



Fy nhaith ddysgu yn Ngwyddoniaeth/Thechnoleg/TGCh

My learning journey in **Science** and Technology/ICT



Uned ymholi/Enquiry unit: *Do you have what it takes to be an Electrician?*

Gwybodaeth a dysgu blaenorol/Prior knowledge and learning:

Previously, you will have found out how energy can be transferred from one place to another and how this can be used to provide the energy we need in our modern lives. You would have also described the factors that affect electrical circuits and how these enable you to change variables and predict what will happen.

Yn ystod eich taith mi fyddwch yn ...

During your journey you will ...

- Explore different careers within STEM, including discovering the desirable skills and attributes of an Electrician.
- Outline the dangers of using electricity and how you can stay safe
- Draw and label a range of circuit symbols
- Compare and contrast electrical conductors and insulators, giving examples of each
- Wire a plug, identifying the three wires and their colours, positions and functions
- Use models to explore the differences between series and parallel circuits
- Investigate how we can measure current, voltage and resistance within circuits
- Experiment how switches can be used to control different components in parallel
- Research about the current issues regarding the mining of and long-term disposal issues of lithium car batteries
- Explore some of the real-life examples of static electricity including lightning storms

Yr ydym ar y daith hon oherwydd ...

We are on this journey because ...

- There are amazing career pathways and future opportunities for all of us in STEM. Electrical engineering is at the forefront of developing new technologies for a number of industries including transport, healthcare, construction and robotics
- Modern innovations in electrical engineering have informed, enlightened, and connected the world.
- Everything from transportation to communication needs the help of moving electrons. Without electricity, you couldn't microwave your lunch, play your favourite video game, or use social media.
- There are over 700,000 electric vehicles on the UK roads with 267,000 of them registered just last year alone. The need for an improved understanding of electronics is only going to increase as we move away from diesel & petrol engines.

Eich tasgau/Your tasks:

Tasg/k 1: **Summative Assessment:** Pre and post topic quiz

Tasg/k 2: **Home Learning Task:** The Future of Electric Cars

Tasg/k 3: **Practical Skills:** Resistance of a Wire Investigation

Tasg/k 4: **Creative Assessment:** Careers Focused Task

