

THE CAPE GANNET

A SUPREME DIVING BIRD

LESSON PLAN 1

THEMES

Identification and distribution of the Cape Gannet.
Physical adaptations of gannets for diving and hunting at sea.

AIM

To discover more about Cape Gannets, their identification, distribution and physical adaptations for plunge-diving and hunting at sea.

LESSON OBJECTIVES

- Learn how to identify a Cape Gannet.
- Learn about where Cape Gannets breed and their distribution range.
- Learn about how they are uniquely adapted for plunge-diving and hunting at sea.

RESOURCES REQUIRED

- Infographic 1
- Fact Sheet 1
- Infographic 2
- Fact Sheet 2
- Colouring equipment (pencils, coloured pencils or paint, eraser)
- Computer/printer/projector to show images and videos
- Video 1: <https://www.youtube.com/watch?v=EwPrXOtBoVg>
- Plain paper
- Questionnaire 1 (1 per student)
- Answer Sheet 1

INTRODUCTION

The Cape Gannet is a large and striking seabird with impressively long wings, capable of plunge-diving at high speed to catch fish. Cape Gannets are resident along the coast of the southern part of Africa, feeding close to shore on a diet of pelagic fish such as sardines and anchovies. Cape Gannets only breed in southern Africa, on 6 offshore islands off the coasts of South Africa and Namibia, making them endemic breeders to this region. Gannets are ideally adapted for plunge-diving at great speeds and hunting underwater.

KEY WORDS / PHRASES

PLUMAGE	The collective term for a bird's feathers.
ENDEMIC BREEDER	Breeding only in a restricted region/area.
PELAGIC FISH	Fish that live in the upper layers of the open sea.
PREDATOR	An animal that naturally preys on others.
PREY	An animal killed by another to be consumed (for food).
ADAPTATION	The evolutionary process whereby an organism becomes better suited to live in its habitat.
MOMENTUM	The amount of motion occurring in something that is moving, or the force that drives something forward to keep it moving.
STREAMLINED	Having a form that presents very little resistance to air or water.

LESSON PLAN 1: Approximately 60-65 minutes

	ACTIVITY	DESCRIPTION	TIME/ minutes
1	Lesson Introduction	Introduce the Cape Gannet as Bird of the Year 2022.	5
2	Distribution	Explain where they are found and that they are breeding endemics. Explain why breeding on islands is a good survival strategy.	5
3	Drawing Challenge: Identification	Hand out blank sheets of paper. Ask students to draw a gannet, based on your description. Ask them to focus on unique identifying features. Description ideas Large, predominantly white seabird Golden wash on head Long pointed, dagger-like bill Sharp black lines running along bill, around eyes and down throat Eyes at front of head with blue eye-ring and icy grey eyes Black wingtips and tail Black legs with yellow-green stripes Show the students Infographic 1 to compare the features they drew with the illustrated image of an adult gannet.	10
4	Worksheet	Ask students to read Fact Sheet 1 and answer the questions 1 – 5.	10
5	Discussion	Show Infographic 2 and Video 1 . Discuss physical adaptations for plunge-diving and hunting at sea.	15
6	Worksheet	Ask students to read the Fact Sheet 2 and answer the questions 6 – 12.	10
7	Evaluation	Read the answer sheet out loud and ask them to peer mark one another.	10
			65

QUESTIONNAIRE 1 (20 points)

1. Where will you find Cape Gannets breeding? (1)

2. What term is used to describe the distribution of their breeding range? (1)

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3. Why does this make them unique? (1)

4. What is it about where gannets breed that protects them from predators? (1)

5. How does having long, narrow wings help a gannet when hunting at sea? (1)

6. What physical adaptations help a gannet prevent injury when diving into the water at high speed? (5)

1:
2:
3:
4:
5:

7. What diving method does a gannet use to hunt its prey? (1)

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8. What does streamlined mean? (1)

9. Think of a gannet. How does a gannet change its body shape to become streamlined when hunting? (2)

10. How does binocular vision help a gannet when hunting at sea? (1)

11. What is momentum? (1)

12. What physical characteristics help a gannet dive deep and catch fish? (4)

1:
2:
3:
4:

ANSWER SHEET (20 points)

1. Q: Where will you find Cape Gannets breeding? (1)

A: On 6 islands off the coast of South Africa and Namibia.

2. Q: What term is used to describe the distribution of their breeding range? (1)

A: The Cape Gannet is a breeding endemic.

3. Q: Why does this make them unique? (1)

A: Cape Gannets only breed in this region of the world and nowhere else.

4. Q: What is it about where gannets breed that protects them from predators? (1)

A: Islands are cut off from the mainland by water, which prevents land-based predators from hunting them.

5. Q: How does having long, narrow wings help a gannet when hunting at sea? (1)

A: Long, narrow wings allow a gannet to glide above the ocean using air currents, which helps to conserve energy without the need to flap constantly.

6. Q: What physical adaptations help a gannet prevent injury when diving into the water at high speed? (5)

A:

1. Reinforced skull.
2. Specially adapted neck muscles.
3. Air sacs under the skin of the head, neck, and chest.
4. Lack of external nostrils.
5. Streamlined body shape.

7. Q: What diving method does a gannet use to hunt their prey? (1)

A: Plunge-diving.

8. Q: What does streamlined mean? (1)

A: A shape that moves easily through air or water with little or no resistance.

9. Q: Think of a gannet. How does a gannet change its' body shape to become streamlined when hunting? (2)

A: Gannets tuck in their wings and extend their pointed beak and long neck to make a streamlined shape.

10. Q: How does binocular vision help a gannet when hunting at sea? (1)

A: It allows them to see long distances accurately to hunt for fish.

11. Q: What is momentum? (1)

A: The force that drives something forward to keep it moving.

12. Q: What physical characteristics help a gannet dive deep and catch fish? (4)

A:

1. A streamlined, missile-shaped body.
2. Large, webbed feet to propel themselves underwater.
3. Powerful wings for swimming.
4. Binocular vision.