Next, click the "Simple Circuits" button at the bottom of the screen. Complete the following by reading/scrolling through the pages.

7) Electricity can only _____ if there is a complete _____	8) Describe how electricity can travel (your own words/summary).	9) What happens if there is a gap within the circuit?
10) Why does the light bulb not light?	11) Explain why this circuit is dangerous.	12) What three things do you need for a circuit to work?
13) Explain why wire is used.	14) What are the two sides of a battery called? Battery is also known as a "power source."	15) What is an electrical component (also known as a load)? List examples of electrical components.

16) Identify the following slides/pictures if the circuit would work AND IDENTIFY WHY or WHY NOT the circuit would work.—check your answers before moving on.

Example	Would it work? (Yes/No)	Why does it work or why not?	Example	Would it work? (Yes/No)	Why does it work or why not?
					
					
					

Next, click the "Insulators and Conductors" at the bottom of the screen. Complete the following by reading/scrolling through the pages.

17) What is an electrical conductor? List five examples of good electrical conductors—yes you will have to think of some more!	18) Describe an electrical insulator. List five examples of electrical insulators.
<p>19) Using the diagram, identify the components of an American plug.</p> 	
(Go to next page) Follow directions on the screen. Then identify below which are insulators and conductors.	
<u>Insulators</u>	<u>Conductors</u>