





eSTEM: Taking it to New Heights

Stage 2-5 (Incursion only)



Environmental (e) STEM will provide students with an introduction to real world environmental coding using mini-drones.

Learning Experiences

During this program students will learn what coding is and the current applications in our day-to-day life. Students will be introduced to coding and have the opportunity to code mini drones to complete a number of basic tasks, before given more complex task where in which their drone will be used to monitor several environmental scenarios.

Outcomes & Contents: Stage 2

Mathematics K-10

- MA3-1WM describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions
- MA3-2WM selects and applies appropriate problem-solving strategies, including the use of digital technologies, in undertaking investigations
- MA3-17MG locates and describes position on maps using a grid-reference system

Science & Technology

- plans and uses materials, tools and equipment to develop solutions for a need or opportunity ST3-2DP-T
- investigate ways that advances in science and technology have assisted people to plan for and manage natural disasters to minimise their effect

Skills Focus

Design and Production

Identifying and defining

- examine and critique needs, opportunities or modifications using a range of criteria to define a project
- examine and determine functional requirements to define a problem

Researching and planning

- design, modify and follow simple algorithms
- develop solutions through trialling and refining using iterations (ACTDIP019)

Producing and implementing

 develop project plans that consider resources when producing designed solutions individually and collaboratively (ACTDEP028)

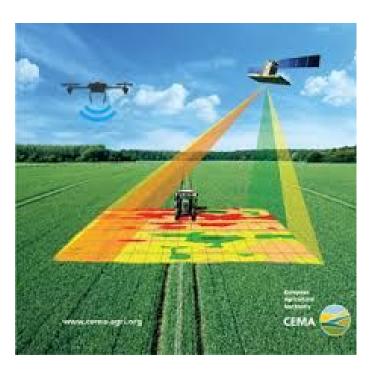
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- defines problems, and designs, modifies and follows algorithms to develop solutions ST3-3DP-T
- explains how digital systems represent data, connect together to form networks and transmit data ST3-11DI-T
- implement digital solutions as visual programs involving branching, iteration and user input (ACTDIP020)
- work collaboratively to share, appraise and improve ideas to achieve design purposes

Testing and evaluating

- evaluate design ideas, processes and solutions according to criteria for success (ACTDEP027)
- explain how students' solutions and existing information systems meet current and future local community needs (ACTDIP021)









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