

"The Boy Who Mailed Himself to Australia" Teacher Guide



SEASON 4 EPISODE 12

The Boy Who Mailed Himself to Australia

by a 12 year-old from Texas named Maxwell

Overview

This lesson is inspired by the story "The Boy Who Mailed Himself to Australia" by a 12 year-old from Texas named Maxwell. In the story, a boy learns about Australia in school and then decides to mail himself there! In this STEM-focused lesson, students will learn about Australian animals and how their unique adaptations help them survive in different environments. The lesson presents three distinct animals in three distinct habitats: the kangaroo in the semi-arid outback, the cassowary in the tropical rainforest, and the platypus in freshwater streams. By examining the unique features of each animal that allow them to thrive in their particular habitat, students will learn about the concept of animal adaptations. Finally, students will be encouraged to design a brand new animal that could live in one of those environments, and will draw their invented animal, gifting the creature with adaptations that are as weird and wonderful as the real ones we see in Australia!

Age Group

Best for 3rd through 5th grade readers and writers.

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Common Core Standards

The following are some NY state Science standards that apply to this lesson. Similar state standards about adaptation and natural selection in other contexts apply.

- LS1.A: Structure and Function. All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water and air. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow.
- 2. <u>3-LS3-2.</u> Use evidence to support the explanation that traits can be influenced by the environment.
- **3.** <u>LS3.B</u>: Variation of TraitsDifferent organisms vary in how they look and function because they have different inherited information. The environment also affects the traits that an organism develops.
- **4.** <u>LS4.B</u>: Natural Selection. Sometimes the differences in characteristics between individuals of the same species provide advantages in surviving, finding mates, and reproducing.

Objectives

Students will be able to:

- Discover some weird and wonderful Australian animals: cassowary, kangaroo, platypus, and crocodile
- Identify three types of Australian habitat: tropical rainforest, semi-arid desert outback, and freshwater streams
- Identify and discuss the adaptations that animals have to help live in their habitats
- Design an imaginary Australian animal that lives in one of the three habitats, complete with imagined adaptations

Materials

- 1. Story Pirates Podcast: Season 4 Episode 12 (it's the first story of the episode at approximately 17:50)
- 2. Weird and Wonderful Australian Animals Packet (see end of lesson)
- 3. Habitat and Adaptation definitions
- 4. Kangaroo, Platypus, Cassowary, and Crocodile sheets
- 5. Writer's Notebook or other place to write down ideas
- 6. Something to write with

Activity Steps

1. Play the Story:

"The Boy Who Mailed Himself to Australia" by a 12 year-old from Texas named Maxwell (**Note:** Students can also listen to the story ahead of time as an asynchronous activity. The story is a jumping off point to exploring Australia.)

• Introduce the story to students: Let's listen to a story from the Story Pirates Podcast called "The Boy Who Mailed Himself to Australia" by a 12 year-old from Texas named Maxwell"

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- Play the story: Play the story for students
- Discuss:
 - What kinds of things did Jack see once he got to Australia?
 - Kangaroo, Koala, Didgeridoo
 - Why do you think it took so long for the mail carrier to bring Jack to Australia?
 - Because it's very far away! It's a continent, but also way out in the Pacific Ocean, so you always need to take a boat or plane to get there.

2. Intro:

Introduce the lesson to your students with a short discussion.

- Do Now/Writer's Notebook: Assess students' prior knowledge by asking them what they know about Australia:
 - What do you know about the environment in Australia? What do you want to know?
 - What do you know about the animals in Australia? What do you want to know?
- Share: Have students share some of their responses.
 - What do you know about the environment in Australia?
 - Possible answers include: Outback, lots of beaches, big continent, desert, rainforest, rivers and swamps
 - What do you know about the animals in Australia?
 - Possible answers include: Marsupials, kangaroos, koalas, crocodiles, etc.
- **Connect:** As we heard in the story "The Boy Who Mailed Himself to Australia," Australia is really far away from lots of other places. Because it is so isolated, the animals there evolved and developed to be pretty different than many other animals in the rest of the world. But, just like animals everywhere, they have body parts like claws and teeth, and behaviors like jumping and swimming that help them live in their habitat. Today we are going to learn more about Australian animals and how they have adapted to live in their environment. Then we'll get creative and design our own Weird and Wonderful animals that could live in Australia.

