



The Big Bang

UK Young Scientists & Engineers Fair

Primary pre-Fair lesson

Lesson 1 of 2

Learning objective

- Students to understand how science, technology, engineering and maths are integral to how we live today.

Resources

- '10 great reasons to become a scientist or engineer' poster available to download at www.tomorrowengineers.org.uk/10-great-reasons
- Big Bang Challenge fold-out card included in teaching pack. All students will be provided with a copy at The Fair to complete.
- A teachers' resource pack will also be available at The Fair.

Starter

- Begin a discussion that reminds students of their upcoming trip to The Big Bang Fair.

Teaching input and lesson overview

- This lesson consists of two in-class discussions and an optional 'on the way to The Fair' activity.
- The discussions can be extended or shortened by the teacher depending on how much time is available.
- The discussions can be led by the teacher, or alternatively students can be divided into groups to discuss independently.
- There are many related resources that are aimed at students for future reference available at www.tomorrowengineers.org.uk/careers
- At the end of the lesson students should understand the reach of science and engineering in the world around us and how there are multiple ways of working in these roles.
- The lesson should end with a summary that students can continue and explore these topics at The Fair and that there is the opportunity to complete the Big Bang Challenge at The Fair which will be discussed in a post-Fair lesson.
- As an optional activity, there is a KWL chart included in the resource pack for students to fill out what they know already, what they want to know and what they learnt.

Not enough time for this lesson?

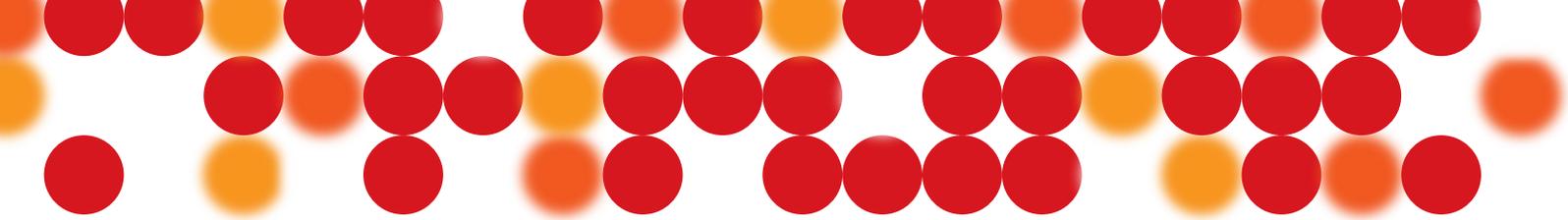
If you don't have time to dedicate a whole lesson to this discussion, you could always do it with your class while travelling to The Fair.

Assessment questions

- Do you know what science, technology, engineering and maths are?

Curriculum links

This activity begins to get students thinking about the options of careers in STEM.



Lesson in detail

1. Discuss with the class what each of the letters in STEM means. Then one by one, start to discuss what science, technology, engineering and maths are. Students should get to know what each subject is.

2. Ask the class to begin to name some objects that are science related and start to make a list on a large sheet of paper or the board (alternatively students can split into groups and compare lists with other tables).

Ideally the list will become quite long and varied to show that STEM is everywhere.

If the class is struggling ask them some prompt questions, such as:

- Who watches TV? What sort of subjects are needed to build a TV? How about the people who make the TV programmes?
- Similar questions could be posed around the topics of food, sport, household products e.g. shampoo.

3. Now start to get the class to discuss who might use STEM at work. Try to encourage them to think broadly outside of examples such as doctors, science teachers and scientists.

If the class is struggling, ask them some prompt questions such as:

- Video games use technology, what might you call a person who creates video games? Could there be more than one type of job involved in making them? E.g. someone to programme the code and someone to create the special effects.

4. To summarise, explain that people who make these objects, and who do these jobs, are scientists and engineers, and that the students will have an opportunity to meet people like this at The Fair.