

# Curriculum Alignment Plan

## FUELLING A HYDROGEN FUTURE: STEM SKILLS FOR SECONDARY LEARNING (YEAR 7)

This curriculum alignment plan for Fuelling a Hydrogen Future: STEM Skills for Secondary Learning is based on the Australian Curriculum, Assessment and Reporting Authority (ACARA) [Version 9.0](#) for Year 7.

### LEARNING AREAS

- Science
- Design and Technologies
- Digital Technologies
- Economics and Business

### SCIENCE CONTENT DESCRIPTORS

#### *Chemical sciences*

- Use particle theory to describe the arrangement of particles in a substance, including the motion of and attraction between particles, and relate this to the properties of a substance (AC9S7U05)

#### *Use and influence of science*

- Examine how proposed scientific responses to contemporary issues may impact on society and explore ethical, environmental, social and economic considerations (AC9S7H03)

#### *Communicating*

- Write and create texts to communicate ideas, findings and arguments for specific purposes and audiences, including selection of appropriate language and text features, using digital tools as appropriate (AC9S7I08)

### DESIGN AND TECHNOLOGIES CONTENT DESCRIPTORS

#### *Technologies and society*

- Analyse how people in design and technologies occupations consider ethical and sustainability factors to design and produce products, services and environments (AC9TDE8K01)
- Analyse the impact of innovation and the development of technologies on designed solutions for global preferred futures (AC9TDE8K02)

#### *Technologies context: Engineering principles and systems*

- Analyse how force, motion and energy are used to manipulate and control engineered systems (AC9TDE8K03)

### DIGITAL TECHNOLOGIES CONTENT DESCRIPTOR

#### *Investigating and defining*

- Define and decompose real-world problems with design criteria and by creating user stories (AC9TDI8P04)

### ECONOMICS AND BUSINESS CONTENT DESCRIPTOR

#### *Interpreting and understanding*

- Interpret information and data to identify economic and business issues, trends and economic cause-and-effect relationships (AC9HE7S03)

### GENERAL CAPABILITIES

#### *Critical and Creative Thinking*

- Identify and clarify significant information and opinion from a range of sources, including visual information and digital sources (Level 5)

#### *Literacy*

- Responds to complex texts (Level 7)
- Selects appropriate listening strategies for planned and unplanned situations (Level 7)
- Uses technical vocabulary to demonstrate topic knowledge (e.g. "deforestation") (Level 6)

### CROSS-CURRICULUM PRIORITIES

#### *Sustainability*

- Sustainable patterns of living require the responsible use of resources, maintenance of clean air, water and soils, and preservation or restoration of healthy environments (SS2)
- Sustainably designed products, environments and services aim to minimise the impact on or restore the quality and diversity of environmental, social and economic systems (SD1)

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- Creative and innovative design is integral to the identification of new ways of sustainable living (SD2)
- Sustainable design requires an awareness of place, past practices, research and technological developments, and balanced judgements based on projected environmental, social and economic impacts (SD3)

### *Aboriginal and Torres Strait Islander Histories and Cultures*

- First Nations communities of Australia maintain a deep connection to, and responsibility for, Country/ Place and have holistic values and belief systems that are connected to the land, sea, sky and waterways (A\_TSICP1)

### **FURTHER INFORMATION**

For further information on Fuelling a Hydrogen Future, contact [H2learning@cqu.edu.au](mailto:H2learning@cqu.edu.au) or the course authors:

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