

Space Careers Assessment Task

Subject	STEM Space and Astronomy
Year Level	9 - 10
Subject Teacher	
Due Date	

Task Name	Careers in the Space Industry
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Background Information	
<p>The national space industry employs over 16,000 Australians and is becoming an emerging industry that will be a major employer of the future STEM workforce. The establishment of the Australian Space Agency in 2018 in South Australia has contributed to a growing space sector across the country.</p> <p>The Australian space industry needs a broad range of people with diverse skill sets to help it grow and transform.</p> <p>Manufacturing, research and development, and communications are just some of the areas that will support our space sector into the future.</p> <p>Space-related employment opportunities and careers range from graphic designers to satellite manufacturers, dieticians to painters, welders to software engineers, and beyond.</p>	

Statement of Inquiry
What could a career in the space industry look like for you?

Learning Intentions
<p>This assessment provides opportunities for you to demonstrate your ability to:</p> <ul style="list-style-type: none"> Describe the job or career path in the space industry that you have identified. Write and create texts to communicate ideas, findings, and arguments effectively for identified purposes and audiences.

Capabilities	
<i>Literacy</i>	<i>Numeracy</i>
<ul style="list-style-type: none"> Communicate scientific ideas and information 	<ul style="list-style-type: none"> Communicate data effectively using appropriate graphics and representations

Task Description

Your task

Produce a 5 minute presentation to give in support of your application for a specific job or career in the space industry in South Australia. For this presentation you will need to assume the persona of someone who is qualified to apply for and win the position that you have identified.

Requirements

- Identify a job or career in the space industry that you are interested in from the Australian Space Discovery Centre excursion and/or from:

<https://www.space.gov.au/career-quiz>

<https://careers.sa.gov.au/explore-industries/jobs-in-space#Seek>

<https://www.csiro.au/en/education/programs/space-careers-wayfinder>

<https://www.space.gov.au/job-roles-and-study-pathways>

<https://www.space.gov.au/people-in-the-space-sector>

<https://www.industry.gov.au/australian-space-discovery-centre/pathways-career-space>

“Careers in space” booklet

“A space for everyone” posters

- Determine and present the qualifications and experience that are required to pursue this career/job and describe how “you” have achieved them.
- Use and present relevant diagrams, data and images about the industry or career path that you have chosen.
- Prepare a response to “standard job interview” questions.
- Include a correctly formatted bibliography.



Conditions

- This is an individual task, all work submitted must be your own.
- You are required to use at least 4 internet sites for this task and to include those sites in a bibliography.

Time Allocation: Excursion + 3 Lessons + Homework

Success Criteria

1. Produce a winning presentation to give in a job interview about your suitability for a job in the space industry.
2. Describe the experience and qualifications that you have that makes you perfect for the position.
3. Explain what you expect from the position, the work you will do and the expected salary.
4. Describe how the position is related to the Australian Space industry and its future.
5. Combine effective graphics and formatting of your presentation with an accompanying speech.

Achievement Standard

By the end of Year 10 students explain the processes that underpin heredity and genetic diversity and describe the evidence supporting the theory of evolution by natural selection. They sequence key events in the origin and evolution of the universe and describe the supporting evidence for the big bang theory. They describe trends in patterns of global climate change and identify causal factors. They explain how Newton's laws describe motion and apply them to predict motion of objects in a system. They explain patterns and trends in the periodic table and predict the products of reactions and the effect of changing reactant and reaction conditions. Students analyse the importance of publication and peer review in the development of scientific knowledge and **analyse the relationship between science, technologies and engineering. They analyse the key factors that influence interactions between science and society.**

Students plan and conduct safe, valid and reproducible investigations to test relationships or develop explanatory models. They explain how they have addressed any ethical and intercultural considerations when generating or using primary and secondary data. They select equipment and use it efficiently to generate and record appropriate sample sizes and replicable data with precision. **They select and construct effective representations to organise, process and summarise data and information.** They analyse and connect a variety of data and information to identify and explain patterns, trends, relationships and anomalies. They evaluate the validity and reproducibility of methods, and the validity of conclusions and claims. They construct logical arguments based on analysis of a variety of evidence to support conclusions and evaluate claims. **They select and use content, language and text features effectively to achieve their purpose when communicating their ideas, findings and arguments to diverse audiences.**

Differentiation

Assigned career path / One on one support / learning support hub / reduced word count / scaffolded template.



