

Weather Station Education Program

Year 5 and 6 Digital Technologies

Year 5 and 6 Design and Technology



This program is designed to connect and relate the Year 5 and 6 curriculum to sustainability and environmental management and aims to assist our local teachers to deliver a sustainability unit that is written specifically for the Townsville region. The program uses complex, real-word sustainability issues as the subject matter. It aims to encourage students to develop future-focused, critical thinking and problem-solving skills to learn by doing and creating. Where possible the lessons are problem based and student orientated with open questioning and inquiry pedagogy that fosters student agency, curiosity, and exploration.

Students will work with Townsville City Council environmental professionals to learn about, build, deploy and evaluate a sustainability focused solution aimed to meet the current and future needs of environmental scientists and the community. As the future environmental scientists of our city, the students will explore and evaluate how weather stations and environmental monitoring technology can help to prepare our city for the future now. Townsville is looking to make its city more sustainable and comfortable to live in – especially as the world continues to experience climate change.

In a world that is forever changing and somewhat unpredictable, how can we prepare for the future?

The program links to the Australian curriculum and meets the following content descriptors:

Digital Technology:

Processes and Production Skills:

- Explain how students' solutions and existing information systems are sustainable and meet current and future local community needs (ACTDIP021)

Knowledge and Understanding:

- Examine the main component of common digital systems and how they may connect together to form networks to transmit data. (ACTDIK014)
- Acquire, store and validate different types of data, and use a range of software to interpret and visualise data to create information (ACTDIP016)

Design and Technology:

Design and Technologies processes and Production Skills:

- Critique needs or opportunities for designing, and investigate materials, components, tools, equipment, and processes to achieve intended designed solutions (ACTDEP024).

The unit is comprised of 7 lessons. The program includes the following resources:

- Lesson outline and structure, including curriculum-linked content descriptors and learning intentions
- Example prompt class discussion questions
- Accompanying worksheets, presentations, and assessment tasks for each lesson
- Interactive quizzes to check for understanding in lesson two
- Background contextual knowledge for teachers
- 30 weather stations in 'flat-pack' style
- Class set of building equipment for lesson three.

The school is required to organise:

- Marking methods for the suggested assessment tasks
- Butcher's paper and markers for introduction lesson
- Bus/transport for lesson four excursion (and other school excursion requirements)
- Class set of computers/laptops with internet connection and Microsoft office for lesson five.