

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

Science: Conservation and Pollution

# Science

## Conservation and Pollution

It is not necessary to carry out all the activities contained in this unit.

Please see *Teachers' Notes* for explanations, additional activities, and tips and suggestions.

Theme	Conservation and Pollution
Levels	A1 – B1
Language focus	Key vocabulary, word identification, sentence structure, extracting information from text, writing text, grammar.
Learning focus	Using science textbooks and accessing curriculum content and learning activities.
Activity types	Matching, word identification, structuring sentences and text, cloze, multiple choice, reading comprehension, categorising vocabulary, recording learning, developing a learning resource.
Acknowledgement	<b>Extracts from Science Revision for Junior Certificate. Shea Mullally. Gill &amp; Macmillan.</b>  We gratefully acknowledge Gill & Macmillan for the right to reproduce text in some of these activities.
Learning Record	A copy of the Learning Record should be distributed to each student.  Students should: <ol style="list-style-type: none"><li>1. Write the subject and topic on the record.</li><li>2. Tick off/date the different statements as they complete activities.</li><li>3. Keep the record in their files along with the work produced for this unit.</li><li>4. Use this material to support mainstream subject learning.</li></ol>

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

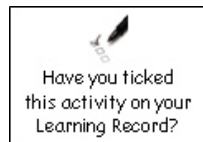
Science: Conservation and Pollution

## Making the best use of these units

- **At the beginning of the class**, make sure that students understand **what** they are doing and **why**. *'We are doing the exercise on page (12) to help you to remember key words / to help your writing skills / to help with grammar' etc.*
- You can create your **personal teaching resource** by printing these units in full and filing them by subject in a large ring binder.
- **Encourage students to:**
  - Bring the relevant **subject textbooks** to language support class. It does not matter if they have different textbooks as the activities in these units refer to vocabulary and other items that will be found in all subject textbooks. These units are based on curriculum materials.
  - Take some **responsibility for their own learning** programmes by:



Developing a **personal dictionary** for different subjects, topics, and other categories of language, on an on-going basis. This prompt is a reminder.

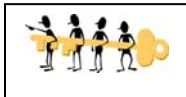


Recording what they have learnt on the **Learning Record**, which should be distributed at the start of each unit.



Keeping their own **files** with good examples of the work produced in language support for different subjects and topics. This file will be an invaluable **learning resource** in supporting mainstream learning.

- Don't forget that many of the activities in these units are suitable as **homework** tasks, for **self-study**, or for use in the **subject classroom** with the agreement of the subject teacher.



Indicates that answers may be found at the end of the unit.

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**Science: Conservation and Pollution**

## **Keywords**

The list of keywords for this unit is as follows:

### **Nouns**

acid  
conservation  
detergent  
earth  
environment  
fertiliser  
human  
incineration  
incinerator  
materials  
pesticide  
pollution  
rain  
resources  
river  
sea  
sewage  
soil  
waste

### **Adjectives**

careful  
harmful  
natural

### **Verbs**

cause  
conserve  
dissolve  
dump  
pollute  
recycle

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### Vocabulary file 1

This activity may be done in language support class or in the mainstream subject classroom.

<b>Word</b>	<b>Meaning</b>	<b>Word in my language</b>
pesticide		
harmful		
waste		
acid		
resources		
earth		



Get your teacher to check this and then file it in your folder so you can use it in the future.

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### Vocabulary file 2

This activity may be done in language support class or in the mainstream subject classroom.

<b>Word</b>	<b>Meaning</b>	<b>Word in my language</b>
incineration		
fertiliser		
environment		
sewage		
dump		
natural		



Get your teacher to check this and then file it in your folder so you can use it in the future.

**NAME:** \_\_\_\_\_ **DATE:** \_\_\_\_\_  
**Science: Conservation and Pollution**

**Level:** all  
**Type of activity:** whole class

**Focus:** vocabulary, spelling,  
dictionary, writing  
**Suggested time:** 10 minutes

## Activating students' existing knowledge

Use a spidergram to activate students' ideas and knowledge on the key points in this chapter. See **Teachers' Notes** for suggestions.

