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**

| 1. Lead in (10 - 15 minutes) | 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.

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.

Then give the students the worksheet and ask them to discuss the question in Activity 1.

Get feedback from the students.

Write STEM on the board. Explain that it is an acronym. Can students guess which school subjects are represented by these letters? (Answer: Science, Technology, Engineering, Maths)

Do they think more men or women work in these fields? (In 2017, women made up 23% of the STEM workforce in the UK)

In pairs, ask them to think about why this might be. |
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Do the preparation activity (vocabulary matching). Check answers and drill pronunciation of difficult words. |
| 3. Task 2 - Reading for gist and discussion (15 minutes) | 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.

Get feedback on what the main reasons are at each stage (Early years, making choices at school and entering the world of work). |
In pairs, ask students to brainstorm ideas for encouraging girls to take up science taking into account these reasons.

4. Task 3 - Reading to check ideas (10 minutes)
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.
In pairs students could rank the ideas in the second part of the text according to how effective they think they would be.
Get some feedback from the class.

5. Task 4 - video pre-watching task (5 minutes)
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.
Ask students in pairs to tick which ones they would expect to see in this type of video.

6. Task 5 - Watch a video (10 minutes)
Show the students the video https://www.youtube.com/watch?v=iuJ1zp-QT8o and as they watch tell them to underline the things that they see on the worksheet
Students compare their answers
In pairs, ask students to discuss their reactions to this video by discussing the questions in Activity 2.

7. Task 6: Information Gap (15-20 minutes)
Tell students that they are going to find out about an alternative approach to encouraging women and girls to take up science.
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.
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

**Answers:**

**Student A questions:** 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?

**Student B questions:** 1. What has she used Wikipedia for? 2. What percentage of biographies on Wikipedia are about women? 3. How
### 8. Optional extras: Suggestions for extension tasks

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:

- [https://en.wikipedia.org/wiki/Patricia_Bath](https://en.wikipedia.org/wiki/Patricia_Bath)
- [https://en.wikipedia.org/wiki/Tu_Youyou](https://en.wikipedia.org/wiki/Tu_Youyou)

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: [http://www.teachingenglish.org.uk/article/project-work-teenagers](http://www.teachingenglish.org.uk/article/project-work-teenagers)

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: [https://learnenglish.britishcouncil.org/writing-purpose/proposals](https://learnenglish.britishcouncil.org/writing-purpose/proposals)