STELR CAREERS IN STEM WORKKSHEET

THE TASK

In this activity, students investigate the work of someone who works in the Science, Technology, Engineering and or Maths (STEM) industries or research. They then write a career profile for that person, in a way that might inspire someone who is interested in taking up that career.

Students can work separately or in a group.

CHOOSING THE INTERVIEW SUBJECT

Ideally, students should try to interview someone in person. This could be a family member, a family friend or someone in the local community. Encourage them to think broadly about the definition of STEM. As well as scientists and engineers consider anyone who works in a related industry or anyone who uses maths, science or engineering principles in their work.

Alternatively, students may use the internet or other resources to find your information, including the STELR website (see the resources section below).

• Option 1 Research the career profile of someone **who works in a STEM industry**. Their job can involve any aspect of the industry, such as research, manufacture, engineering, management, installation, technical service and marketing.

• Option 2 Research the career profile of an **Australian scientist** whose work focuses on a STEM topic. Their job might involve research and development, researching the impact of an industry on the environment, and so on.

THE REPORT

Students can select a suitable report format for their findings. This could be:

- written report
- verbal report
- short video or audio
- poster
- PowerPoint or Prezie

DEVEOPING A QUESTIONNAIRE

Students should think about what they want to find out about the career as well as the pathway to that career and the personal attributes of the person in that job.

A list of stimulus questions below can be used by the students to develop their own questionnaire.

CURRENT POSITION

- Position in the organisation
- Duties involved in their job
- The most enjoyable aspects of the job
- The challenges they face in the job
- How they think this job will change over the next decade
- Salary range of people working in this kind of job

THE ORGANISATION

- Name of the organisation where the person works and brief description of what the organisation does
- How many people are employed by the organisation
- Why they chose to work in this organisation

AT SCHOOL

- Subjects they studied at upper secondary school level
- Why they chose these subjects
- If they enjoyed or disliked the subjects
- Any mentors (teachers, family members etc,) who inspired them while at school
- What they thought they wanted to be 'when they grew up'.

AFTER SCHOOL AND CAREER PATHWAY

- Study or training after leaving secondary school
- Why they chose this job or the pathway to their current job

ADVICE

- What advice would they give to student choosing their school subjects now?
- What advice would they give to students who want to follow the same career as you?
- What general career advice would they give to students?

OTHER QUESTIONS

Sometimes it is interesting to find out general information about a person also. You might want to ask some general questions such as:

- What other hobbies to you enjoy?
- Could you tell me something about yourself that might be surprising?

Remind students that some people may be happy to answer all questions while others may not. Always respect their privacy.

STUDENT REFLECTION

As well as reporting on the information that they have gathered about the career of choice, ask students to reflect on what they found out.

- Did they find out anything surprising while researching the career profile?
- Were they inspired by the person they interviewed?
- Are there other questions they now want answered after the interview?

CHANGES/EXTENSION

This worksheet can be re-purposed to meet the needs of the teacher or the particular cohort of students:

- A Career in Renewable Energy Worksheet
- A Career in Engineering Worksheet
- A Career in Sustainable Housing Worksheet
- A Career in Maths Worksheet
- A Career in Sustainability Worksheet

EVALUATION

Use the *Student Assessment of Presentations* rubric (attachment 1) can be used for students or groups of students who choose to give a verbal presentation of their research.

RESOURCES

STELR CAREER PROFILES

You can find sample career profiles of people working in the renewable energy industry on the ATSE STELR website at: http://www.stelr.org.au/career-profiles

WOMEN IN STEM AND ENTREPRENEURSHIP CAREER PROFILES

http://www.stelr.org.au/women-in-stem/

OTHER ORGANISATIONS

Engineering Icons website

https://www.engineeringicons.org.au/

Ultimate Careers (Australian Science Channel)

https://australiascience.tv/category/ultimatecareers/

Careers with STEM Website

https://careerswithstem.com/

Power Engineering website

http://powerengineering.org.au

JobHero website

http://www.jobhero.com/

ATTACHMENT 1

STUDENT ASSESSMENT OF PRESENTATIONS

Name(s) of Student(s):_____

Criterion	Needs improvement	Satisfactory	Very good	Excellent
Voice projection	The student(s) spoke too softly and/ or too quickly.	It was difficult to hear parts of the presentation.	The student(s) voices were clear and able to be heard.	The student(s) voices were clear and projected well.
Engagement with the audience	The student(s) did not seem confident or enthusiastic or aware of their audience.	The student(s) showed some confidence and/or enthusiasm. They showed limited awareness of their audience.	The student(s) appeared confident and enthusiastic and maintained good eye contact with the audience. They made a good effort to interest and involve all the audience.	The student(s) were very confident, lively and enthusiastic and maintained good eye contact with the audience. They made a real effort to interest and involve all the audience.
Response to questions from the audience	The student(s) did not encourage the audience to ask questions, and found it difficult to answer questions.	The student(s) did not encourage the audience to ask questions, but answered most questions quite clearly.	The student(s) encouraged the audience to ask questions, and answered most questions clearly and confidently.	The student(s) encouraged the audience to ask questions, and answered the questions clearly and confidently.
Use of different communication aids to the presentation	The student(s) used some visual aids in their presentation, but these were sometimes difficult to see or needed more work to be beneficial.	The student(s) used some communication aids in their presentation, but these needed more work to be beneficial.	The student(s) used some well-prepared communication aids to help make their presentation interesting and clear.	The student(s) used a good variety of well-prepared communication aids. Their presentation was interesting, clear and very creative.
Knowledge of material	The student(s) needed to provide a lot more information.	The student(s) provided some interesting relevant facts but needed to explain them more clearly.	The student(s) provided a number of interesting relevant facts and explained the ideas and terms well.	The student(s) provided many interesting relevant facts and explained the ideas and terms very clearly.
Logical development of material	The student(s) tended to jump around with their presentation, making it difficult to follow. Some of the content did not appear to be relevant.	The student(s) needed to organise their material into a more logical order and to give a more balanced coverage of the different aspects. Some of the content did not appear to be relevant.	The student(s) presented the material in quite a logical and balanced way. All or most of the content was relevant to their topic.	The student(s) presented the materials in a very logical, balanced way. All the content was relevant to their topic.

Signed: _____

Print name: _____