

# Environmental Science

## **UNIT 3: How can biodiversity and development be sustained?**

In this unit, students examine environmental management through sustainability principles. They explore the value of biodiversity and ecosystem services, analyse threats to biodiversity, and evaluate management strategies for a selected threatened endemic species. Using a case study, students investigate environmental management from an Earth systems perspective, considering impacts on the atmosphere, biosphere, hydrosphere, and lithosphere.

### **AoS 1: Why is maintaining biodiversity worth a sustained effort?**

Students will learn to explain why Earth's biodiversity is important, how it has changed over time, identify threats to biodiversity, and assess strategies to protect it—focusing on one threatened endemic species.

### **AoS 2 When is development sustainable?**

Students will be able to explain how sustainability principles apply to environmental management and analyse how different stakeholder perspectives impact environmental decision-making.

## **UNIT 4: How can climate change and the impacts of human energy use be managed?**

In this unit, students investigate the factors influencing Earth's climate and their effects on life, society, and the environment at different scales. They evaluate renewable and non-renewable energy sources based on sustainability principles and examine how science informs climate change management and energy impacts. Students also develop data analysis skills, learning to interpret environmental indicators, manage uncertainty, and assess the reliability and validity of scientific evidence.

### **AoS 1: How can we respond to climate change?**

Students will be able to analyse key factors influencing Earth's climate, explain how climate variability is measured and modelled over time, and evaluate strategies for managing climate change.

### **AoS 2: What might be a more sustainable mix of energy sources?**

On completion of this unit the student should be able to compare the advantages and disadvantages of using a range of energy sources and evaluate the suitability and impacts of their use in terms of upholding sustainability principles.