

Women in science

Topic

Women in Science

Learning outcomes

- Be aware of the relative lack of women in science and consider why this might be so.
- Be able to identify the main ideas in a semi academic text.
- Understand how reference words are used to link the ideas of a text together.

Age / level

Aged 13–17 and adults (B2–C1)

Time

50 minutes + 15 minutes additional reading (optional)

Materials

- Worksheet 1 (optional)
- Presentation

Introduction

This lesson will help raise awareness of some of the reasons why women are relatively poorly represented in science. The lesson begins by challenging some stereotypes and asking learners to consider why there aren't more women in science. They then read a text that provides some possible reasons and discuss how these relate to their own opinions. The lesson then focuses on reference words, and how they link a text together, before a final speaking task about different jobs and gender. Note: The presentation can be used for a paper-free lesson

Procedure

1. Lead-in (5 mins)

- Start the class by asking learners to solve the following logic problem. Ask any students who have heard it before not to say anything.

	<p><i>A father and his son are in a car accident. The father dies instantly, and the son is taken to the nearest hospital for surgery. The surgeon comes in and exclaims 'I can't operate on this boy.'</i></p> <p><i>'Why not?' the nurse asks.</i></p> <p><i>'Because he's my son,' the surgeon responds.</i></p> <p><i>How is this possible?</i></p> <ul style="list-style-type: none"> It's likely that at least some learners will find this difficult to solve because they will assume that the surgeon is a man. Use this to lead into the idea of women in science.
2. Discussion (10 mins)	<ul style="list-style-type: none"> Give out worksheet 1 and ask learners to read just the first paragraph (A) and find four facts about women in science. Let learners discuss what they found, and what they found surprising either in small groups or as a class. Answers: Only 12.8% of STEM jobs in the UK are held by women / 78% of students studying physics at school leaving age are boys / 52% of male undergraduates are studying science, compared with 40% of females. In the USA only 1/5 of physics degrees are awarded to women.
3. Task 2 (10 mins)	<ul style="list-style-type: none"> In pairs or small groups, ask learners to make a list of possible reasons (ex 2). Monitor, but don't take feedback at this stage.
4. Task 3 (15 mins) OPTIONAL	<ul style="list-style-type: none"> Ask learners to now read the rest of the article (paragraphs B–E) and identify the main idea in each paragraph. They should then compare the ideas with the ideas they had at the previous stage. Suggested answers: B: stereotypes that women don't do science, or if they do, the emphasis is still on their looks. C: women undervaluing themselves. D: bias against women – paid less and seen as less capable. E: difficulties with childcare or career breaks. Then allow learners to discuss the content of the article, using the questions in exercise 4. Depending on the group, this could be in groups or whole class.

5. Task 4 (15 mins)	<ul style="list-style-type: none"> Ask learners to read the grammar box and answer any questions. Then ask learners to look back at the beginning of the article and discuss what each highlighted word refers to. Go through the answers. Make sure that learners understand that a reference word can refer back to another specific word or phrase, or to an idea within the text. Note: Only the first three references are on the presentation. Answers: <ol style="list-style-type: none"> The proportion of boys studying science at school leaving age. The proportion of boys studying science being much higher than girls. University The fact that scientists in films and TV are usually men. Female scientists'. Students then work through exercise 6 individually, checking their answers against the text. Note: Only the first four gaps are in the presentation. Answers: 1 this. 2. their. 3. one. four. They. 5. their.
6. (10 mins)	<ul style="list-style-type: none"> In small groups, learners discuss these questions: Which of the jobs below are typically done by men or typically done by women? Are there any (good) reasons for this? Write the occupations on the board. Hairdressers / Mechanics / Care workers / Painters and decorators / Primary school teachers / Receptionists / Gardeners Learners can consider why this might be (Aptitude? Physical strength? Tradition?) and if there are any reasons why the jobs couldn't be done by the opposite gender.

Contributed by

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For more ideas related to this theme, go to the following pages:
International Women's Day. Video that celebrates IWD.

<https://youtu.be/xuhrquFmacE?si=BUoXnjnteshj7W8V>
Women and tech. A video from Facebook that encourages women and girls to get into the tech industry. https://youtu.be/Rj04gU_bwvI?si=T0nSXeNzcYt1nVsb