

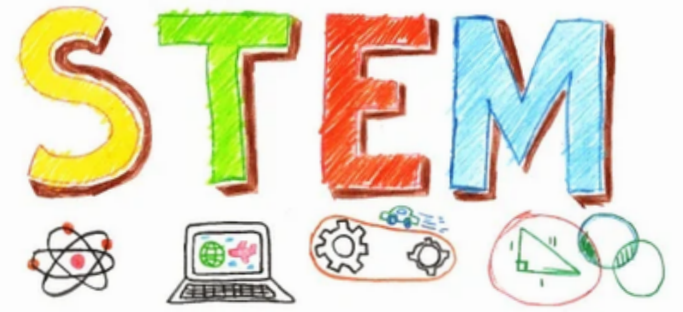


# STEM

## A Guide For Parents

### What is STEM?

STEM stands for **Science, Technology, Engineering** and **Mathematics**, and includes numeracy and digital skills. STEM allows us to make connections in the individual curricular subjects and enhance learning experiences in each.



### Why is STEM important?

Modern life is full of continuous changes that are largely driven by developments in STEM. Within Scotland, STEM related sectors of the economy have been growing faster than Scotland's economy as a whole and this trend is set to continue. This means there is a growing number and range of STEM jobs available for our learners as they grow. However, whether or not young people end up working in a STEM related job, they will require STEM knowledge and literacy to be active citizens within our increasingly connected world.



### What is STEM Capital?

STEM Capital can be thought of like a "science rucksack" that every student carries. It's the sum of all their STEM-related experiences, including who they know, what they think, and what they do outside of school. It includes their knowledge of STEM subjects, their interest in how things work, and even the conversations they have about technology or nature. Research shows that the more "capital" a child has, the more likely they are to see themselves as "science people," which significantly boosts their confidence and engagement in the classroom. By building this capital together at school and at home, we help our learners realise that they have the skills to solve real-world problems, opening doors to exciting, sustainable careers in Scotland and beyond.



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## Diversity within STEM

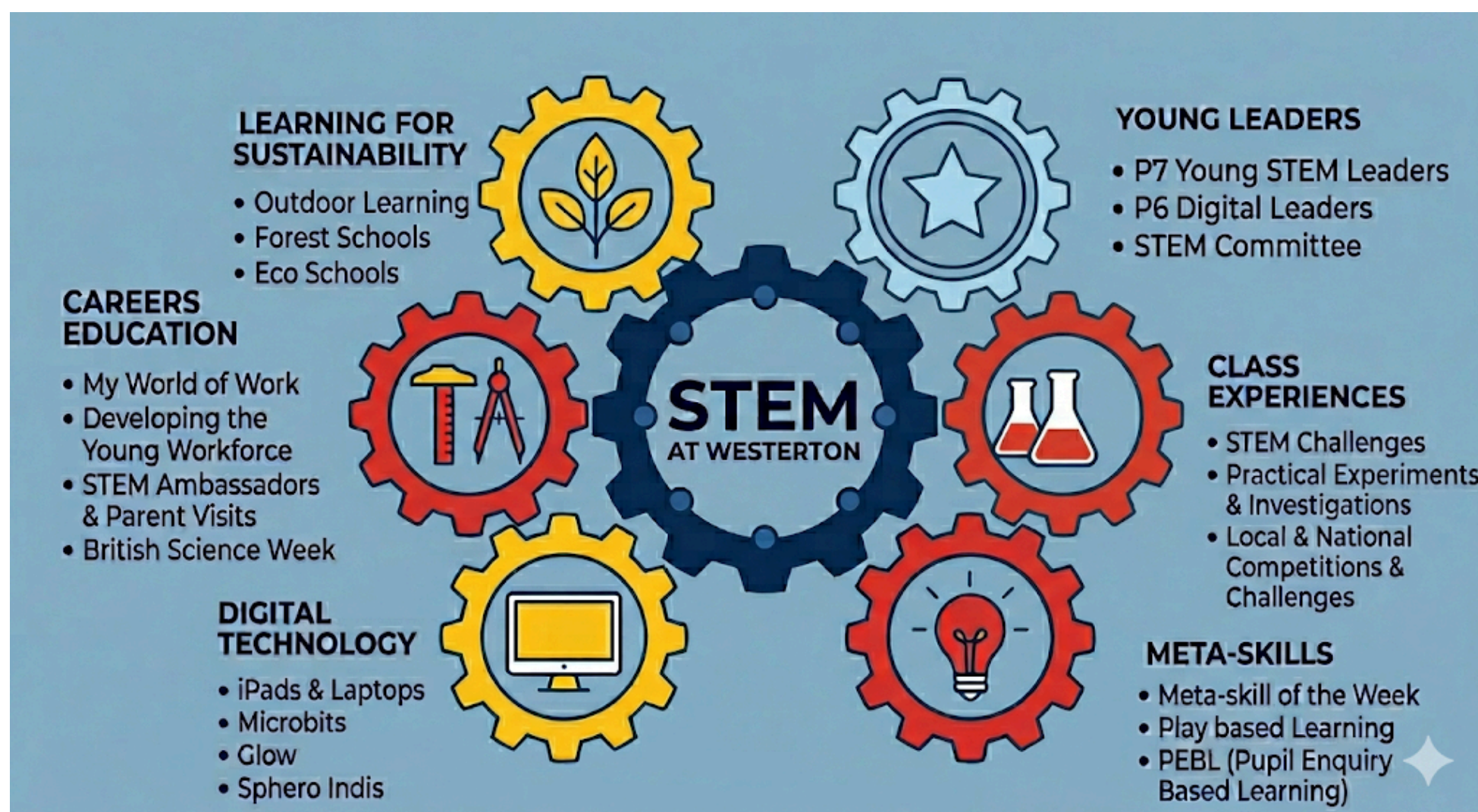
A vital part of growing STEM capital is ensuring that all children, particularly girls, see themselves represented within these fields. Historically, women have often been underrepresented in STEM careers, often due to a lack of pathways available or visible role models. At Westerton, we support and encourage all of our pupils to participate equally in STEM, ensuring gender balance in all areas of the curriculum. By highlighting the achievements of a range of scientists, mathematicians, and engineers (both past and present) we aim to challenge outdated stereotypes and show our pupils that STEM has no gender, race or age.

