Inspiring Young People in STEM: Resources and diversity

Examples of online resources

Below is a selection of resources provided by institutions that you may be a member of. This is not a comprehensive list, so please do share your ideas and suggestions in the course.

STEM Ambassador activities collection

We will look at these examples in more detail during the course. If you are a STEM Ambassador, you are encouraged to draw upon the selected resources for your practical activity.

- STEM Ambassadors classroom activities collection [STEM Learning]

Institute of Physics

Marvin and Milo. Over 80 “Do try this at home!” experiments in cartoon format featuring Marvin and Milo, the Institute of Physics intrepid cat and dog team.

- Marvin and Milo [PDF]

You can request copies for these resources directly from the Institute of Physics.

Institution of Engineering and Technology

The IET Faraday website hosts the IET's collection of online teaching resources for both primary and secondary schools. The curriculum-linked teaching materials include classroom activities, films of engineering case studies, engineering profiles and more. One example is Properties of rock. What sort of rock would be best to drill through when constructing underground sewage tunnels?

Royal Society of Chemistry

Learn Chemistry is a good starting point here. Use this selection of short quizzes at the start of chemistry lessons to help embed the skills required for the transition to advanced level courses. The Starters for Ten series covers chemistry competencies, mathematical competencies, and practical competencies.

Royal Society of Biology

The Gopher Science Laboratory is an excellent resource that could be used with Primary and Secondary pupils. It includes “simple hands-on science activities to build children's confidence and encourage their natural curiosity to find out how and why everyday things work.”

Practical Action

Practical Action provides resources that focus on global issues including energy, climate change and disaster risk reduction. One example of their resources is Stop the Spread which is a STEM challenge that enables pupils to research the problem then use their STEM and communication skills to design a hand washing device and education materials for a primary school in Kenya.

Oxfam

Oxfam have real-life data that can be used to support students’ knowledge of data-handling and correlations. Bringing Data to Life is available for both 14-16 year age group and 11-14 years.

Further online resources

- The RNLI – Royal National Lifeboat Institution
- The RNIB – Royal National Institute of Blind People
- The Duke of Edinburgh Award
- Girlguiding
- The Science Museum Online Collection
- The Eden Project
- ZSL Whipsnade Zoo
- The National Museum of Wales