**** **TAPS Cymru Plan for Focused Assessment**

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| **Science and DT topic:**  Electricity (or Materials) | Year 4  Age 8-9 | | Title: Circuit products |
| **Enquiry Focus**  use equipment safely and revise design where necessary | | **Concept context**  Make simple circuits | |
| **Assessment Focus**   * Can children safely use equipment to make a bulb/LED light in a product? * Can children explain how they constructed and/or revised the design of their circuit product? | | | |
| **Activity** *Today we will be electrical engineers.*  Ask pairs to recap previous lessons on circuits by making a bulb light with a simple circuit (e.g. battery, bulb and 2 crocodile-clip wires - no rechargeable batteries because they get hot).  *If using LEDs: now try with an LED and pieces of wire (stripped at each end). NB. LEDs have a polarity – short leg to negative, long leg to positive. Take care not to make a ‘short-cut’ for the electric current or use too powerful batteries for the LED (which will make it ‘pop’).*  Discuss possible designs for using a circuit in a product e.g. circuit bug/butterfly, Christmas decoration, clown face, light house…  Support the children to design and make their own circuit product.  Talk with the children about how they are adapting their designs to ensure the circuit works inside the product. They can take and annotate photos/drawings, or explain to you how they made them work.  **Adapting the activity**  **Support:** Use one bulb or LED eg clown with light up nose.  **Extension:** Include a switch to turn product on and off.  **Other ideas:** What elsecould we make? Could we make a noisy product? (with a buzzer) Or a wobbly product? (with a motor)  **Questions to support discussion**   * What do you need to make the bulb/LED light? * How have you connected your components? * What happens if you turn the LED the other way around? * Can you show me the path of the circuit? * The circuit is not working like this, how could we adapt the design? * How can we turn it off? | | | |
| **Assessment Indicators**  **Not yet met:** Children cannot yet explain how they constructed their circuit to make the component work in their product, e.g. they may focus on the look of the product, rather than whether it works.  **Meeting:** Children can explain/draw/show how they connected the components to make a circuit in the product.  **Possible ways of going further:** Children may design a product with more than one working component and/or a switch. They will be able to explain how this affects the intensity of the components or any modifications they needed to make to get the same volume/brightness etc. | | | |