

SCIENCE

Plant Reproduction

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	Plant Reproduction	
All students: Activities that are suitable for Learning Support, Language Support and the Mainstream Subject Class include:	Keywords	3
	Vocabulary File	4-6
	Activating Students' Existing Knowledge	7
	Completing Sentences	13
	Multiple Choice	14
	Labelling diagrams and writing	15
	Wordsearch	19
Learning support and Language support: Activities suitable for students receiving Learning or Language Support include:	Working with words	8
	Picture Sentences	9
	Odd One Out	10
	Science Keywords	11
	Unscramble the letters	12
	Alphaboxes	18
	Play Snap	20-22
Language support: Additional activities for Language Support:	Grammar	16
	Vocabulary	17
Levels for Language Support	A1 – B1 The language level of each activity is indicated in an information box.	
Learning focus	Using Science textbooks and accessing curriculum content and learning activities.	
Acknowledgement	The <i>English Language Support Programme</i> acknowledges the permission of Gill and Macmillan to reproduce excerpts from <i>Science Revision for Junior Cert.</i> by Shea Mullally	

Note: The categorisation of activities is indicative only and should not prevent teachers from using any activities that are considered suitable for a particular group of students.

Making the best use of these units

Learning Record

A copy of the Learning Record should be distributed to each learning support and language support student.

Students should:

1. Write the subject and topic on the record.
2. Tick off/date the different statements as they complete activities.
3. Keep the record in their files along with the work produced for this unit.
4. Use this material to support mainstream subject learning.

Introduction of a topic or activity should ensure that students understand **what** they are doing and **why**. Many students will have some difficulty in understanding both the language in the activity and the instructions/purpose for carrying out the activity.

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 learning/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:



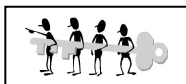
Developing a **personal dictionary** for different subjects, topics, and other categories of language, on an on-going basis. This prompt is a reminder.



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 for different subjects and topics. This file will be an invaluable **learning resource** in supporting mainstream learning.



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

Don't forget that many of the activities in these units are also suitable as **homework** tasks or for **self-study**.

Keywords

The list of keywords for this unit is as follows:

Nouns

absence
animals
anther*
availability
blotting paper
carpel
colour
combination
community
cuttings
dispersal
egg
fertilisation
filament*
flower
food
formation
fruits
fusion
gamete
germination
graftings
insects
leaf
living things
method
nucleus

offspring
ovary*
parent
plant
pollen
pollination
presence
relationships
reproduction
resources
scent
seeds
seedlings
self-dispersal
sex cells
stamen
stigma*
style*
wind
zygote

Verbs

to attract
to compete
to contain
to cut
to disperse

to fertilise
to form
to fuse
to grow
to involve
to occur
to plant
to pollinate
to produce
to reproduce
to transfer

Adjectives

asexual
different
female
fertilised
identical
male
new
sexual
similar

Adverbs
sexually

*** Higher Level material only**

Vocabulary file 1

Word	Meaning	Note or example*
carpel		
dispersal		
egg		
fertilisation		
flower		
formation		
fruits		

*You may wish to write a sentence or phrase, make a note of the page in your textbook where this word appears or, if English is not your first language, provide a translation into your language.



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

NAME: _____ DATE: _____
SCIENCE: Plant Reproduction

Vocabulary file 2

Word	Meaning	Note or example
germination		
graftings		
living things		
pollination		
reproduction		
seeds		
self-dispersal		



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

NAME: _____ DATE: _____
SCIENCE: Plant Reproduction

Vocabulary file 3

Word	Meaning	Note or example
to attract		
to disperse		
stamen		
zygote		
to grow		
to pollinate		
to transfer		



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

Language Level: all
Type of activity: whole class
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 term for the spidergram:

Reproduction

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



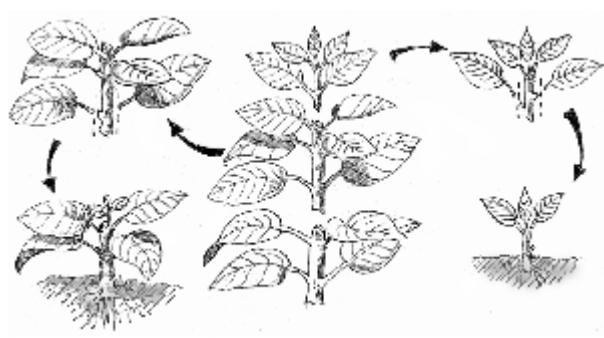
All students should record vocabulary and terms from the spidergram in their personal dictionaries.