Possible key terms for the spidergram:

**Pollution**

**Acid Rain**

**Recycling**

- Invite students to provide key words in their own languages.
- Encourage dictionary use.
- Encourage students to organise their vocabulary into relevant categories (e.g. meaning, nouns, keywords, verbs etc.).



Students should record vocabulary and terms from the spidergram in their personal dictionaries.

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 Science: Conservation and Pollution

**Level:** A1  
**Type of activity:** pairs or individual

**Focus:** vocabulary, spelling, dictionary  
**Suggested time:** 30 minutes

### Working with words



#### 1. Tick the correct answer



- ☐ a) This is a beach.
- ☐ b) This is a dump.
- ☐ c) This is a recycling facility.
- ☐ d) This is a car park.



- ☐ a) This is a beach.
- ☐ b) This is a dump.
- ☐ c) This is a recycling facility.
- ☐ d) This is a car park.

#### 2. Find these words in your textbook.

Write your own explanation for these words. Then write the word in your own language. Use your dictionary if necessary.

Word	Page in textbook	Explanation	In my language
pollution			
natural resources			
conservation			
recycling			



Check that these key words are in your personal dictionary.

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_  
Science: Conservation and Pollution

Level: A1

Type of activity: pairs or individual

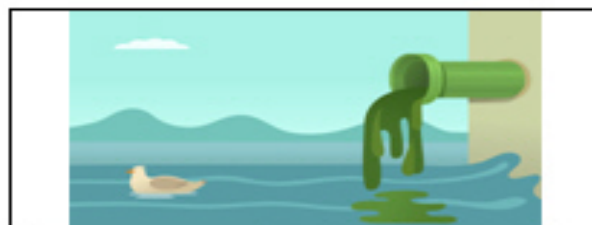
Focus: vocabulary, basic sentence structure  
Suggested time: 30 minutes



## Picture Sentences

### 1. Tick the correct answer

- a) This is air pollution.
- b) This is soil pollution.
- c) This is water pollution.



- a) This is air pollution.
- b) This is soil pollution.
- c) This is water pollution.



- a) This is air pollution.
- b) This is soil pollution.
- c) This is water pollution.



2. Put these words in the correct order to form sentences about pollution.

and/ smoke/air pollution/ is caused by/ dust/ harmful gases

\_\_\_\_\_

is caused by/ soil pollution/ pesticides / and/ acid rain/ artificial fertilisers

\_\_\_\_\_

oil /fertilisers /water pollution/ , sewage/ and detergents/ is caused by

\_\_\_\_\_

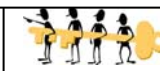
NAME: \_\_\_\_\_ DATE: \_\_\_\_\_  
Science: Conservation and Pollution

Level: A1/A2

Type of activity: pairs or individual

Focus: word identification, vocabulary

Suggested time: 20 minutes



### Odd One Out

1. Circle the word which does not fit with the other words in each line.

Example:    *apple*    *orange*    *banana*    taxi

earth                      environment              wind              book

pollution              humans              waste              look

desk                      conservation              seas              rivers

natural                      detergents              great              materials

2. Find these words in your textbook. Then put them in short sentences in your own words. Use a dictionary if necessary.

to pollute \_\_\_\_\_

to recycle \_\_\_\_\_

to cause \_\_\_\_\_

to dump \_\_\_\_\_

to dissolve \_\_\_\_\_



Check that these key words are in your personal dictionary.

