



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 a **Materials Scientist**?*

Gwybodaeth a dysgu blaenorol/Prior knowledge and learning:

Previously, you will have recognised that changes in materials affect their properties and uses under different conditions, that our planet provides us with natural resources and what the impact of science and technology is, both past and present, on your everyday life.

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 a Materials Scientist
- Distinguish between an element, mixture and compound
- Explore uses, properties and benefits of using alloys
- Compare and contrast the properties of metals and non-metals
- Describe the properties and uses of the different forms of carbon
- Examine the key groups and properties of different elements on the Periodic Table
- Use chemical formula to represent numbers of elements in different compounds
- Explain the processes of evaporation, condensation, filtration and distillation
- Investigate dissolving using soluble and insoluble substances
- Explore some of the new materials that have recently been discovered

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
- Chemistry, and in particular, Materials Science, helps us to understand the World around us.
- It is important for us to understand what things are made of and why they behave as they do. By understanding more about the elements and their properties, we can make informed decisions, such as identifying whether a chemical is toxic or dangerous.
- Every year, new materials are being created or discovered that could transform our lives in the future. Materials such as graphene or carbon nanotubes bring unlimited opportunities for the materials industry. What could the future hold?
- As ambitious, capable learners, we are learning to undertake research and evaluate critically what we have found.

Eich tasgau/Your tasks:

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

Tasg/k 2: **Home Learning Task:** Periodic Table Creative Challenge

Tasg/k 3: **Practical Skills:** Dissolving Enquiry

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

