

2024 Shorebirds Competition Unit of Work

Years 5-6 Science

Strand	Sub-strand	Content Description
Science Understanding	Biological Sciences	<ul style="list-style-type: none"> Living things have structural features and adaptations that help them to survive in their environment (ACSSU043) The growth and survival of living things are affected by physical conditions of their environment (ACSSU094)
Science Inquiry Skills	Planning and Conducting	<ul style="list-style-type: none"> Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks (AC SIS086) Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks (AC SIS103)

Cross-curriculum Priorities and General Capabilities		
<ul style="list-style-type: none"> Sustainability Critical and Creative Thinking 	<ul style="list-style-type: none"> Literacy Ethical Understanding 	<ul style="list-style-type: none"> Personal and Social Capability

These lessons would be best taught alongside the 2024 Shorebirds Competition Geography unit for Years 5-6.

Lesson 1: Shorebird Adaptations

Different species of shorebirds have different shaped bills that suit the type of food they eat. Use the **Shorebirds Adaptations activity sheet** provided to guide a hands-on lesson with your students to highlight the unique adaptations shorebirds have developed for sourcing food. See the Teacher Resources below for additional background information.

Lesson 2: Changing Wetland Conditions

Some species of shorebird, such as the bar-tailed godwit, fly non-stop from Alaska to Australia without food or water. A healthy wetland habitat is therefore crucial for their survival as they recover from this journey and build stores in preparation for their migration back north.

With an understanding for the importance of wetland areas, ask students to investigate some of the threats to wetland areas (they may like to choose a local wetland area or one in their State or Territory). The **activity sheet** provided can be used to record this. Students should then select one of these threats and conduct an experiment, applying their *Working Scientifically* skills, to confirm the potential impact of a threat on a wetland environment. Suggested areas for investigation are:

- The impact of saline water on plants
- The impact of pollution on plants
- The impact of trampling plants

Lesson 3: Prepare a Shorebird and Wetland Postcard

Focussing on the features of a shorebird, students prepare a submission for the *2024 Shorebirds Competition* (please refer to the website for competition outline).

Note to Teachers: The *Shorebirds Competition* in 2024 focusses on a shorebird and the features of a wetland as a habitat for shorebirds. The ‘threat’ component in this science lesson is included to raise students’ awareness of the issues being faced by wetlands and shorebirds globally and locally. It should not form part of the postcard for the *Shorebirds Competition* in 2024.

Teacher Resources

- A Booklet for identifying shorebirds that can also be used to highlight varying bill shapes
[Shorebird ID Booklet V3.pdf \(birdlife.org.au\)](https://www.birdlife.org.au/resources/shorebird-id-booklet-v3.pdf)
- Page 5 of the attached booklet contains a fantastic diagram depicting differing bill shapes of shorebirds
[20170167 pilbara shorebirds and seabirds of the pilbara coast and islands web.pdf \(dpaw.wa.gov.au\)](https://www.dpaw.wa.gov.au/20170167-pilbara-shorebirds-and-seabirds-of-the-pilbara-coast-and-islands-web.pdf)

Shorebird Adaptations

Shorebirds are unlike many other types of birds and have a number of unique physical features that help them to survive. These are called *adaptations*. For example, although they live on shorelines, they **cannot swim** like sea birds and **do not have webbed feet**. The shape of their bill (or beak) is also a special *adaptation* to suit the types of food that they eat.

Activity: Feeding like a shorebird

For this activity you will need:

- One pair of chopsticks *This will be your "bill"*
- A paper clip *These will be different types of food*
- A small piece of wool or string *for you to try and eat.*
- A small rubber
- A grain of uncooked rice
- A marble or small pebble
- A kernel of uncooked corn

Using the chopsticks, try and pick up each of the items you have collected. Use the table below to record how much "food" you have been able to pick up in your "bill". Give yourself a score of 1 point if you were able to pick any up.

Type of food	Points
Paper clip	
Piece of wool/string	
Small rubber	
Uncooked rice	
Marble	
Uncooked corn kernel	

Now, take away any of the items that you were able to pick up with the chopsticks. Try again to pick up the remaining items.

Were you able to pick any up? If so, take these away and try again.

A major threat to survival of shorebirds is the loss of their habitat and sources of food. If this occurs, do you think they can easily find other sources of food? Explain your answer.

The importance of Wetlands

Name of wetland _____

<p>Where is this site located?</p>	<p>What species of shorebird visits this wetland?</p>
<p>What special features does this wetland have?</p>	<p>Why is this wetland important for shorebirds?</p>

What are some of the major threats to this wetland?

How do these threats impact shorebirds?

Select a threat you have identified and create an investigation question to explore: _____
