

THE CAPE GANNET HISTORICAL GUANO RUSH

LESSON PLAN 3

THEMES

1. The historical Great Guano Rush and its impact on Cape Gannets.

AIM

To discover more about the history of guano harvesting and its impact on Cape Gannet colonies and populations.

LESSON OBJECTIVES

- Learn about the history of guano harvesting in southern Africa.

RESOURCES REQUIRED

- Infographic 4: The Great Guano Rush.
- Fact Sheet 4: Guano Rush historical threats Fact Sheet.
- Pencil and eraser.
- Computer/printer/projector to show images.
- Questionnaire 3 (1 per student).
- Answer Sheet 3.
- Word Puzzle Sheet 2 (1 per group).
- Word Puzzle Solution Sheet 2.

INTRODUCTION

The ancient Inca civilization discovered that guano was a valuable source of fertiliser to improve the soil and increase the production of crops. Its potential value was later discovered by explorers and led to the Great Guano rush of the 1840s. It became a highly prized and valued commodity. The unrestricted scraping of guano from seabird islands led to the destruction of the seabird's breeding habitat, population declines and the eventual collapse of the guano industry.

KEY WORDS / PHRASES

FERTILISER	A chemical or natural substance added to soil or land to increase its fertility.
HABITAT	The natural home or environment of an animal, plant, or organism.
AGRICULTURE	The science or practice of farming, including cultivation of the soil for the growing of crops and the rearing of animals to provide food, wool, and other products.
YIELD	The amount produced of an agricultural (or industrial) product.
ORGANIC	Derived from living matter.
ORGANIC FARMING	Farming methods that do not use chemical fertilizers, pesticides, or other artificial chemicals.
SYNTHETIC	A substance produced chemically to imitate a natural product.
ARID	Land (or climate) with little or no rain which is too dry for the growth of vegetation.

LESSON PLAN 3: Approximately 55 minutes

	ACTIVITY	DESCRIPTION	TIME/ minutes
1	Lesson Introduction	Referring to Infographic 4 (The Great Guano Rush), describe the history of guano harvesting in southern Africa.	5
2	Class Discussion	Ask students to imagine life on a guano island during the guano rush. Ask them to describe what it would smell like, look like and sound like. Think about who would be working the guano and what it would be like to be a worker. What tools were used? Ask students to put themselves into the shoes of a guano worker on a seabird island in the 1840s.	10
3	Reading and Worksheet	Ask students to read Fact Sheet 4 (Guano Rush Historical Threats) and answer the questions 1-8 (Questionnaire 3).	15
4	Evaluation	Read the Answer Sheet 3 out loud and ask them to peer mark one another.	5
5	Word Puzzle	Ask students to gather in groups of 2-4. Ask them to look at the Word Puzzle and see how many words they can find, keeping in mind that the words will be related to the subject matter that is covered in the lesson.	15
6	Evaluation	Go through the Solution Sheet of the word puzzle, scoring each correctly identified word.	5
			55

QUESTIONNAIRE 3 (10 points)

1. What is guano? (1)

2. What ancient civilization discovered that guano was a good source of fertiliser? (1)

--

3. Where would you expect to find large quantities of guano? (1)

--

4. What does guano contain that helps crops to grow? (1)

--

5. What was guano called during the Great Guano Rush of the 1840s? (1)

--

6. How did the harvesting of guano affect gannets? Name two effects. (2)

1:
2:

7. What other material was made using guano during World War 1? (1)

--

8. Why is guano no longer in demand for use as a fertiliser? List two reasons. (2)

1:
2:

ANSWER SHEET 3 (10 points)

1. Q: What is guano? (1)

A: A mixture of bird excrement, bones, eggshells, and feathers.

2. Q: What ancient civilization discovered that guano was a good source of fertiliser? (1)

A: The Inca Empire (of South America).

3. Q: Where would you expect to find large quantities of guano? (1)

A: Islands inhabited by seabirds (such as gannets, penguins, and cormorants).

4. Q: What does guano contain that helps crops to grow? (1)

A: Nitrogen (or nitrates).

5. Q: What was guano called during the Great Guano Rush of the 1840s? (1)

A: White Gold.

6. Q: How did the harvesting of guano affect gannets? Name two effects. (2)

A:

1: Guano scraping destroyed the breeding habitat of gannets.

2: The breeding cycles of gannets were interrupted.

7. Q: What other material was made using guano during World War 1? (1)

A: Gunpowder.

