

STEM COMPETITION RESOURCE

INTRODUCTION & OVERVIEW

This resource has been developed to support the delivery of a STEM competition within your school. It is designed to run alongside normal classroom learning and can be used accordingly to suit individual school's topics, values and timeframes.

The key aims of running this competition is to:

- Help students gain an insight into environmental issues
- Develop student's employability skills
- Learn about a range of STEM careers
- Integrate opportunities for employer engagement into lessons

HOW DOES IT WORK?

We have designed the following two lesson plans:

1. 'The Big Issue' – This half day lesson explores issues around energy and waste and the environmental impacts these have on our planet. The lesson is designed to work with children in Y5 and Y6.
2. 'The Competition' – The STEM Competition has been developed to encourage pupils to unleash their creativity by developing an idea that saves energy and/or reduces waste. The lesson is designed to work with children in Y5 and Y6. Time wise this activity could last half a day, a whole day, or could be revisited over a series of lessons.

The lessons have been developed to be inclusive for younger or lower ability Y5 and Y6 pupils

For higher ability or older pupils, many slides include 'Deeper Learning Activity' suggestions in the notes section.

The lesson plans also build in 'Careers Related Learning' opportunities and include activities to help reflect on and develop key employability skills.

WHO ARE 'LEARN BY DESIGN'?

We work on behalf of schools, corporate and public sector clients to provide quality, value for money, educational products and services to inspire future generations. To find out more about us and the organisations we work with please visit www.learnbydesign.co.uk

CAREERS RELATED LEARNING

Career-related learning for primary-aged children is not about getting them to select a job. However, we know that career-related learning in primary is so important for other things, such as challenging stereotypes about certain career paths. Finding out about different careers whilst at primary school helps develop children's aspirations and allows them to explore all the opportunities in the world of work as early as possible.

The term 'career-related learning' includes early childhood activities in primary schools designed to give children from an early age a wide range of experiences of, and exposure to, education, transitions and the world of work. We highly recommend reading a research paper called '*Career-related learning in primary. What works?*'. This paper looks at the importance of career-related learning in primary schools and provides a range of key insights for practice. You can find the paper here:

https://www.educationandemployers.org/wp-content/uploads/2018/12/1145_what_works_primary_v6_digital9.pdf

We have taken three approaches to building career-related learning into our lesson plans:

1. **STEM Jobs:** A range of different jobs in the field of STEM are introduced throughout the lessons.
2. **Career Volunteers:** We have built opportunities into our lesson plans for you to invite volunteers from the world of work to visit your school, talk to your children about their careers and support your activities. Having the opportunity at primary school to meet a wide range of people doing different jobs is really important and hearing them talk about their careers can be so inspiring! There are some great online portals that you can use to link with employers and invite volunteers into your school. Here are a couple of them:

Primary Future: <https://primaryfutures.org/schools/how-to-sign-up/>

STEM Learning: <https://www.stem.org.uk/stem-ambassadors>

Careers and Enterprise Company: <https://www.careersandenterprise.co.uk/schools-colleges/join-our-network>

3. **Employability Skills:** Activities to reflect on and develop employability skills are built into the lessons. We have built in the 8 essential skills that the 'Skills Builder Partnership' have identified as being the skills that underpin success at every stage of life. Visit <https://www.skillsbuilder.org/> to learn more about the free Skills Builder Framework. It takes each of the eight skills and breaks them down into teachable and learnable nuggets - from the age of three through to adulthood.

