

# CWILLESSEN

TERM TWO

## PREPARATION FOR THE NATIONAL NEST PREDATION SURVEY

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Photo credit: Dr Donald McKnight





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### **CURRICULUM**

See how this lesson maps with the Australian curriculum

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# Learning Objectives

At the end of the lesson, students will be able to:

- (1) Define an experimental design;
- (2) Explain the 3 R's Principle and how it is used in scientific research;
- (3) Participate in the National Nest Predation Survey, as they will have completed training prerequisites.



**Define**



**Explain**



**Participate**

# Background Information

## Experiment design and the 3 R Principle

### Experimental Design:

Experimental design refers to the process of planning and organising an experiment in order to gather data and draw conclusions to answer a research question.

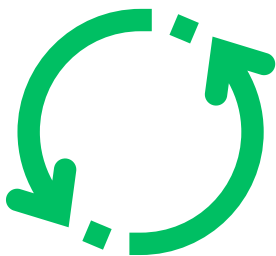
### The 3 R Principle:

The 3Rs is a concept that refers to the guiding principles for the ethical use of animals in scientific research. The 3Rs stand for Replacement, Reduction, and Refinement. These principles aim to minimise the use of animals in research, reduce their suffering, and improve their welfare.

**1) Replacement** – the principle of replacement aims to find alternative scientific methods that can replace the use of animals in research where possible.

**2) Reduction** – the principle of reduction focuses on minimising the number of animals used in research.

**3) Refinement** – the principle of refinement aims to improve the welfare of the animals used in research, through refining experimental procedures and protocols to minimise pain, distress or suffering.



**Replace**



**Reduce**



**Refine**

# National Nest Predation Survey (NNPS)

The National Nest Predation Survey encourages communities to measure nest predation rates. Nest predation rates on turtle nests are very high in many parts of the country. Introduced foxes are the major predator. By conducting the National Nest Predation Survey throughout Australia the 1 Million Turtles Community Conservation Program, aims to develop a national interactive 'hotspot' map to determine region specific estimates of predation rates.

As part of the National Nest Predation Survey, users will be trained as citizen scientists conducting the survey in their region. The survey involves the creation of artificial nests by placing chicken eggs underground and monitoring predation rates. The NNPS must be done on private land or under the guidance or approval from local land management agencies (e.g., Local Council). Ideally the survey is done near a wetland (e.g. river, creek, lagoon, pond) and outside of the month of November.



# Classroom Activities

## ACTIVITY 1

(1A) Coordinate with the local council to organise class involvement in the NNPS. This is a requirement of participating in the NNPS.

### Coordinate



## ACTIVITY 2

(2A) Complete a risk assessment, as per the 1 Million Turtles website.

(2B) Students complete the National Nest Predation Survey quiz prior to participating in the survey.

Link to risk assessment and survey on the website: [Copy and paste into browser] <https://1millionturtles.com/nnp-survey>).



### Quiz

# Classroom Activities

## ACTIVITY 3

3A) Watch the following videos -

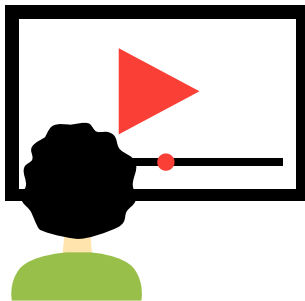
Video 1 provides an overview of how to conduct the National Nest Predation Survey.

Link to video: [<https://youtu.be/624skxfMhYM>] (Copy and paste into browser)

Video 2 explains how to dig artificial nests.

Link to video: [<https://www.youtube.com/watch?v=4C1nvkzylq4&t=2s>] (Copy and paste into browser).

(3B) Ask students to reflect on the information in the two videos and complete the Video Reflection Handout.



**Video**



**Reflect**

# Australian Curriculum addressed in this Lesson



## Science

### **Strand: Science as a human endeavour (Year 5)**

#### **Sub-strand: Nature and development of science**

**AC9S5H01:** examine why advances in science are often the result of collaboration or build on the work of others.

#### **Sub-strand: Use and influence of science**

**AC9S5H02:** investigate how scientific knowledge is used by individuals and communities to identify problems, consider responses and make decisions.

### **Strand: Science inquiry (Year 5)**

#### **Sub-strand: Planning and conducting**

**AC9S5I02:** plan and conduct repeatable investigations to answer questions, including, as appropriate, deciding the variables to be changed, measured and controlled in fair tests; describing potential risks; planning for the safe use of equipment and materials; and identifying required permissions to conduct investigations on Country/Place.



# Australian Curriculum addressed in this Lesson



## Science

### **Strand: Science as a human endeavour (Year 6)**

#### **Sub-strand: Nature and development of science**

**AC9S6H01:** examine why advances in science are often the result of collaboration or build on the work of others.

#### **Sub-strand: Use and influence of science**

**AC9S6H02:** investigate how scientific knowledge is used by individuals and communities to identify problems, consider responses and make decisions.

### **Strand: Science inquiry (Year 6)**

#### **Sub-strand: Planning and conducting**

**AC9S6I02:** plan and conduct repeatable investigations to answer questions including as appropriate, deciding the variables to be changes, measured and controlled in fair tests, describing potential risks, planning for the safe use of equipment and materials; and identifying required permissions to conduct investigations on Country/Place.