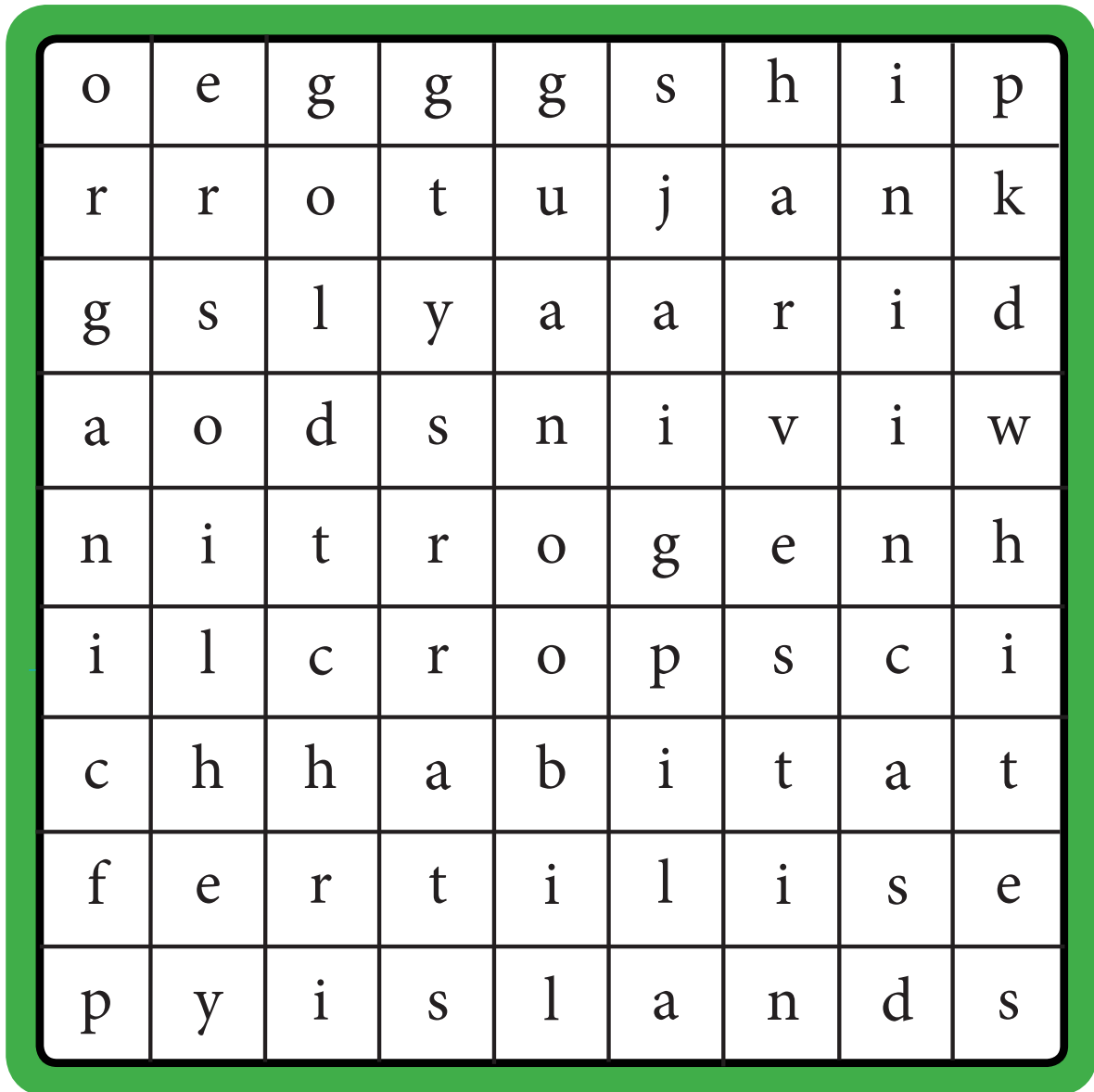
8. Q: Why is guano no longer in high demand for use as a fertiliser? List two reasons. (2)

A:

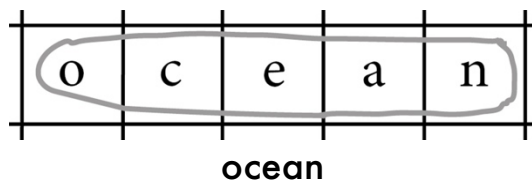
1: It has been replaced with synthetically produced chemical fertilisers.