3) MiniLesson:

- **Explain:** Australian animals may look a bit different, but just like other animals, they have adapted to their environment. This means that their bodies and behaviors have changed over time so that they can survive and thrive in the place that they live.
- **Display or hand out the "Weird and Wonderful Australian Animals packet"** to illustrate the concepts, and show students the pictures as you go:
 - *Habitat:* A habitat is an environment or place where an animal makes its home. In this lesson on Australia, we are going to examine three types of habitats:
 - *The Outback:* The Outback is the central part of Australia where there are big open spaces, few trees, and little water. It's a bit like a desert.



- Ask students: what would an animal need to do live here?

• *The Tropical Rainforest:* In northern Australia there are tropical rainforests near the beach with lots of rainfall, dense plant life, and fruit falling from the trees. The ground in the rainforest is usually uneven, with lots of branches to walk over.

- Ask students: what would an animal need to do to live here?

- *Freshwater:* Some animals live in lakes, streams, and rivers in Australia. These places might be saltwater if they're near the ocean, but can also be freshwater in the interior.
 - Ask students: what would an animal need to do to live here?
- *Adaptation*: An adaptation is a trait that an animal has that helps it survive in its habitat. There are some questions we can pose about animal adaptations:
 - *Body parts:* What is the shape of the animal's body? Does it have arms, legs, or a tail that help it navigate its surroundings? How about teeth, claws, or wings?
 - Body coverings: What kind of skin, fur, or feathers does the animal have? What color is it?
 - Behaviors: How does the animal move?

4) Group Practice:

- Looking at the Crocodile as an example and discuss with students how it has adapted to its environment
- **Example:** Look at the Crocodile page of the packet and use it as an example to discuss adaptations. You can follow the prompts on the sheet and refer to the definitions of the habitats and adaptation types there
 - Habitat: The Crocodile lives in freshwater. What would it need to be able to do to live there?
 - Possible answers: swim, catch fish, hide from prey
 - *Body*: Ask students what they notice about the color and shape of crocodile's body.
 - Possible answers: It has scales and bumps, it is green (same color as water) it has a big tail and claws, it has big teeth
 - Adaptation: How do you think the crocodile's body helps it live in freshwater?
 - Possible answers: its teeth and big mouth help it catch and eat fish, its skin color helps it hide, its big tail helps it swim

5) Independent Practice: Kangaroo, Cassowary, or Platypus

- In groups or individually, students can look at the pictures of the other three animals in the packet and make inferences about their relationships to their environment.
- Have students examine each picture, make observations about each animal's habitat and body, refer to the descriptions of each habitat for more clues, and draw hypotheses about their adaptations.
 - Note: it's ok if their hypotheses about the adaptations are different from what is printed here. Animal adaptations and behaviors are still a bit mysterious to biologists, and scientists discover new things all the time!



6) Sharing:

