TAS Stage 4 -TAS related careers

**Duration:** two to three 40-minute lessons

Learning for life beyond school is supported when all subjects are delivered to students in a way that they can understand how the content is relevant to career pathways and work settings. NESA syllabuses identify work and enterprise as important learning across the curriculum content for all students.

# Career learning benefits and career management skills

Career learning resources have been developed to enrich existing teaching and learning programs to facilitate effective career education for students, supporting students to link classroom learning to workplace applications, including developing career management skills.

Career learning activities embedded within existing curriculum have been aligned to the themes from the [K-12 Career Learning Framework](https://education.nsw.gov.au/teaching-and-learning/curriculum/career-learning-and-vet/career-learning). Activities may relate to one or more of the themes:

* Identity – building and maintaining a positive self-concept, responding to change and developing capabilities.
* Experience – discover, investigate and consider opportunities in lifelong learning and work exploration.
* Empower – learning to self manage, engage in career decision making and developing skills and capabilities to make informed decisions.

|  |  |  |
| --- | --- | --- |
| **Theme** | **Career management skills** | **Australian Blueprint for Career Development competency** |
| **Experience** | Locate and use career information  Explore education and training requirements for various work roles | 5.2.4. Explore the education and training requirements for occupations of interest by locating and using available career information resources |

## What do we want students to know, understand or be able to do?

This activity allows students to share their knowledge of technology related careers and then explore how technology related professions contribute to industry and society now and into the future.

### Key thinking skills

The syllabus provides opportunities for types of thinking to be incorporated into the knowledge, understanding and skills of the syllabus. This includes computational thinking, design thinking and systems thinking.

### Syllabus outcomes

* **TE4-10TS** explains how people in technology related professions contribute to society now and into the future

### Assumed knowledge and understanding

To participate in this activity, it is assumed that students have a basic understanding of the content structure in the Stage 4 TAS syllabus:

* Digital technologies
* Agriculture and food technologies
* Engineered systems
* Material technologies

### Learning experiences, adaptations, changes or extensions

#### Activity 1- know, want, learn, how

The skills and capabilities developed by students through the study of a variety of technology contexts can be applied to further education, and career opportunities in design, technology, engineering, science, mathematics and related fields. In this activity students are asked to think about how technology is used in a range of jobs and careers. As a class discuss the statement:

Everyone needs to learn skills in technology and apply them because they are used in all careers.

Discussion can be supported through inquiring questions, for example:

* Why does everyone need to learn skills in technology?
* Why has this changed?
* Why are they used in all careers?
* Why do you have to keep learning new skills in technology?
* Why do you have to be able to apply the technological skills you have learnt?

Following class discussion, ask students to identify which field of technology they most enjoy. For example, timber, metals, textiles, computing, food technology. Students use activity sheet 1 and complete the first two columns, explaining **what they already know** about the technology skills and careers relating to TAS and **what they want to learn** about them.

**Teacher notes:** The Know, want, learn, how (KWLH) table is a critical thinking tool that starts students thinking about what they know about a topic and for this activity it asks them to think about the jobs related to the content strands of the Stage 4 syllabus. It then allows students to think about what they want to know, what they have learned at the end of an activity or unit of work and how they can learn more. This is a note taking devise that guides students through the process to activate prior knowledge, develop a purpose for learning and summarising.

#### Activity 2 – jobs in industry sectors

Identify five jobs that are related to the following industries:

* Digital technology and data
* Agriculture and food
* Engineering
* Materials and manufacturing

Record the jobs and careers on Activity sheet 2. This can also be completed using a ‘brainstorming’ activity from the [digital learning selector](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Browser?cache_id=7e4e4). Students can combine their list of jobs or students can be placed into groups to add jobs to one of the following industry groups.

**Teacher notes**: Encourage students to think critically and creatively about jobs. For example, data analytics and algorithms are used to profile social media and internet searches to market products. Drone technologies and drone operators are needed in farming, information management and records managers are emerging rolls in the health sector.

#### Activity 3 – research

From the list of jobs that have been created by the class, students select one that is of particular interest. This can be completed using Activity sheet 3 or an activity such as the affinity diagram from the [digital learning selector](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Browser?order=alphabetic&clearCache=c76e44b7-60fb-adf-113a-24e73c78f28a). Students will research this job and create a report with the following information:

* Job title
* Training required
* Personal requirements
* Outline of duties
* Average income

#### Extend the learning

Discuss the following statements and compose a written response for one.

* How have advancing technologies increased efficiency of time and/or materials in the production of models or products?
* How have technologies evolved locally, regionally or globally and how are competing factors are prioritised in the development of design solutions (Engineered Systems)

### Activity Sheet 1 Critical and creative thinking using a KWLH table

*In this activity I am learning about:*

**Careers relating to Technological and Applied Studies**

Complete the first two columns in the chart below before you attempt Activity 2 and 3.

Explain **what you already know** about the technology skills and careers relating to TAS and **what you want to learn** about them.

After completing all activities add your thoughts in the remaining two columns.

Explain **what you learned** and **how you could learn more** about this topic.

|  |  |  |  |
| --- | --- | --- | --- |
| What do I KNOW | What do I WANT to learn | What did I LEARN | HOW can I learn more |
|  |  |  |  |

### Activity sheet 2 - Careers relating to technological and applied studies

Use the internet to search for lists of jobs or careers in the following fields that relate to TAS. Websites including [myfuture](https://myfuture.edu.au/occupations/details/2621--database-and-systems-administrators-and-ict-security-specialists) and [joboutlook](https://joboutlook.gov.au/) will support you in your research.

|  |  |
| --- | --- |
| Employment field | Response |
| Digital technology and data |  |
| Agriculture and food |  |
| Engineering |  |
| Materials and manufacturing |  |

### Activity sheet 3 – Career research

Select one of the jobs or careers from the lists that particularly interests you.

Research how you can become a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (use [the good universities guide](https://www.gooduniversitiesguide.com.au/careers-guide) as a starting point).

|  |  |
| --- | --- |
| Criteria | Response |
| Job title |  |
| Training required |  |
| Personal requirements |  |
| Outline of duties |  |
| Average income |  |

### Sample affinity diagram grouping facts

Use an activity from the [digital learning selector](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Browser?cache_id=63754) such as an affinity diagram to group facts. Extend student skills in digital literacy and ask them to embed a video or weblink. A sample of this activity has been provided below.

A diagram of three rectangles each with descriptive sticky notes about an ICT security specialist
rectangle one - Facts
rectangle 2 - training and qualifications
rectangle 3 - interesting facts
