

# Career resources

## Science

### Activity collection – years 9–10

#### **Introduction**

These resources are suitable for students in years 9–10.

They are aligned to the Australian Curriculum and relate to the Australian Curriculum learning area of Science

This selection will provide you, as an Australian educator, with tools to help build your own and your students' career development awareness.

If you are an Australian teacher or preservice teacher you can access these resources via Scootle, the national digital learning resources portal that contains more than 20,000 digital teaching and learning resources.

#### **Log in to Scootle**

Using your school or teacher training institution email account, [log in to Scootle](#).

#### **Not registered? Accessing resources on Scootle**

These resources can only be accessed by teachers working in Australian schools (using their school email accounts), and by preservice teachers in Australian education institutions (using their institution email accounts). [Register now](#).

Not sure if you are eligible? View [Frequently asked questions](#).

## Careers with STEM: Science and health teacher notes

|  |  |                                     |                            |                                     |                          |                                     |
|--|--|-------------------------------------|----------------------------|-------------------------------------|--------------------------|-------------------------------------|
| <b>Resource ID</b>                                     | M021754  |                                     |                            |                                     |                          |                                     |
| <b>Link to resource</b>                                | <a href="http://resolver.thelearningfederation.edu.au/?rft_id=10257/5870667">http://resolver.thelearningfederation.edu.au/?rft_id=10257/5870667</a>  |                                     |                            |                                     |                          |                                     |
| <b>Resource description</b>                            | The Careers with STEM Teacher Notes are for teachers, careers counsellors, parents, STEM-based institutions, or mentors that could use the guides to expose and inspire students towards STEM careers. These notes focus on careers with science or careers with health.   |                                     |                            |                                     |                          |                                     |
| <b>Relevance of resource to careers education</b>      | <p>The Careers with STEM series includes four quarterly magazines, along with website articles, teacher resources and videos across four STEM areas: science, technology, engineering and maths.</p> <p>The focus is on independent inquiry and constructivist learning through the application of a range of general capabilities that can ‘bridge the academic and vocational divide, providing young people with the resources to navigate the future.’* Each magazine issue provides inspiring stories, career role models, job statistics and first step action points towards the careers of the future, and is based on the premise of discovering new areas of innovation through <i>STEM + X</i> – where X is another field of study, a personal passion, or a world-changing goal.</p> <p><small>*Kate Torii and Megan O’Connell, March 2017. Preparing young people for the future of work. <i>Mitchell Report</i> 01/2017.</small></p> |                                     |                            |                                     |                          |                                     |
| <b>Australian Curriculum Work Studies category/ies</b> | Career development and management  | <input checked="" type="checkbox"/> | Entrepreneurial behaviours | <input type="checkbox"/>            | Gaining and keeping work | <input type="checkbox"/>            |
|  | Learning to learn  | <input checked="" type="checkbox"/> | The nature of work         | <input checked="" type="checkbox"/> | Work skills              | <input checked="" type="checkbox"/> |

## Bringing engineering to life: STEM careers

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| <b>Resource ID</b>                                     | M019742  |                                     |                            |                                     |                          |                                     |
| <b>Link to resource</b>                                | <a href="http://resolver.thelearningfederation.edu.au/?rft_id=10257/5871187">http://resolver.thelearningfederation.edu.au/?rft_id=10257/5871187</a>  |                                     |                            |                                     |                          |                                     |
| <b>Resource description</b>                            | This is a unit of work on engineering, the range of possible occupations in engineering and the future and ethics of engineering. The resource includes: an introduction with teacher notes, student tasks, embedded videos and links to additional resources. The resource aims that students learn broadly about engineering and that there are many types; and that students consider and appreciate the important role of engineering today, throughout history and into the future. Topics covered include defining engineering; meeting engineers; engineering wonders and who made them; and ethics in engineering. The resource is a career resource written for both classroom teachers and career counsellors. |                                     |                            |                                     |                          |                                     |
| <b>Relevance of resource to careers education</b>      | This is a useful resource for the year 9 Science curriculum. It is particularly useful for the content description Use and influence of science, which refers to the fact that advances in science and technology affect people's lives and create new career opportunities. Task 2: Getting to know some engineers is particularly relevant here, as it includes three videos of interviews with engineers discussing their work, with associated student tasks. Task 6: If I were an engineer is also relevant, as it asks students to reflect on their own career aspirations on completion of the unit.  |                                     |                            |                                     |                          |                                     |
| <b>Australian Curriculum Work Studies category/ies</b> | Career development and management  | <input checked="" type="checkbox"/> | Entrepreneurial behaviours | <input type="checkbox"/>            | Gaining and keeping work | <input type="checkbox"/>            |
|  | Learning to learn  | <input checked="" type="checkbox"/> | The nature of work         | <input checked="" type="checkbox"/> | Work skills              | <input checked="" type="checkbox"/> |