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_  
Science: Conservation and Pollution

Level: A1/A2  
Type of activity: individual

Focus: key vocabulary, writing  
descriptive text  
Suggested time: 20 minutes



## Keywords

1. Fill in the missing letters of the keywords listed below.  
On the line beside each word, write whether the word is a noun, an adjective or a verb.

e\_rt\_ \_\_\_\_\_

h\_ma\_s \_\_\_\_\_

r\_in \_\_\_\_\_

r\_ve\_s \_\_\_\_\_

2. Write as many words as possible related to **Conservation and Pollution**. You have 3 minutes!

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Check that these key words are in your personal dictionary.

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

Science: Conservation and Pollution

Level: A1 / A2

Type of activity: pairs or individual

Focus: key vocabulary, spelling

Suggested time: 20 minutes



### Unscramble the letters

1. There are three main types of... PLLOTUNIO

**Answer** \_\_\_\_\_

2. Soil pollution is caused by... PTESICIED

**Answer** \_\_\_\_\_

3. Water is polluted by... FETRILISRES

**Answer** \_\_\_\_\_

4. The burning of waste is called... INCNIERATNOI

**Answer** \_\_\_\_\_

### Solve the secret code

English	W	A	D	E	F	I	N	M	O	S	T	U
Code	B	X	Y	F	G	Q	R	O	L	E	A	W

ex: EAWYFRA = STUDENT

**BXEAF** \_\_\_\_\_

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

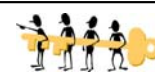
**Science: Conservation and Pollution**

**Level:** A2 / B1

**Type of activity:** pairs or individual

**Focus:** reading comprehension, extracting meaning from text, vocabulary

**Suggested time:** 30 minutes



## Completing sentences

Fill in the blanks in these sentences. Use words from the Word Box below.

### POLLUTION

\_\_\_\_\_ is any undesirable change in our \_\_\_\_\_ caused by human activities.

- Water pollution is the introduction of anything into water which alters any of its beneficial uses, e.g. sailing, fishing, drinking, etc.

- \_\_\_\_\_ pollution is the introduction of small suspended solids or poisonous liquids and gases into the air.

- \_\_\_\_\_ rain is caused by an increase in the pH of normal rain \_\_\_\_\_ by the introduction of sulphur dioxide and the oxides of nitrogen into the air.

*Word Box:*

pollution	acid	water	environment	atmospheric
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Science: Conservation and Pollution

Level: A2 / B1

Type of activity: individual

**Focus:** key vocabulary, topic information, reading comprehension, multiple choice  
**Suggested time:** 40 minutes



## Multiple choice

*Read the text below and choose the best answers.*

### GREENHOUSE EFFECT

Certain gases in the air absorb ultraviolet radiation, which causes an increase in the temperature of the Earth. Carbon dioxide, methane and CFCs are some examples of greenhouse gases.

### OZONE LAYER

A layer of ozone gas protects us from the harmful effects of radiation from the sun. Some gases, in particular CFCs, have created a hole in the ozone layer.

### Effects of human activity on the environment

Treatment of waste - sewage.

Burning fossil fuels - greenhouse effect

Recycling of plastic, glass and aluminium cans.

Use of CFCs, which damage the ozone layer.

Restocking of fish in rivers.

Fish kills caused by silage and slurry.

Government levies - plastic bags.

Discharge of nitrates and phosphates into water

1. What do certain gases in the air absorb?

- |           |                          |
|-----------|--------------------------|
| a) food   | b) natural resources     |
| c) people | d) ultraviolet radiation |

2. What does the layer of ozone gas do?

- |                    |                   |
|--------------------|-------------------|
| a) causes damage   | b) protects us    |
| c) helps the earth | d) saves the fish |

3. What have some gases created?

- |                              |          |
|------------------------------|----------|
| a) smoke and dust            | b) water |
| c) a hole in the ozone layer | d) trees |

4. Should materials such as paper, glass and plastics be recycled?

- |        |       |
|--------|-------|
| a) Yes | b) No |
|--------|-------|

5. Does the government collect money for plastic bags?

- |        |       |
|--------|-------|
| a) Yes | b) No |
|--------|-------|

## Science: Conservation and Pollution

**Type of activity:** pairs / small groups

**Focus:** vocabulary, structure, planning and creating text  
**Suggested time:** 40 minutes

## Writing

Use your textbook to help you to write at least 6 sentences about **pollution**. Ask you teacher to check your work, and then file it in your folder. Note - writing this out will help you to remember it!

