

What do STEM careers look like?

This activity enables students imagine what the life of a scientist is like and exposes stereotypes of STEM professionals. Participants draw a scientist at work and then discuss the common features. This enables discussion during which students can challenge dominant stereotypes about STEM work.

Step 1

Ask students to draw a picture of someone at work in their STEM discipline. Give students four minutes for the drawing task: ask them to just “dive in” and start drawing. We suggest using a drawing and caption approach, as on the [Design your Future](#) or [Engineer your Future](#) resource. You will find examples and analysis of student drawings [here](#) (student musicians) and [here](#) (pre-service teachers).

Step 2

Next, challenge students to list as many jobs as they can which employ STEM skills or are considered to be careers in STEM. Give students no more than two minutes for this task. If you use online tools such as GoSoapbox or Quizlet, students can watch and add to a list populated online.

Finally, ask students to list people they know in STEM. If students need to build their STEM networks or if you plan to have them find out more about possible careers, use the following resources.

[Learn how to network](#)

[Careers panel: How did you get here?](#)

Step 3

Share the drawings either in the classroom or online. Create a table and ask students to tally the common features (e. g. wild hair, glasses/safety glasses, lab coat, gender).

Step 4

Use the tally to generate discussion. Use the word ‘stereotypes’ sparingly as it can have negative connotations. Instead, use words such as beliefs and perceptions. You could start with:

- How many drawings show the person at work in a laboratory, mine site, engineering plant or computer lab?

- How many people are working alone?
- What are people wearing?

Step 5

Raise some of the following points. We use the example of a scientist here, so please adapt the questions to your students' disciplines. Foster an open discussion in a safe environment where peers are listened to and questioned rather than talking over the top of one-another and jumping to conclusions (making assumptions).

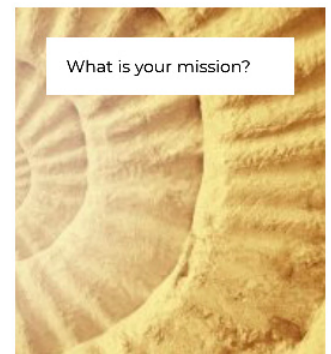
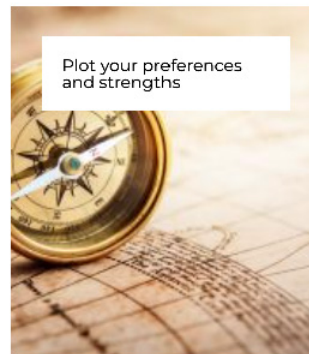
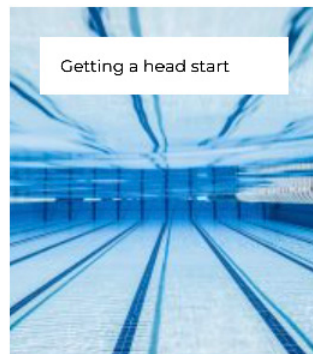
1. Are these common features true of all scientists? How do you know this?
2. What about scientists today, compared with scientists in the past?
3. When I asked you to draw a picture of a scientist/STEM worker at work, what you drew (generally speaking) was based on your beliefs about who scientists are and what they do. These beliefs may be accurate for only some scientists. These 'generalised beliefs' imply that all people or objects in a particular group are all the same: for example, all tall people make great basketball players; or no doctors can write neatly. Such beliefs or claims are not always true.
4. Humans, and other animals, hold generalised beliefs about lots of different things and often these beliefs are very helpful. You might believe that a stranger on the street, walking along swinging a knife, for example, should be avoided because he or she might be dangerous. A bird might 'believe' that a squiggly looking object on the ground (shaped like a snake) should be avoided because it is dangerous. Such generalised beliefs in these instances help to keep us safe and they save us the hassle of testing out each new situation (and risk harming ourselves or others).

Think about your own beliefs in relation to who scientists are and what they do.

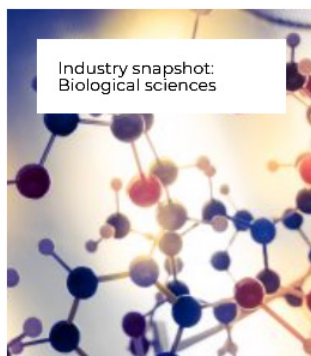
- a. To what extent do your beliefs about science work fit with what you would like your career to look like?
- b. What more might you want to find out?
- c. How does learning about science and the idea of becoming a scientist make you feel? Explain why?
- d. Does advertising, social media, news stories make you think about working STEM make you feel encouraged? Why/why not?

Extra resources

Students will find the following resources very useful when conceptualising possible careers.



Students might also like to look at some industry snapshots. We have two snapshots on the Developing employABILITY [STEM toolkit](#):



Please refer to the toolkit for a list of STEM-related career resources from around the world.

Adapted by Dawn Bennett from STEM Careers Pack 1, Government of South Australia Department for Education and Child Development. See the Royal Institution of Australia riaus.org.au/education for more information

Developing Employability is led by Professor Dawn Bennett, Curtin University, Australia. The work is supported by the Australian Government Department of Education and Training.

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