## Unconscious bias: You can be a scientist: STEM careers

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| <b>Resource ID</b>                                     | M019899  |                                     |                            |                                     |                          |                                     |
| <b>Link to resource</b>                                | <a href="http://resolver.thelearningfederation.edu.au/?rft_id=10257/5871192">http://resolver.thelearningfederation.edu.au/?rft_id=10257/5871192</a>  |                                     |                            |                                     |                          |                                     |
| <b>Resource description</b>                            | <p>This is a unit of work about the work of scientists and science careers; particularly what common stereotypes, prejudices and perceptions exist regarding who can or should become scientists. The resource includes: an introduction with teacher notes, student tasks, embedded videos and links to additional resources. Specific topics explored include stereotypes; scientists at work; and participation of girls and women in STEM. The resource is a career resource written for both classroom teachers and career counsellors.</p> |                                     |                            |                                     |                          |                                     |
| <b>Relevance of resource to careers education</b>      | <p>The resource is also very useful for the year 9 Science curriculum – particularly the content description relating to the way the values and needs of contemporary society can influence the focus of scientific research. Task 5 is relevant to this as it explores why few people, especially women, are taking up STEM Career pathways.</p> <p>This is a very valuable source of information for the year 9 and 10 Work Studies curriculum, particularly for the sub-strand Career development and life design</p>                         |                                     |                            |                                     |                          |                                     |
| <b>Australian Curriculum Work Studies category/ies</b> | Career development and management  | <input checked="" type="checkbox"/> | Entrepreneurial behaviours | <input type="checkbox"/>            | Gaining and keeping work | <input type="checkbox"/>            |
|  | Learning to learn  | <input checked="" type="checkbox"/> | The nature of work         | <input checked="" type="checkbox"/> | Work skills              | <input checked="" type="checkbox"/> |

## Science futures: Teacher guide

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| <b>Resource ID</b>                                     | M020761  |                                     |                            |                                     |                          |                                     |
| <b>Link to resource</b>                                | <a href="http://resolver.thelearningfederation.edu.au/?rft_id=10257/5868495">http://resolver.thelearningfederation.edu.au/?rft_id=10257/5868495</a>  |                                     |                            |                                     |                          |                                     |
| <b>Resource description</b>                            | <p>This teacher guide provides an overview of a unit of work on the future of science, with an emphasis on the nature of science, emerging technologies and potential applications, and the development of science literacy including science in the media, science innovators and political policy. Designed as a culminating unit in the Science by Doing series, the unit provides opportunities to reflect on scientific achievement and to explore the possibilities of the future. This resource includes background information, a unit outline, glossary of terms, student worksheets, and assessment suggestions. This Science By Doing resource is part of a comprehensive resource containing three parts: a student guide (Student pages), student digital notebook (Student e-Notebook), and this teacher guide. All are included in this resource, although they are available separately.</p> |                                     |                            |                                     |                          |                                     |
| <b>Relevance of resource to careers education</b>      | Part 5 has a career focus.   |                                     |                            |                                     |                          |                                     |
| <b>Australian Curriculum Work Studies category/ies</b> | Career development and management  | <input checked="" type="checkbox"/> | Entrepreneurial behaviours | <input type="checkbox"/>            | Gaining and keeping work | <input type="checkbox"/>            |
|  | Learning to learn  | <input checked="" type="checkbox"/> | The nature of work         | <input checked="" type="checkbox"/> | Work skills              | <input checked="" type="checkbox"/> |

## Meet a scientist

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| <b>Resource ID</b>                                     | R10706  |                                     |                            |                                     |                          |                          |
| <b>Link to resource</b>                                | <a href="http://resolver.thelearningfederation.edu.au/?rft_id=10257/5830011">http://resolver.thelearningfederation.edu.au/?rft_id=10257/5830011</a>   |                                     |                            |                                     |                          |                          |
| <b>Resource description</b>                            | This collection of 20 digital curriculum resources investigates the life and work of scientists from a range of scientific endeavours. It is organised into five categories - environmental scientists, life scientists, physical scientists, earth scientists and the qualities of a research scientist. Interactive learning objects can be used to explore and collect biographical data from which scientific profiles can be developed. Several audio and video resources discuss the nature of the work of particular scientists. |                                     |                            |                                     |                          |                          |
| <b>Relevance of resource to careers education</b>      | <p>This resource:</p> <ul style="list-style-type: none"> <li>• explores the nature of work within science</li> <li>• illustrates how scientists live and work</li> <li>• provides biographical information about scientists at work, their professional activities and personal interests</li> <li>• demonstrates real-world applications of science.</li> </ul>  |                                     |                            |                                     |                          |                          |
| <b>Australian Curriculum Work Studies category/ies</b> | Career development and management   | <input checked="" type="checkbox"/> | Entrepreneurial behaviours | <input type="checkbox"/>            | Gaining and keeping work | <input type="checkbox"/> |
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## CSI: a job in criminology

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|--|--|-------------------------------------|----------------------------|-------------------------------------|--------------------------|-------------------------------------|
| <b>Resource ID</b>                                     | M018015  |                                     |                            |                                     |                          |                                     |
| <b>Link to resource</b>                                | <a href="http://resolver.thelearningfederation.edu.au/?rft_id=10257/5860347">http://resolver.thelearningfederation.edu.au/?rft_id=10257/5860347</a>  |                                     |                            |                                     |                          |                                     |
| <b>Resource description</b>                            | Would you like to know what it is like to work in the field of criminology? In this clip, crime scene investigator Isabel Logan describes her job, including what she does, the equipment she uses and why she enjoys it. Watch this clip to find out how real-life CSI differs from the way it's portrayed on television shows.   |                                     |                            |                                     |                          |                                     |
| <b>Relevance of resource to careers education</b>      | <p>Teachers can use this video to encourage students to explore career information related to the field of criminology.</p> <p><b>Suggested activity:</b><br/>           After viewing, ask students to find out about another job in criminology or a related field, such as forensic science. Students can visit the <a href="#">Australian Institute of Criminology's website</a> or the ABC's <a href="#">Ace Day Jobs website</a> to find job descriptions, personal requirements and pathways.</p> |                                     |                            |                                     |                          |                                     |
| <b>Australian Curriculum Work Studies category/ies</b> | Career development and management  | <input checked="" type="checkbox"/> | Entrepreneurial behaviours | <input type="checkbox"/>            | Gaining and keeping work | <input type="checkbox"/>            |
|  | Learning to learn  | <input checked="" type="checkbox"/> | The nature of work         | <input checked="" type="checkbox"/> | Work skills              | <input checked="" type="checkbox"/> |