

Museum visit

Engineer Your Future is a free interactive exhibition that aims to engage and inspire young people aged 11–15 about engineering careers.

This exhibition will encourage students to think like engineers and enable them to explore the skills engineers use every day. Students can discover how engineering has shaped our world and the wide variety of places and jobs a background in science and maths could take them.

The exhibition is free to visit, though school groups should book in advance. It is located on the third floor of the Science Museum's Wellcome Wing and is open until the end of December 2017.

Why visit?

Bring your class to Engineer Your Future to inspire them about some of the many careers that can be pursued by studying maths and science.

Research has shown that most young people believe that science qualifications only lead to a narrow range of jobs such as scientist or doctor.

The exhibition takes a skills-based approach, identifying key engineering skills and building exhibition experiences around them. Visitors can learn about and try out engineering skills, identify that a variety of inspiring engineers also use these skills in their work, and discover that this is something they might be able to do themselves.

This exhibition features films and games alongside examples of real engineers who have taken an interest in science as the basis for a variety of exciting engineering careers that can impact on all our lives.

How to use *Engineer Your Future* in your visit

The exhibition is divided into four areas with game or film exhibits. Three areas focus on the skills engineers use and one area looks into where they work.

You and your students can explore:

- Testing and improving skills
- Systems thinking skills
- Ingenuity and problem-solving skills
- Who are engineers and where do they work?

Further information about the exhibition and activities is given on the next page.

Book a visit for your class

Call 020 7942 4777

Science Museum
Exhibition Road
London SW7 2DD

Find out more

sciencemuseum.org.uk/learning
sciencemuseum.org.uk/engineeryourfuture
learning-resources.sciencemuseum.org.uk

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Bechtel
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This page summarises what you can see and do with your students in the *Engineer Your Future* exhibition at the Science Museum.

	Area summary	Learning outcomes	Questions for discussion
	<ul style="list-style-type: none"> Watch the short film <i>We Engineer</i> and see real-life engineers improving and testing faster racing yachts, safer houses and smarter prosthetics See the cutting-edge BeBionic prosthetic hand, the America's Cup racing yacht model and a model house and sea walls built to test tsunami defences featured in the film 	<ul style="list-style-type: none"> Engineering involves key skills such as improving, testing, making and adapting Engineers are always striving to make things better Engineering involves teamwork and communication 	<ul style="list-style-type: none"> What skills do these engineers use? What sort of things do engineers improve? What thing would you want to improve?
	<ul style="list-style-type: none"> Play our fun and challenging games to design and test some of the UK's most amazing complex systems including our power grid, rail network and airport baggage handling See the displays of engineers who use systems thinking in their everyday work 	<ul style="list-style-type: none"> Engineering involves key skills including systems thinking Systems thinkers juggle multiple factors to make a system that works; they need to understand and visualise complex networks, and cope with unexpected consequences Engineering involves teamwork and communication 	<ul style="list-style-type: none"> What factors or 'specifications' might you consider to make these systems work? (e.g. passenger numbers, eco points, safety, budget, supply v. demand, getting bags on planes) When have you juggled multiple factors to make something work in your life? How do you think life would be different if there weren't engineers to design the systems shown in the panels and games?
	<ul style="list-style-type: none"> It's time to try your hand at space-age engineering: create your own rover design and see if you can solve the problems of crossing an alien landscape See the display behind the game showing engineers using creative problem-solving in their everyday work 	<ul style="list-style-type: none"> Engineering involves key skills including creative problem-solving Engineers use creativity and novel thinking to find good solutions to problems 	<ul style="list-style-type: none"> What problems do you need to overcome on the terrain? (e.g. steep slopes, drops, gaps, gravel pits) What do you need to consider to solve these problems? (shape, number of wheels, size of wheels) Look at the panel behind the game showing a variety of engineers; what other problems are engineers trying to solve?
	<ul style="list-style-type: none"> Explore <i>FutureVille</i>, a city of the not-too-distant future, meet the engineers who work there and discover how engineers work everywhere, even in some surprising places See the display behind <i>FutureVille</i> with some of the routes you could take into engineering 	<ul style="list-style-type: none"> Engineering underpins every aspect of our lives There are many industries in which you can work and many roles you can fulfil There is more than one route into engineering, and engineering provides you with lots of career options 	<ul style="list-style-type: none"> Do any of the areas where engineers are working surprise you? What area most interested you? Do these jobs link with any of your interests or what you like to do in your spare time? Which route do you think suits you best?