

**Topic**

Women and girls in science

**Aims**

- To practise speaking skills in a discussion about women in science
- To develop vocabulary related to science
- To practice reading skills

**Age group**

Adults / Teens

**Level**

CEF level B2 and above

**Time**

Approximately 90 minutes

**Materials**

- Women and girls in science student worksheet
- Women and girls in science article from LearnEnglish  
<https://learnenglish.britishcouncil.org/magazine/international-day-women-and-girls-science>
- YouTube video link: <https://www.youtube.com/watch?v=iuJ1zp-QT8o>

**Introduction**

February 11 is International Day of Women and Girls in Science. In this lesson, students read an article about some of the reasons why there are fewer girls and women interested in working

in science, technology, engineering and mathematics (STEM) and what's happening to encourage equality in these fields. Students will have a chance to evaluate ways of doing this, as well as reading about alternative approaches. There are optional extension tasks at the end of the lesson.

### Procedure

<p><b>1. Lead in (10 - 15 minutes)</b></p>	<p>Ask students to think back to school and write down the three subjects that they liked the best and the three subjects that they liked the least. Help with any vocabulary they might need.</p> <p>Ask them to compare what they have written with a partner and explain what it was they liked or didn't like about those subjects.</p> <p>Then give the students the worksheet and ask them to discuss the question in Activity 1</p> <p>Get feedback from the students.</p> <p>Write STEM on the board. Explain that it is an acronym. Can students guess which school subjects are represented by these letters? (Answer: <i>Science, Technology, Engineering, Maths</i>)</p> <p>Do they think more men or women work in these fields? (In 2017, women made up 23% of the STEM workforce in the UK)</p> <p>In pairs, ask them to think about why this might be.</p>
<p><b>2. Task 1: pre-reading vocabulary task (10 minutes)</b></p>	<p>Give students a copy of the worksheet from LearnEnglish <a href="https://learnenglish.britishcouncil.org/sites/podcasts/files/LearnEnglish-Magazine-International-Day-Women-and-Girls-in-Science.pdf">https://learnenglish.britishcouncil.org/sites/podcasts/files/LearnEnglish-Magazine-International-Day-Women-and-Girls-in-Science.pdf</a>, or you could do the first activity online if you have access to a computer in your classroom.</p> <p>Do the preparation activity (vocabulary matching). Check answers and drill pronunciation of difficult words.</p>
<p><b>3. Task 2 - Reading for gist and discussion (15 minutes)</b></p>	<p>Give students the first part of the text (up to 'What can be to encourage girls to take up science as a career?'). You could either print the text and cut it up, or simply ask students to fold the text over. Ask students to read the text to check if any of their ideas from the lead-in are mentioned.</p> <p>Get feedback on what the main reasons are at each stage (Early years, making choices at school and entering the world of work).</p>

	<p>In pairs, ask students to brainstorm ideas for encouraging girls to take up science taking into account these reasons.</p>
<p><b>4. Task 3 - Reading to check ideas (10 minutes)</b></p>	<p>Ask students to share some of the ideas they have had. Then ask them to read the second part of the text to see if any of their ideas were mentioned.</p> <p>In pairs students could rank the ideas in the second part of the text according to how effective they think they would be.</p> <p>Get some feedback from the class.</p>
<p><b>5. Task 4 - video pre-watching task (5 minutes)</b></p>	<p>Tell students that they are going to watch a video made by the EU to encourage women and girls to study and work in science. Before they watch, ask them to read through the list of items in Activity 2. Check they understand all of them and help with any vocabulary.</p> <p>Ask students in pairs to tick which ones they would expect to see in this type of video.</p>
<p><b>6. Task 5 - Watch a video (10 minutes)</b></p>	<p>Show the students the video <a href="https://www.youtube.com/watch?v=iuJ1zp-QT8o">https://www.youtube.com/watch?v=iuJ1zp-QT8o</a> and as they watch tell them to <u>underline</u> the things that they see on the worksheet</p> <p>Students compare their answers</p> <p>In pairs, ask students to discuss their reactions to this video by discussing the questions in Activity 2.</p>
<p><b>7. Task 6: Information Gap (15-20 minutes)</b></p>	<p>Tell students that they are going to find out about an alternative approach to encouraging women and girls to take up science.</p> <p>Divide students into two groups, A and B. Give group A Text A and group B Text B about Dr. Jessica Wade. Each text has different missing information.</p> <p>Ask students to read their text quickly. Then ask them to focus on the missing information. Can they write the questions they will need to get the missing information from the other group. Monitor and help here with question formation</p> <p><b>Answers:</b></p> <p><i><u>Student A questions:</u> 1. What did she study after school? 2. What is she researching at the moment? 3. Why has she criticised some campaigns designed to encourage girls to take up science?</i></p> <p><i><u>Student B questions:</u> 1. What has she used Wikipedia for? 2. What percentage of biographies on Wikipedia are about women? 3. How</i></p>

	<p><i>many Wikipedia entries did she write last year? 4. What was she included in in December 2018?</i></p> <p>When students have the questions, regroup them into pairs (1A and 1B) and ask them to ask and answer their questions from the text.</p> <p>Ask students what they think about this approach to encouraging women into science - how effective might it be?</p>
<p><b>8. Optional extras: Suggestions for extension tasks</b></p>	<p>As an optional class (or homework) extension task, students could do some research into some successful female scientists, using Jessica's Wikipedia biographies as a starting point. Students can then give a mini presentation/report on their scientist in the next class:</p> <p><a href="https://en.wikipedia.org/wiki/Dorothy_Hodgkin">https://en.wikipedia.org/wiki/Dorothy_Hodgkin</a></p> <p><a href="https://en.wikipedia.org/wiki/Patricia_Bath">https://en.wikipedia.org/wiki/Patricia_Bath</a></p> <p><a href="https://en.wikipedia.org/wiki/Tu_Youyou">https://en.wikipedia.org/wiki/Tu_Youyou</a></p> <p><a href="https://en.wikipedia.org/wiki/Eugenie_Clark">https://en.wikipedia.org/wiki/Eugenie_Clark</a></p> <p><a href="https://en.wikipedia.org/wiki/Yvonne_Brill">https://en.wikipedia.org/wiki/Yvonne_Brill</a></p> <p>Alternatively, students could work in groups to come up with their own campaign ideas and slogan for encouraging women to take up science. This could take the form of a poster or video campaign for example. For more about setting up group projects, see:</p> <p><a href="http://www.teachingenglish.org.uk/article/project-work-teenagers">http://www.teachingenglish.org.uk/article/project-work-teenagers</a></p> <p>Another alternative would be to ask students to write a proposal to a school board outlining their ideas for promoting STEM studies and careers to women and girls. For more about writing proposals see:</p> <p><a href="https://learnenglish.britishcouncil.org/writing-purpose/proposals">https://learnenglish.britishcouncil.org/writing-purpose/proposals</a></p>

**Contributed by**

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