## Pollution

[illegible]

Have you ticked  
this activity on your  
Learning Record?

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

**Science: Conservation and Pollution**

**Level:** B1

**Type of activity:** individual

**Focus:** verb+ prepositions

**Suggested time:** 30 minutes



## Grammar points

### Verb + preposition

#### 1. Study the following sentence:

Air pollution is caused by smoke, dust and harmful gases.

The verb cause is often followed by the preposition by.

2. Look at the following list of verbs. Write down the preposition that usually follows the verb. Then write a sample sentence. You can compare your answers with the Answer Key.

verb	+ preposition
cause	by <i>Acid rain is caused by pollution.</i>
agree	
ask	
believe	
belong	
depend	
hope	
good	
look	
pay	
talk	

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

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## Levels A1 and A2 - Alphaboxes

Using your textbook, find **one** word beginning with each of the letters of the alphabet.  
Write the word in the relevant box. You could also write the word in your own language.

a	b	c
d	e	f
g	h	i
j	k	l
m	n	o
p	q	r
s	t	u
v	w	xyz

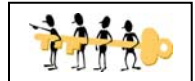
Do you understand all these words?



Get your teacher to check this, then file it in your folder so you can use it in the future.

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

Science: Conservation and Pollution



Word search

Find the words from the list below. When you have found all the words, write each word in your own language.

E A  
 P V  
 J Z J G  
 K V N Q  
 S A X F S F  
 F R W C U K  
 N A T U R A L B  
 Q A H D R X E W  
 D E T E R G E N T S  
 W E A U U I B K E A  
 O P G L Q R I V E R V J  
 K K P J B O H E F F Z Q  
 D E J C G N D H L Q F T W V  
 O Q T C R I V E R S C L I Z  
 M W A S T E F Z T N S N A V N K  
 Y D Y Q K S O I L Q L F A U L D  
 A Y T Q U Z P T D C S E W A G E Q E  
 X Z P M K Z O R A F F E C T N A V W  
 E P Z S C Q I N C I N E R A T I O N R I  
 Y D I S S O L V E G N E X U R K B Z A N  
 C N K A N I M A L S F N J N R D O W D B B Q  
 V G A S E S U L F U R N N X J J A L G A L Y  
 D E Y T N S D J Q V O U H Y T E V W E F N L X D  
 E A K C I C K H F E R T I L I S E R S X V A D W  
 B M Y D U M P I N G T Z T L V N A G C A U S E T M K  
 Z S U P F V E N V I R O N M E N T N I P K Y P Y Y K  
 P E S T I C I D E S Z E H G G E A R T H I E Z V O N S B  
 H P U V D B G V M F V V Z L S Y O M O B J A L T A Z T K  
 Q D T D P O L L U T I O N P H U M A N S R E S O U R C E S B  
 T C T C V S J L K H A R M F U L T S I I F K X L P A C I D T

ACID	DUMPING	HUMANS	RIVER
AFFECT	EARTH	INCINERATION	RIVERS
ANIMALS	ENVIRONMENT	NATURAL	SEWAGE
CAUSE	FERTILISERS	PESTICIDES	SOIL
DETERGENTS	GASES	POLLUTION	SULFUR
DISSOLVE	HARMFUL	RESOURCES	WASTE

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## Play Snap

Make Snap cards with 2 sets of the same keywords. See *Notes for teachers* for ideas about how to use the cards.



