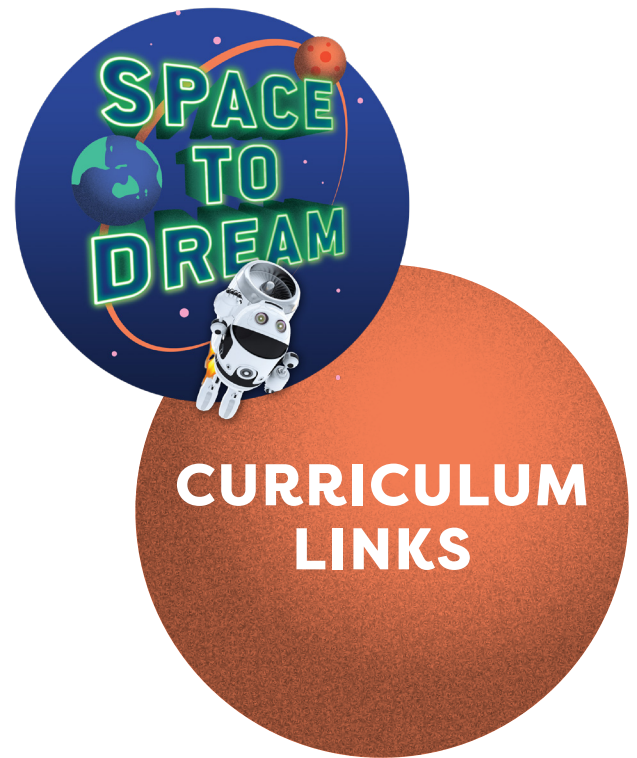


The **Space to Dream Design Thinking Challenge** presents many opportunities for students to develop skills and knowledge addressed in the Australian Curriculum F-10.



## TECHNOLOGIES

The **Space to Dream Design Thinking Challenge** explicitly addresses the Australian Curriculum: Design and Technologies subject. Assessment rubrics are included in this resource pack to support teachers in assessing student learning against the F-10 achievement standards.

Through the Challenge, students have the opportunity to address the following broad design and technology learning outcomes:

### Knowledge and understanding

- The use, development and impact of technologies in people's lives
- Technologies and design across a range of technologies contexts

### Processes and production skills

- Creating designed solutions
- Investigating and defining
- Generating and designing
- Producing and implementing
- Evaluating
- Collaborating and managing

## SCIENCE

The **Space to Dream Design Thinking Challenge** encourages students to use a range of inquiry skills addressed in the Australian Curriculum: Science

- Questioning and predicting
- Planning and conducting
- Processing and analysing data and information
- Evaluating
- Communicating

By learning about Mars, students are encouraged to develop knowledge and understanding related to the key ideas of:

- Patterns, order and organisation
- Form and function
- Stability and change
- Scale and measurement
- Systems
- Matter and energy
- Nature and development of science
- Use and influence of science

# OTHER CURRICULUM LINKS

The **Space to Dream Design Thinking Challenge** provides an authentic context for students to apply mathematical skills and knowledge addressed in a range of other Australian Curriculum learning areas and general capabilities. These include:

## Mathematics

Through the design of their inventions students can be applying mathematical skills and concepts such as scale, measurement, geometry and number concepts.

## English

Students use language throughout the challenge to express, communicate and develop their ideas.

## The Arts

Through making, students learn, develop and refine their skills using 3D modelling and drawing mediums.

## Humanities and Social Sciences

By designing a toy or gadget for another child to take to Mars, students explore interdisciplinary concepts such as place and space, interconnections of systems, perspectives and actions, as well as roles, rights and responsibilities.

## Health and Physical Education

By considering what is required for another person to live on Mars students are encouraged to critically analyse contextual factors that impact on the health and wellbeing of individuals and communities.

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## General Capabilities

The **Space to Dream Design Thinking Challenge** provides opportunities for students to enhance their general capabilities as recognised in the Australian Curriculum:

### Literacy

Comprehending texts through listening, reading and viewing. Composing texts through speaking, writing and creating.

### Numeracy

Using spatial reasoning, recognising and using patterns and relationships, using measurement, and interpreting statistical information.

### Information and Communication

#### Technology (ICT) Capability

Investigating with ICT, creating with ICT, communicating with ICT and, managing and operating ICT.

### Critical and Creative Thinking

Identifying, exploring and organising information and ideas; generating ideas, possibilities and actions; reflecting on thinking and processes; analysing, synthesising, evaluating reasoning and procedures.

### Personal and Social Capability

Social awareness and social management.

### Ethical Understanding

Understanding ethical concepts and issues, reasoning in decision making and actions, and exploring values, rights and responsibilities.

### Intercultural Understanding

Interacting and empathising with others.