

Reading is

**STEMSATIONAL**



The Reading is STEMsational project encourages schools to organise a week of STEM activities. At the heart of the project is the desire to use great books to inspire a love of STEM, and STEM topics to inspire a love of reading. Win-win.



## Project outline

The project partners are:

- **All About STEM** - [www.allaboutstem.co.uk](http://www.allaboutstem.co.uk) (STEM Ambassador Hub for Merseyside and Cheshire)
- **Reading Rocks** – [www.wherereadingrocks.com](http://www.wherereadingrocks.com)

We have curated, currently, three sets of texts, each linking to the National Curriculum for Science for Years 1-6 and covering the following themes:

- **Conservation**
- **Engineering**
- **Blue Planet**

Schools are able to loan these book sets to use as the basis for a week of STEM activities in school.

The book sets provide enough texts for a one-form entry school and consist of:

- **A whole school text to use as the focus and launch of the topic (12 copies)**
- **Individual class sets for Years 1-6, consisting of:**
  - Class driver text (15 copies)
  - Three sets of satellite texts (6 copies of each)
  - A couple of supplementary texts (2 copies of each)

Outline notes are provided to support use of the texts, though not lesson plans. Teachers are encouraged to incorporate their own new ideas or their existing planning and mould a project that is appropriate to their school's intake and local area.

Schools should use the texts to deliver their Literacy and Science curriculum during their STEM week, using the STEM theme of the texts as the springboard for all other subject lessons.

The driver behind the project, however, is not curriculum delivery. The curriculum, rather, becomes the vehicle for supporting the pupils' acquisition of **'science capital'** and development of **careers awareness and aspiration**.



Science capital<sup>1</sup> is a concept (developed by Professor Louise Archer at Kings College London) that can help us to understand why some young people remain engaged with science as they get older and others do not. In particular, it helps shed light on why particular social groups remain under-represented and why many young people do not see science careers as being 'for me'.

The concept of science capital can be imagined like a 'holdall', or bag, containing all the science-related knowledge, attitudes, experiences and resources that you acquire through life. It includes what science you know, how you think about science (your attitudes and dispositions), who you know (e.g. if your parents are very interested in science) and what sort of everyday engagement you have with science. Research has identified eight dimensions of science capital that together comprise what you know, how you think, who you know, and what you do. These things go beyond just the positive experience of science curriculum delivery in school.

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<sup>1</sup><https://www.ucl.ac.uk/ioe/departments-and-centres/departments/education-practice-and-society/science-capital-research>

## Supporting students' acquisition of Science Capital

There are lots of ways schools can enrich their STEM Week; trips, outside speakers, clubs, book fairs, art /craft activities, competitions, workshops etc. Each individual school will have their own ideas based on things they've used before, their local geography and the contacts they have amongst their staff, parent cohort and local community.

With a quick click in the Google search engine, teachers are able to find a wealth of **online resources** provided by a wide range of **organisations** that they might use to support their STEM Weeks and the topics relevant to their specific year group. The STEM Learning website has a huge collection of online resources available at [www.stem.org.uk/resources](http://www.stem.org.uk/resources)

**Off-site trips and visits** are a great way of enriching the STEM Week, however, it can be just as beneficial (and cheaper!) to organise a **local area visit**. You'll know best what exists in your locale that you could use to enrich your pupils' STEM Week experience, whilst also developing their awareness and knowledge of their community.

Schools could:

- Run an out-of-hours science fair
- Arrange a talk by a scientist
- Show a science-themed movie, open to the public or school families
- Organise 'stay and play' activities for parents and guardians using science-related games and tasks
- Invite in families to see the work pupils have done during STEM Week
- Present a themed assembly to which parents are invited
- Set themed 'to-do' lists or crafts, relating to your STEM topic, as homework tasks
- Provide lists of possible local science-themed days out
- Organise a themed social event in the community

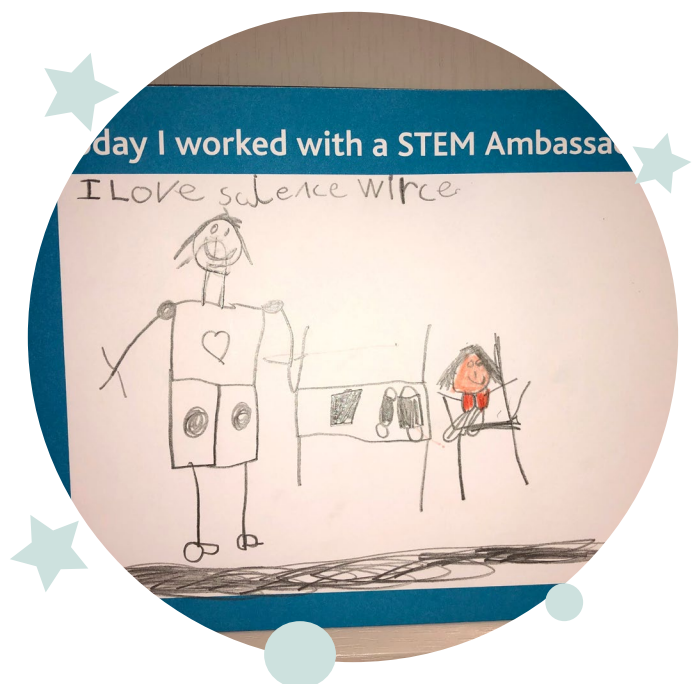
The possibilities are endless!

