

DANGER ZONE

UNIFY Series: Year 4-6 STEM



impact.edu.au/register

BIG IDEA

Danger Zone transforms your students into citizen scientists. These citizen scientists develop a rich understanding of the purpose and process of scientific inquiry and mathematical investigation as they investigate the plight of endangered animals from Australia and beyond. Student curiosity and feeling of connectedness to local ecosystems and the global biosphere will be enriched, inspiring students to take action towards creating a sustainable future. The IMPACT Centre has partnered with Australia Zoo's Education Team to produce *Danger Zone*.

NB: This program includes an awesome research excursion to Australia Zoo, Beerwah, Sunshine Coast. The excursion is highly recommended. Schools who cannot participate in the excursion can still join *Danger Zone*.

Danger Zone helps schools to build staff and student capability simultaneously. Key teachers and leaders can access the [IMPACT STEM Team](#). Your web conference supervisor can co-teach with our online teacher.

SELECTION CRITERIA

- ✓ Selection criteria for the UNIFY Series is largely subjective.
- ✓ Many schools use *Danger Zone* and other UNIFY Series programs as an enrichment opportunity for mid-to-high achieving students.
- ✓ Teacher judgement and student interest in the topic should assist selection.

AUSTRALIAN CURRICULUM

See page 2 for Australian Curriculum links and other important details.

THE COURSE:

LESSON OVERVIEW		
NO.	TITLE	CONTENT
1	Welcome to <i>Danger Zone</i>	<ul style="list-style-type: none">Introduction to web conferencing tools and <i>Danger Zone</i>
2	Introduction to eLearn	<ul style="list-style-type: none">Introduction to eLearnIntroduction to STEM
3	Pre-Assessment	<ul style="list-style-type: none">eLearn TestAttitudes toward conservation & sustainability
4	Scientific Inquiry	<ul style="list-style-type: none">Questioning & PredictingPlanning & ConductingModel – Trauma Season, based on Australia Zoo Wildlife Hospital data
5	Evidence	<ul style="list-style-type: none">Types of dataPresenting, organising & interpreting data
6	Collecting Data	<ul style="list-style-type: none">Evaluate sources of evidenceDanger Ranger Animal data collection
7	Data Analysis I	<ul style="list-style-type: none">Processing and Analysing Data and InformationDanger Ranger Animal data collection
8	Data Analysis II	<ul style="list-style-type: none">Visualising DataDanger Ranger Infographic
9	Communicating Scientifically	<ul style="list-style-type: none">Danger Ranger Infographic
10	Evaluating & Concluding	<ul style="list-style-type: none">Evaluate scientific investigation process and suggest improvementsDraw evidence-based conclusionsFinalise Danger Ranger Infographic
11	Post Assessment	<ul style="list-style-type: none">eLearn Test
12	Where to from here?	<ul style="list-style-type: none">Review, consolidate and extend on project learning – celebrate successPeer review of Infographics



UNIFY Series
Round 2 only

'The students have developed their scientific inquiry skills, especially with investigating an issue and communicating their findings. This has helped the students in the classroom as they have been able to transfer these skills into other subject areas, such as English, Mathematics and Geography when interpreting data, drawing conclusions and making suggestions based on their findings.'

Supervisor – 2016

'Before I couldn't do an Infographic but now I can comfortably do one. Also it has improved my science skills and how to analyse the data.'

Student – 2016

[How it Works](#)

[Participation Costs](#)

[Primary Main Page](#)

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Australian Curriculum

Science

Science Inquiry Skills

Questioning and predicting:

- With guidance, pose clarifying questions and make predictions about scientific investigations ([AC SIS231](#))

Processing and analysing data and information:

- Construct and use a range of representations, including tables and graphs, to represent and describe observations, patterns or relationships in data using digital technologies as appropriate ([AC SIS107](#))
- Compare data with predictions and use as evidence in developing explanations ([AC SIS218](#))

Science as a Human Endeavour

Use and influence of science:

- Scientific knowledge is used to solve problems and inform personal and community decisions ([AC SHE100](#))

General Capabilities / Cross-Curriculum Priorities

Literacy

Comprehending texts through listening, reading and viewing

- Comprehend texts
- Navigate, read and view learning area texts
- Interpret and analyse learning area texts

Composing texts through speaking, writing and creating

- Compose spoken, written, visual and multimodal learning area texts

Word Knowledge

- Understand learning area vocabulary

Visual Knowledge

- Understand how visual elements create meaning

Critical and Creative Thinking

Inquiring – identifying, exploring and organising information and ideas

- Pose questions
- Identify and clarify information and ideas
- Organise and process information

Generating ideas, possibilities and actions

- Seek solutions and put ideas into action

Analysing, synthesising and evaluating reasoning and procedures

- Apply logic and reasoning
- Draw conclusions and design a course of action
- Evaluate procedures and outcomes

Numeracy

- Recognising and using patterns and relationships
- Recognise and use patterns and relationships
- Interpreting statistical information
- Interpret data displays

ICT Capability

Managing and operating ICT

- Select and use hardware and software

Creating with ICT

- Generate solutions to challenges and learning area tasks
- Use ICT effectively to record ideas, represent thinking and plan solutions

Communicating with ICT

- Select and use appropriate ICT tools safely to share and exchange information and to safely collaborate with other

Sustainability – Cross-Curriculum Priority

The sustainability of ecological, social and economic systems is achieved through informed individual and community action that values local and global equity and fairness across generations into the future.

NAPLAN Online – ICT Skills Guide

NAPLAN Online requires students to confidently use a computer or device in at least seven ways. As shown below, IMPACT Centre projects develop all seven of these skills and are an excellent way to prepare your students for online testing.

1. Locate and select an answer from a list – YES
2. Type an answer – YES
3. Read the screen and navigate web pages – YES
4. Manipulate objects on screen – YES

5. Read and comprehend digital texts – YES
6. Plan and compose text using word processing – YES
7. Listen using a headset – YES

NB: See [DET's NAPLAN Online ICT Skills Guide](#) for details.

Assessment

Pre and Post Assessment:

1. Pre and post tests
2. Produce a Danger Ranger Infographic

Reporting

- Pre and post assessment data are provided to schools, along with student attendance data.
- Qualitative report card comments are provided to schools. We recommend their inclusion as an OLA on semester report cards.

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