2: It is very expensive.

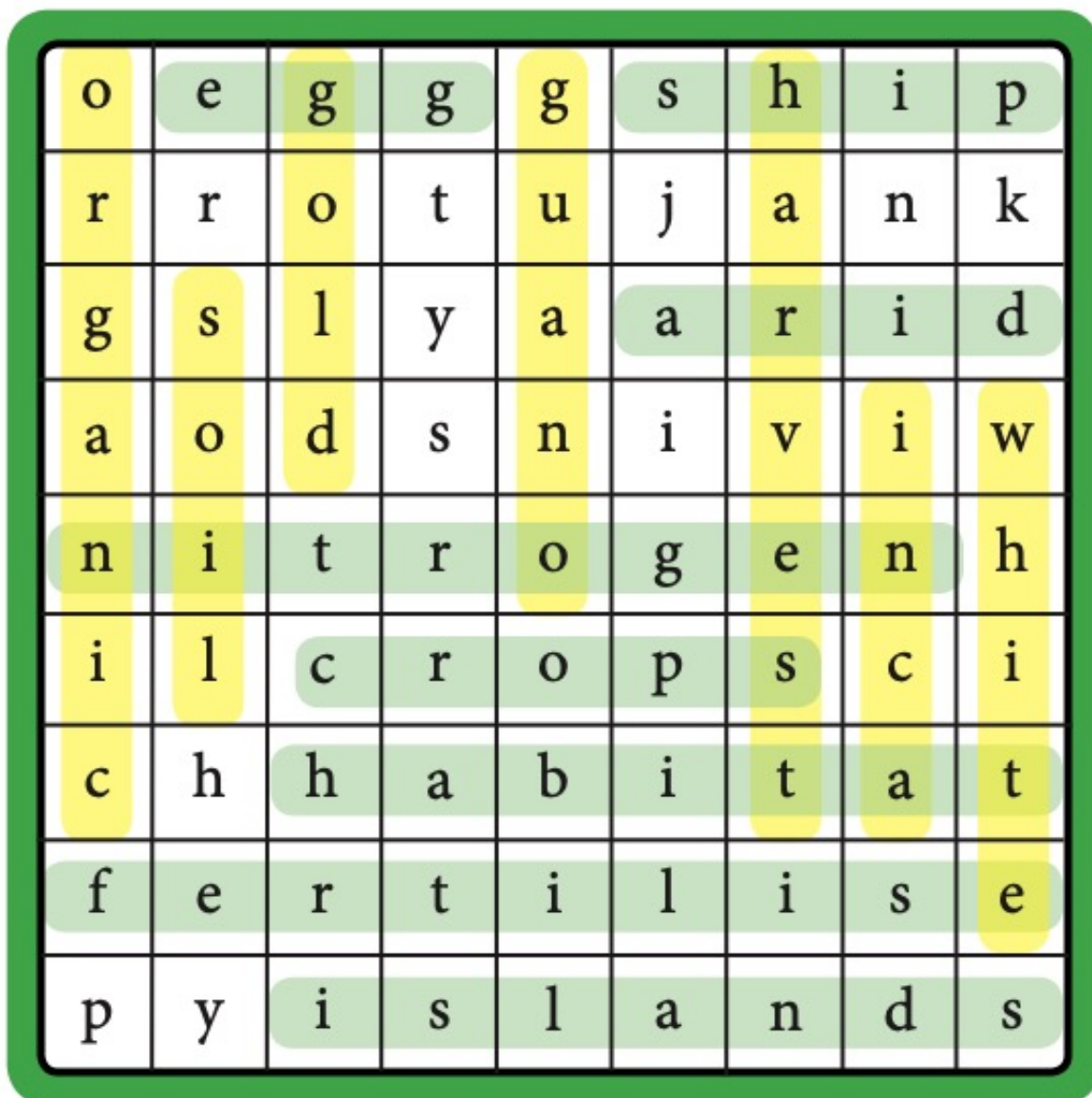
WORD PUZZLE 2 (15 points)



Try to find as many words as you can in this word puzzle.
 All the words will have something to do with gannets, and the Great Guano Rush.
 Circle each word that you find using a pencil just like this:



WORD PUZZLE SOLUTION 2 (15 points)



ACROSS	DOWN
egg	organic
ship	soil
arid	gold
nitrogen	guano
crops	harvest
habitat	Inca
fertilise	white
islands	