Assessment Rubric

	Science as a Human Endeavour	Science Inquiry
A	<p>Displays extensive understanding of concepts and key ideas and connections between them when:</p> <p>HE2: Investigating how advances in technologies enable advances in science, and how science has contributed to developments in technologies and engineering.</p> <p>HE3: Analysing the key factors that contribute to science knowledge and practices being adopted more broadly by society.</p>	<p>Displays a high-level capacity to apply knowledge, skills and understandings in new contexts and outstanding development of skills when:</p> <p>I7: Constructing arguments based on analysis of a variety of evidence to support conclusions or evaluate claims and considering any ethical issues and cultural protocols associated with accessing, using, or citing secondary data or information.</p> <p>I8: Writing and creating texts to communicate ideas, findings, and arguments effectively for identified purposes and audiences, including selection of appropriate content, language and text features, using digital tools as appropriate.</p>
B	<p>Displays a deep understanding of concepts and key ideas when:</p> <p>HE2: Investigating how advances in technologies enable advances in science, and how science has contributed to developments in technologies and engineering.</p> <p>HE3: Analysing the key factors that contribute to science knowledge and practices being adopted more broadly by society.</p>	<p>Displays a strong capacity to apply knowledge, skills and understandings in new contexts and a high-level development of skills when:</p> <p>I7: Constructing arguments based on analysis of a variety of evidence to support conclusions or evaluate claims and considering any ethical issues and cultural protocols associated with accessing, using, or citing secondary data or information.</p> <p>I8: Writing and creating texts to communicate ideas, findings, and arguments effectively for identified purposes and audiences, including selection of appropriate content, language and text features, using digital tools as appropriate.</p>
C	<p>Displays an adequate understanding of concepts and key ideas when:</p> <p>HE1: Explaining how scientific knowledge is validated and refined, including the role of publication and peer review.</p> <p>HE2: Investigating how advances in technologies enable advances in science, and how science has contributed to developments in technologies and engineering.</p> <p>HE3: Analysing the key factors that contribute to science knowledge and practices being adopted more broadly by society.</p>	<p>Displays a capacity to apply knowledge, skills and understandings in new contexts and a sound development of skills when:</p> <p>I7: Constructing arguments based on analysis of a variety of evidence to support conclusions or evaluate claims and considering any ethical issues and cultural protocols associated with accessing, using, or citing secondary data or information.</p> <p>I8: Writing and creating texts to communicate ideas, findings, and arguments effectively for identified purposes and audiences, including selection of appropriate content, language and text features, using digital tools as appropriate.</p>
D	<p>Displays some understanding of concepts and ideas when:</p> <p>HE1: Explaining how scientific knowledge is validated and refined, including the role of publication and peer review.</p> <p>HE2: Investigating how advances in technologies enable advances in science, and how science has contributed to developments in technologies and engineering.</p> <p>HE3: Analysing the key factors that contribute to science knowledge and practices being adopted more broadly by society.</p>	<p>Displays a capacity to apply knowledge, skills and understandings in familiar contexts and some development of skills when:</p> <p>I7: Constructing arguments based on analysis of a variety of evidence to support conclusions or evaluate claims and considering any ethical issues and cultural protocols associated with accessing, using, or citing secondary data or information.</p> <p>I8: Writing and creating texts to communicate ideas, findings, and arguments effectively for identified purposes and audiences, including selection of appropriate content, language and text features, using digital tools as appropriate.</p>
E	<p>Displays beginning understanding and concepts and key ideas when:</p> <p>HE1: Explaining how scientific knowledge is validated and refined, including the role of publication and peer review.</p> <p>HE2: Investigating how advances in technologies enable advances in science, and how science has contributed to developments in technologies and engineering.</p> <p>HE3: Analysing the key factors that contribute to science knowledge and practices being adopted more broadly by society.</p>	<p>Displays beginning capacity to apply knowledge, skills and understandings in a familiar context and initial development when:</p> <p>I7: Constructing arguments based on analysis of a variety of evidence to support conclusions or evaluate claims and considering any ethical issues and cultural protocols associated with accessing, using, or citing secondary data or information.</p> <p>I8: Writing and creating texts to communicate ideas, findings, and arguments effectively for identified purposes and audiences, including selection of appropriate content, language and text features, using digital tools as appropriate.</p>

Choosing Job / Career

Job Option	Positives for that Job	Negatives for that Job
Chosen Job		
Link to job Ad or info		

Qualifications required for that Job (from the Job ad or other source)

Requirement	Skill / Qualification / Experience
Possible ways to achieve that requirement	Chosen Way for presentation

Notes: Chosen Job:

Website:	Information Gathered:

Peer Review Year 10 Space and Astronomy Job Interview Panel

Applicant		Assessor			
Job Applying for					
Powerpoint	Applicant has used highly effective and relevant images and format	Applicant has used effective and relevant images and format	Applicant has used some images and format	Applicant has produced a presentation but is missing one or more slides	Applicant has not produced a presentation.
	Applicant used slides to present and identify key aspects and requirements of the job/career highly effectively	Applicant identified key aspects and requirements of the job/career in slides effectively	Applicant identified some key aspects or requirements of the job/career in slides	Applicant has not identified key aspects or requirements of the job/career	Applicant has not produced a powerpoint
Speech	Applicant communicates their experience and qualifications highly effectively with explanation at appropriate level	Applicant communicates their experience and qualifications effectively at a mostly appropriate level	Applicant communicates some experience or qualification related to the job/career	Applicant communicates some relevant information about the job/career	Applicant does not communicate or explain relevant qualifications or experience required for the job/career in a comprehensible way.
STEM Understanding	Applicant clearly explains the roles and responsibilities involved in the job/career, how they would be performed and links to the qualifications and or experience "they" have gained	Applicant explains the roles and responsibilities involved in the job/career	Applicant describes one or more of the duties or expectations of the job/career	Applicant identifies one or more of the duties or expectations of the job/career	Applicant does not identify any of the duties or expectations of the job/career
Science as a human endeavour	Applicant clearly and effectively identifies and describes the relation of the job/career to the space industry in Australia and its future	Applicant identifies and describes the relation of the job/career to the space industry in Australia	Applicant identifies the relation of the job/career to the space industry in Australia	Applicant mentions that the job/career relates to the space industry in Australia	Applicant does not identify how the job/career relates to the space industry in Australia
Overall Strengths					
Areas for Improvement					
Other Comments					

(Additional comments can be added on next page if needed)