<b>pollution</b>	<b>pollution</b>
<b>recycling</b>	<b>recycling</b>
<b>dumping</b>	<b>dumping</b>

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<b>incinerator</b>	<b>incinerator</b>
<b>wastes</b>	<b>wastes</b>
<b>detergents</b>	<b>detergents</b>

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<b>fertiliser</b>	<b>fertiliser</b>
<b>resources</b>	<b>resources</b>
<b>rain</b>	<b>rain</b>

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## Answer key

### Working with words, page 7

1. b, c

### Picture sentences, page 8

1. c, a, b
2. Air pollution is caused by dust, smoke and harmful gases.  
Soil pollution is caused by pesticides, artificial fertilisers and acid rain.  
Water pollution is caused by sewage, fertilisers and detergents.

### Odd one out, page 9

Book, look, desk, great

### Keywords, page 10

Earth (noun), humans (noun), rain (noun and verb), rivers (noun)

### Unscramble the letters, page 11

Pollution, pesticides, fertilisers, incineration

Secret code: waste

### Completing Sentences, page 12

**Pollution** is any undesirable change in our **environment** caused by human activities.

- Water pollution is the introduction of anything into water which alters any of its beneficial uses, e.g. sailing, fishing, drinking, etc.
- **Atmospheric** pollution is the introduction of small suspended solids or poisonous liquids and gases into the air.
- **Acid** rain is caused by an increase in the pH of normal rain **water** by the introduction of sulphur dioxide and the oxides of nitrogen into the air.

### Multiple Choice, page 13

1.d, 2.b, 3.c, 4.a, 5.a

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**Grammar point, page 15**

Other verb + prepositions are possible, these are the most common.

verb	+ preposition
cause	<b>by</b> <i>Acid rain is caused by pollution.</i>
agree	<b>with</b> <i>I agree with the teacher that spellings are difficult!</i>
ask	<b>for</b> <i>I asked for extra paper during the exam.</i>
believe	<b>in</b> <i>Most people believe in a god.</i>
belong	<b>to</b> <i>He belongs to a soccer club.</i>
depend	<b>on</b> <i>I depend on my parents for everything.</i>
hope	<b>for</b> <i>We are all hoping for a good summer.</i>
good	<b>at</b> <i>I am very good at English!</i>
look	<b>For</b> <i>Look for the special offers when you go shopping.</i> <b>At</b> <i>Look at that sky – it's going to rain.</i>
pay	<b>for</b> <i>If you break something you have to pay for it.</i>
talk	<b>to</b> <i>I love talking to my sister.</i>

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

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Word search, page 17

E A  
P V  
J Z J G  
K V N Q  
S A X F S F  
F R W C U K  
N A T U R A L B  
Q A H D R X E W  
D E T E R G E N T S  
W E A U U I B K E A  
O P G L Q R I V E R V J  
K K P J B O H E F F Z Q  
D E J C G N D H L Q F T W V  
O Q T C R I V E R S C L I Z  
M W A S T E F Z T N S N A V N K  
Y D Y Q K S O I L Q L F A U L D  
A Y T Q U Z P T D C S E W A G E Q E  
X Z P M K Z O R A F F E C T N A V W  
E P Z S C Q I N C I N E R A T I O N R I  
Y D I S S O L V E G N E X U R K B Z A N  
C N K A N I M A L S F N J N R D O W D B B Q  
V G A S E S U L F U R N N X J J A L G A L Y  
D E Y T N S D J Q V O U H Y T E V W E F N L X D  
E A K C I C K H F E R T I L I S E R S X V A D W  
B M Y D U M P I N G T Z T L V N A G C A U S E T M K  
Z S U P F V E N V I R O N M E N T N I P K Y P Y Y K  
P E S T I C I D E S Z E H G G E A R T H I E Z V O N S B  
H P U V D B G V M F V V Z L S Y O M O B J A L T A Z T K  
Q D T D P O L L U T I O N P H U M A N S R E S O U R C E S B  
T C T C V S J L K H A R M F U L T S I I F K X L P A C I D T