- Students can share their observations about each animal. You can also share some fun facts with students after they've shared.
- Some possible answers about animal bodies and adaptations:
 - Kangaroos have long tails and legs to help them jump. They are a similar color as their environment, the
 reddish rocks of the Outback. Since there isn't much water in the Outback, being able to jump means they
 can travel quickly to find food and water. They are marsupials, which is a type of animal that carries their
 young in a pouch. You can show the photo so they see how cute the 'joey,' or baby kangaroo, is in the pouch!
 The pouch helps their babies not get lost in the big Outback.
 - Fun Facts: Kangaroos can jump 30 feet in one leap! Kangaroos are very common in Australia, and it is estimated that there are over 40 million kangaroos on the continent--compared to only 25 million people who live in Australia.
 - Platypuses are furry and have duck bills and webbed feet. That weird pink thing is a tongue! They live in water, and their webbed feet and beaver-like tail help them swim. Their duck bill might help them glide more efficiently when they dive through the water. (It works for ducks too!)
 - Fun Fact: Even though they are mammals and have fur, they lay eggs. Male platypuses have venomous spurs on their ankles. Their bills have special receptors on them that help them pick up electricity so they can navigate better in water
 - Cassowaries have gigantic feet with big sharp toenails, and an oddly shaped bone-like horn on their head. They live in a dense jungle near a beach. Their big feet help them walk on sand and on uneven forest floors. The crest on their head protects them from falling fruit in the forest, and may also help them plow through branches as they run quickly.
 - Fun Fact: Cassowaries can run up to 30 miles per hour! They are the second heaviest bird in the world (ostrich is #1). They are one of the closest living relatives to dinosaurs. They eat fruit and then when they poop out the seeds, they help plant new trees.
- Students might have noticed other things too, and may have made other wild guesses about the adaptations
 of the animals. (Like why the cassowary is blue!) That's great! It's important to reinforce that scientists are
 always making guesses about the world around us (inferences), and testing to see if those guesses are true
 (hypotheses).



Extension Activity: Design your own Animal

- Now that they've learned about real Australian habitats and animals, students can use that knowledge and their imaginations to create their own.
 - 1. Pick a habitat: have students pick one of the three habitats presented in the lesson, or any others you've discussed in class
 - 2. Decide on adaptations needed in that habitat
 - 3. Draw an animal with those adaptations, and give it a fun name
- Students can present their made up animals to the class.



Weird and Wonderful Australian Animals! Habitat and Adaptations

Habitat:

A habitat is an environment or place where an animal makes its homes. In this lesson on Australia, we are going to examine three types of habitats:







The Outback:

The Outback is the central part of Australia where there are big open spaces, few trees, and little water. It's a bit like a desert.

The Tropical Rainforest:

In northern Australia there are tropical rainforests near the beach with lots of rainfall, dense plant life, and fruit falling from the trees. The ground in the rainforest is usually uneven, with lots of rocks to walk over.

Freshwater:

Some animals live in lakes, streams, and rivers in Australia. There is water to swim in, fish to eat, and also bits of land to rest on.



Adaptation:

An adaptation is a trait that an animal has developed in order to survive in its habitat. These adaptations help an animal get food and water or avoid being attacked by other animals. There are some questions we can ask to think about animal adaptations:

Body parts:

What is the shape of the animal's body? Does it have arms, legs, or a tail that help it navigate its surroundings? How about teeth, claws, or wings?

Body coverings:

What kind of skin, fur, or feathers does the animal have? What color is it? Does it help them hide?

Behaviors:

How does the animal move? How does this help the animal move in the environment?



Weird and Wonderful Australian Animals: Crocodile



The crocodile lives in freshwater. What would it need to be able to do to survive there?

What do you notice about the color and shape of the crocodile's body?

How might the color and shape of its body help it live in freshwater?



Weird and Wonderful Australian Animals:

Kangaroo



The kangaroo lives in the Outback. What are some challenges to living there?

What do you notice about the shape and color of the kangaroo's body? How about the way it moves?

How do you think the color and shape of the kangaroo's body help it live in the Outback?



Weird and Wonderful Australian Animals: Platypus



The platypus lives in freshwater. What would it need to be able to do to survive there?

Look at the platypus' body. What do you notice about the shape and color of its body?

How might the shape of its body help it live in this habitat?



Weird and Wonderful Australian Animals:

Cassowary



The cassowary lives in the tropical rainforest. What would it need to be able to do to survive there?

What do you notice about the shape of the cassowary's body?

How might the shape of its body help it live in this habitat?



Weird and Wonderful Australian Animals:

Draw your own imaginary animal below in its habitat and give it a fun name!

What habitat does it live in? What does it need to do to survive there?

What color is it? What other unique body parts does it have? How does it move?

How does the shape and color of its body help it live in this habitat?

Fun Facts about this animal: