

# British Science Week: careers in engineering

<b>Session summary</b> This session will introduce students to the variety of careers available in engineering, and the skills those careers require. They will challenge stereotypes they hold of engineers and understand the various route available into engineering.	<b>Suggested volunteers:</b> Engineers – particularly those in diverse fields, e.g. aeronautical, communications, robotics. If available, female engineers or those from minority backgrounds are best to involve as underrepresented demographics in engineering.
<b>Learning outcomes:</b> <ul style="list-style-type: none"> <li>Students will recognise the diversity of careers available within Engineering</li> <li>Students will understand the skills required to be an engineer and begin to identify these in themselves.</li> </ul>	
<b>Resources</b> <ul style="list-style-type: none"> <li>Presentation</li> </ul>	
<b>Pre-session preparation</b> <ul style="list-style-type: none"> <li>Speak to the volunteers over the phone and let them know what to expect from the session, as well as finding out about their career pathway and how they will tell their story.</li> </ul>	

Timings	Section content	Key objective and link to next section
0 – 2	<b>Welcome and introduction (slides 1 &amp; 2)</b> <ul style="list-style-type: none"> <li>Introduce the session and objectives.</li> <li>Mention that we have some volunteers who will be supporting the session (alumni not yet present in the room).</li> </ul>	
2 - 5	<b>What do engineers do? (slide 3)</b> <ul style="list-style-type: none"> <li>Students discuss the skills which you might need in different engineering pathways.</li> <li>Facilitate discussion around the need for communication skills, teamwork, creativity underscored by a curiosity in how things work.</li> </ul>	<b>Objective:</b> Students understand the skills required to be an engineer.  <b>Link:</b> 'Now that we have had a think about what engineering is all about, we have some real-life volunteers who are all engineers who can speak to us about their experiences.'
5 – 12	<b>Meet an engineer (slide 4)</b> <ul style="list-style-type: none"> <li>Introduce the former student(s) and ask them questions about their career pathway and challenges they have faced.</li> <li>Facilitator to ensure volunteers clearly highlight what they do day-to-day.</li> <li>To encourage students to ask questions if they don't have any the facilitator can ask students to come up</li> </ul>	<b>Objective:</b> Students gain insight into the reality of a career in engineering and challenge their assumptions.  <b>Link:</b> 'We're now going to have a think about the other kinds who people who are

	with questions in pairs or groups, ask them to write questions on post-it notes, begin questioning themselves, etc.	engineers, and what an engineer really looks like.'
<b>12 - 18</b>	<b>What do engineers look like? (slide 5)</b> <ul style="list-style-type: none"> <li>- Facilitator asks students to name physical qualities which they associate with engineers (e.g. male, white) with no pictures on the board.</li> <li>- Facilitator shows images of female and BME engineers, discussing each of their achievements in turn.</li> <li>- If you have female and/or BME engineers on your network, it would be good to include them here.</li> </ul>	<b>Objective:</b> Students challenge stereotypes of engineers and what they 'look' like.  (This is useful if the volunteers fit a more traditional stereotype of an engineer, i.e. middle-class white male.)
<b>18 - 20</b>	<b>Final advice and resources (slide 8-9)</b> <ul style="list-style-type: none"> <li>- Alumni give a final piece of advice to students: something they would say to themselves at 16/17.</li> <li>- Facilitator highlight resources available to students should they like to find out more about the profession and routes available.</li> </ul>	

<b>Comments and adaptations</b>
---------------------------------