# FROG CONSERVATION



**LESSON PLANS: STAGE 3-4** 

The purpose of this lesson is for students to consider the importance of conservation and sustainability for the natural environment. Students explore the impact of increasing urbanisation and climate change on natural flora and fauna. Through a focus on frogs, students consider what this species requires for survival and the importance of providing havens for our frog neighbours in the built environments in which we live.





Discover how the University of Newcastle is protecting Australia's frog populations.

**NEWCASTLE.EDU.AU/HIPPOCAMPUS** 



# UN SUSTAINABLE DEVELOPMENT GOALS

- 11. Sustainable cities and communities
- 13. Climate action
- 14. Life below water
- 15. Life on land
- 17. Partnerships for the goals











ALIGNED WITH THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS



The activities included in this lesson may be adapted by teachers to suit any year level.

#### **OUTCOMES - STAGES 3-4**

#### Science

- ST3-4LW-S examines how the environment affects the growth, survival and adaptation of living things
- SC4-14LW relates the structure and function of living things to their classification, survival and reproduction

#### Geography

- GE3-2 explains interactions and connections between people, places and environments
- GE4-5 discusses management of places and environments for their sustainability



# SUSTAINABILITY (CROSS-CURRICULUM PRIORITY)

The activities included in this lesson may be adapted by teachers to suit any year level.

#### SCIENCE LEARNING AREA:

### Stage 3 (years 5 and 6):

- ACSSU043 Living things have structural features and adaptations that help them to survive in their environment
- ACSSU094 The growth and survival of living things are affected by physical conditions of their environment
- ACSHE083/ACSHE100 Scientific knowledge is used to solve problems and inform personal and community decisions

### Stage 4 (years 7 and 8):

 ACSHE135 - solutions to contemporary issues that are found using science and technology, may impact on other areas of society and may involve ethical considerations

# HASS LEARNING AREA (GEOGRAPHY SUB-STRAND):

#### Stage 3:

 ACHASSK113 – The environmental and human influences on the location and characteristics of a place and the management of spaces within them

#### Stage 2:

- ACHGK053 Causes, impacts and responses to a geomorphological hazard
- ACHGK051 Human causes and effects of landscape degradation



# TOPIC 1 HABITATS AND ENVIRONMENTS

Students are encouraged to consider the importance of habitat to the survival of native species.

Class discussion: consider the impacts of urbanisation on wildlife.

Possible discussion points:

- Adaptability
- Conservation efforts
- Sustainability





Website resource

# **TOPIC 2**

# **GEOMORPHIC HAZARDS: BUSHFIRES AND FLOODS**

Individually or in groups, students explore the impact of geomorphic hazards on wildlife. As an example, teachers may use the 2019/2020 bushfires or the 2018 floods as case studies, to encourage students to consider how the increasing intensity and regularity of such events impacts on flora and fauna.





Website resource

### **TOPIC 3**

# **CITIZEN SCIENTISTS**

Students are then introduced to the idea of conservation science and the fieldwork undertaken to observe and record vital data to monitor, conserve and manage flora, fauna and ecosystems.





A day in the life of an aquatic ecologist

Following the video, the teacher then leads a discussion about the tasks being undertaken by the research group and how these come to inform knowledge.

#### **SAVING THE FROGS**

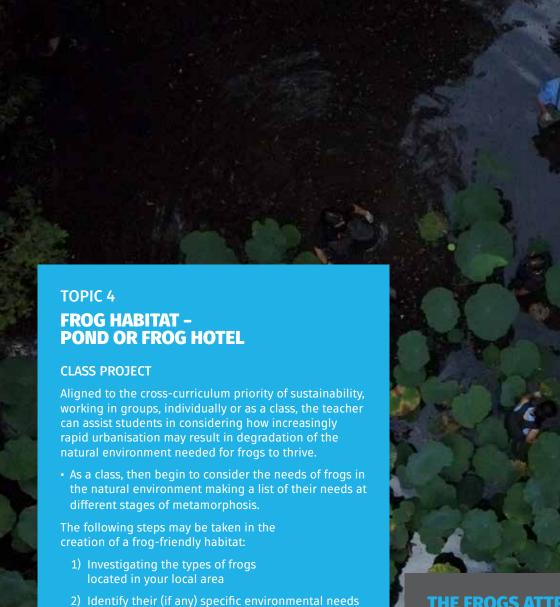
Students view the video Saving the frogs, listening to Professor Michael Mahoney, followed by a discussion about the significance of the work being done with frogs at the University of Newcastle, where the teacher has the opportunity to extend and refine student understanding. Some key ideas from the video include:

- Frogs as bio-indicators of change
- 50 million frogs killed in fires of 2020
- Environmental degredation
- Preservation for future





Saving the Frogs



# THE FROGS ATTRACTED (TRACKING)

Citizen scientist observation – students should then routinely monitor their frog habitat for any visitors, keeping records of their observations. As an extension, students should be encouraged to contribute their observations to the national data set via the Australian Museum resource.



The following resource from the Australian Museum may be used to identify frog species, as well as contributing to the national data set

### **RESOURCES**

5) Planning

6) Collecting materials

7) Building the habitat

The following resources may be shown to students, or used to assist teachers in the creation of a sustainable frog habitat:

3) Identifying an appropriate area in the school

4) Determining the scale of the project





Building a frog hotel





Building a "frog bog" with Gardening Australia

### **CONCLUSION**

Class discussion: Sustainability

Students consider the importance of responsible citizenship in caring for the environment in the face of increasing urbanisation and climate change. Students should reflect on the importance of maintaining ecosystems so that the needs of native flora and fauna can be met.

Discover how the University of Newcastle is protecting Australia's frog populations.