## How you can help:

- Emphasise the message: STEM subjects and STEM-based jobs are for everyone.
- Watch [Girl Toys v Boys Toys](#) to see how unconscious bias can contribute to gender inequality
- Take a look at [Let Toys Be Toys](#) and [Let Books Be Books](#) for useful information and resources
- Choose shops with the [Toymark](#) good practice award where the Toymark standard has been met

## STEM at Westerton

At Westerton we provide numerous opportunities for learners to develop their STEM skills and capital, both in and beyond the classroom.



## Supporting at Home

You are probably already helping to build your child's STEM Capital at home without realising. Simple activities such as baking, building with Lego, going on a colour/senses walk, making paper aeroplanes and conversations about science are all STEM! Here are some simple STEM starters for you to try at home. There are more available at [STEM Learning](https://www.stem.org.uk), using items you can already find around the house.

<p><b>Fantastic fruits,</b> Collect a selection of fruits. Are they all the same? Do you know what they look like inside? Look inside—what patterns do you notice? <a href="https://www.stem.org.uk/rx64kj">www.stem.org.uk/rx64kj</a></p>	<p><b>Garden/home treasure hunt</b> Create a rainbow collage by collecting coloured materials from your garden or home. <a href="https://www.stem.org.uk/rx33ho">www.stem.org.uk/rx33ho</a></p>	<p><b>What's in your house?</b> Find 5 things in your house. What are they made from? Can you name the properties of the different materials? <a href="https://www.stem.org.uk/rxq2rt">www.stem.org.uk/rxq2rt</a></p>	<p><b>Growing plants from the things you throw away</b> Collect the seeds from the fruit that you eat. Including tomatoes and squash. Do they all look the same? Plant them and observe how they grow. <a href="https://www.stem.org.uk/rx32mi">www.stem.org.uk/rx32mi</a></p>	<p><b>Imagine what your life would be like without plastic</b> Write a story or create a comic strip for 'a life without plastic'. Are all plastics the same? Do they all float? <a href="https://www.stem.org.uk/rx355t">www.stem.org.uk/rx355t</a></p>
<p><b>How does our body work?</b> Go outside and use chalk to draw around someone's body. Can you draw what is inside your body? What does each part do? <a href="https://www.stem.org.uk/rx34f3">www.stem.org.uk/rx34f3</a></p>	<p><b>Spooky sounds</b> Sit quietly for 60 seconds, make a list of everything you can hear. Try this in different places, indoors, outdoors or even in the bath. What do you think it would sound like in space? <a href="https://www.stem.org.uk/rxzum">www.stem.org.uk/rxzum</a></p>	<p><b>Excellent electricity</b> Make a list using words/drawings to find all the things in your home that use electricity. If you could keep only one item which would it be? Why? <a href="https://www.stem.org.uk/rxxxr">www.stem.org.uk/rxxxr</a></p>	<p><b>Fun with flight</b> Design and make a paper aeroplane that will travel the furthest. Does changing your design make it go further? <a href="https://www.stem.org.uk/rxfiv7">www.stem.org.uk/rxfiv7</a></p>	<p><b>Who would live in a house like this?</b> Design a creature that would live in the boot of your car, or the bottom of your bag. What special adaptations/characteristics would it have? <a href="https://www.stem.org.uk/rxq7nj">www.stem.org.uk/rxq7nj</a></p>

Further ideas to encourage your child:

- **Speak positively:** Use encouraging language to help them feel confident and capable in STEM.
- **Match their interests:** Show them how STEM subjects connect to the things they already love.
- **Link school to real life:** Research together the "how" behind everyday items, like mobile phones, video games, or even how chocolate is made.
- **Lead by example:** Share how you use STEM skills, like logic or problem-solving, in your own life and job.
- **Explore careers:** Look into the huge variety of cool and unexpected jobs that STEM can lead to.
- **Learn through play:** Build confidence with fun activities like baking, visiting museums, or watching nature documentaries together.



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## Useful Websites

<https://www.stem.org.uk/>

<https://www.glasgowsciencecentre.org/learn/gsc-home>

<https://education.gov.scot/parentzone/learning-in-scotland/curriculum-areas/stem>

<https://www.ashtongate.bristol.sch.uk/stem/>

<https://bollin-primary.com/school-life/curriculum/core-subjects/stem>

<https://www.audleyprimary.uk/school/stem>

<https://education.gov.scot/parentzone/Documents/lamaScientistMar16.pdf>

<https://www.lettoysbetoys.org.uk/>

<https://www.bbc.co.uk/teach/terrific-scientific>

<https://mykidscareer.com>

<https://www.myworldofwork.co.uk/>

<https://www.sserc.org.uk/resources/sserc-home-learning/early-years-primary-home-learning/>



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