## Developing careers awareness through your STEM Week

The STEM week is also a perfect opportunity to use the curriculum to support the development of pupils' careers awareness. Schools should engage local employers, or individuals, to speak to pupils or to provide activities showcasing STEM careers. Engagement with real-life role models will help to develop pupils' understanding of the world of work, breakdown any stereotypes they have and develop their future aspirations.

Showcasing careers can be done in several ways:

- Drawing on the school's existing employer links where possible
- Using the skills and company links that exist within the parent community
- Staff calling on their own personal contacts and networks
- Making use of the national STEM Ambassador Programme



## STEM Ambassador Programme

The **STEM Ambassador Programme** aims to connect young people with volunteers from a variety of STEM backgrounds, helping them to get excited about STEM subjects and to recognise the links between the school curriculum and possible future career pathways. It is a national, government-funded scheme, coordinated centrally by **STEM Learning Ltd** and managed locally by regional **STEM Ambassador Hubs**.

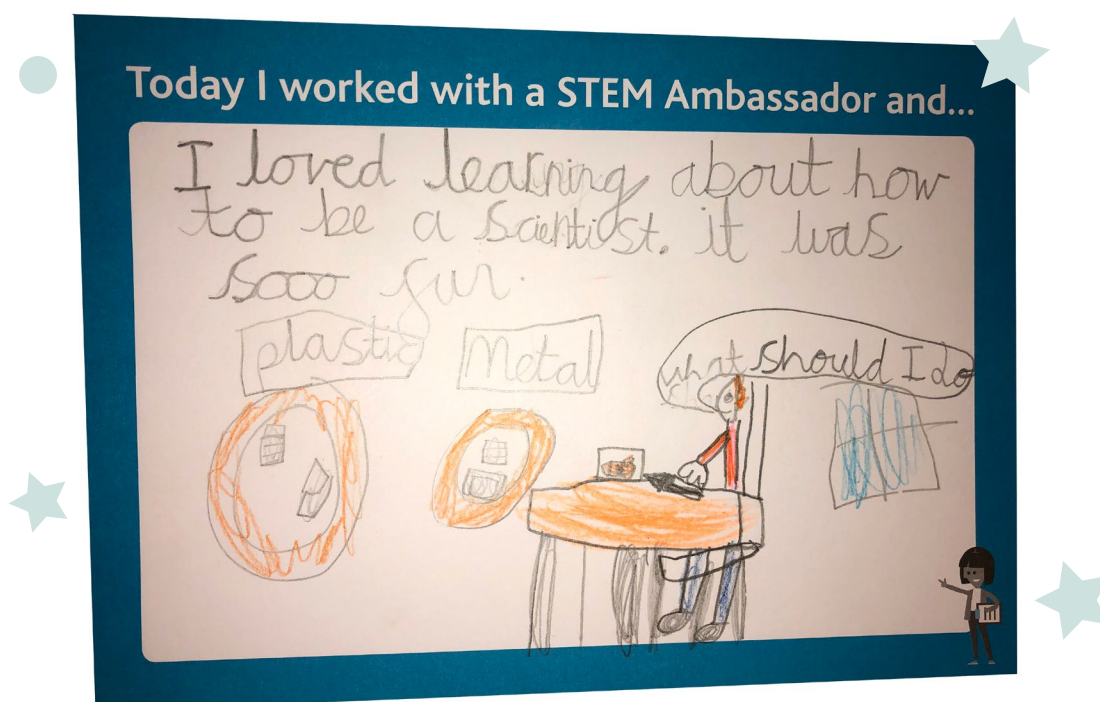
Volunteers from business, industry and academia, can sign up as STEM Ambassadors to share their expertise and experience with young people, encouraging them to consider whether STEM could be for them. Teachers, youth leaders and other organisations can request support from these volunteers for the STEM, or careers-focused, lessons or activities they are running

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## How to request STEM Ambassador support

1. Log in to your STEM Learning Teacher Account (or set one up) at [www.stem.org.uk](http://www.stem.org.uk).
2. On your 'Dashboard', click the 'Activities' link on the left-hand side, then select 'Advertise an Activity'.  
N.B. Ideally, we suggest 4-6 weeks minimum notice for advertising activities, to give volunteers a chance to plan their work diaries.
3. Complete the form that opens and provide information about your activity to help STEM Ambassadors decide whether they would like to offer to help.
4. Ambassadors will be able to view your activity online and express an interest in helping. You will be able to message them via the website to make arrangements.
5. Once the activity has taken place, you'll need to click the 'Ambassadors Confirmed' button on your activity page. This will log the activity on the Ambassadors' volunteering profiles. You, and also the Ambassadors who took part, will also receive an email asking for feedback about the activity.

For further information check out the '[Guide to Finding a STEM Ambassador](#)'<sup>2</sup> on the STEM Learning website, which includes a helpful video.



<sup>2</sup> <https://www.stem.org.uk/stem-ambassadors/find-a-stem-ambassador>