Language Level: A1
 Type of activity: pairs or individual
 Suggested time: 30 minutes

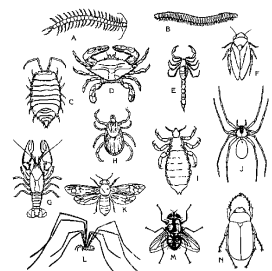


Working with words

1. Tick the correct answer



- a) eggs
- b) cuttings
- c) the wind
- d) fish



- a) insects
- b) flowers
- c) eggs
- d) bones

2. Find these words in your textbook.

Write your own explanation for these words. Then write a note or example to help you remember the word. Use your dictionary if necessary.

Word	Page in textbook	Explanation	Note or example
colour			
egg			
fertilisation			
germination			



Check that these key words are in your personal dictionary.

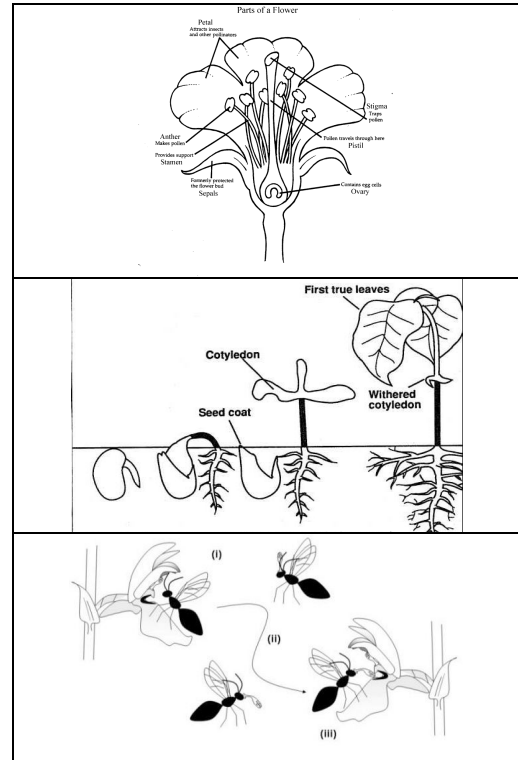
Language Level: A1
 Type of activity: pairs or individual
 Suggested time: 30 minutes



Picture Sentences

1. Tick the correct answer

- a) This is a bee.
 - b) These are the parts of a flower.
 - c) This is a snow storm.
-
- a) This is a tram.
 - b) These are books.
 - c) This is plant germination.
-
- a) This is a newspaper.
 - b) This is pollination.
 - c) This is a computer speaker.



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

petals insects attract

two pollen carried is in ways

reproduce by plants of means flowers

NAME: _____ DATE: _____

SCIENCE: Plant Reproduction

Language Level: A1 / A2
Type of activity: pairs or individual
Suggested time: 20 minutes



Odd One Out

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

Example: chair desk book **train**

flower stamen ovary blue

seeds nucleus pollen pepper

stigma gamete insects snake

germination small plant anther

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

to attract _____

to compete _____

to cut _____

to fuse _____

to pollinate _____



Check that these key words are in your personal dictionary.

NAME: _____ DATE: _____

SCIENCE: Plant Reproduction

Language Level: A2 / B1
Type of activity: individual
Suggested time: 20 minutes



Science 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.

s_ig_a _____

o_ary _____

st_m_n _____

in_ec_s _____

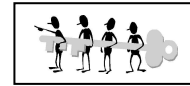
2. Write as many words as possible related to **plant reproduction**. You have 3 minutes!



Check that these keywords are in your personal dictionary.



Language Level: A1 / A2
 Type of activity: pairs or individual
 Suggested time: 20 minutes



Unscramble the letters

1. Plants reproduce sexually by means of FOLERWS

Answer _____

2. Pollen is made in the anther of the... STMAEN

Answer _____

3. The egg is made in the... OVRAY

Answer _____

4. Plants are pollinated by either the wind or... ISNECST

Answer _____

Look at each word as you write the answer.

Is your spelling correct?

Can you pronounce the word?

Do you know what the word means?

Have you got this word in your personal dictionary?



Solve the secret code

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

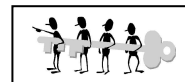
example: (code) EAWYFRA = STUDENT (English)

QREFXA =

NAME: _____ DATE: _____

SCIENCE: Plant Reproduction

Language Level: A2 / B1
Type of activity: pairs or individual
Suggested time: 40 minutes



Completing text

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

_____ reproduction involves only one parent. No fusion of gametes (sex cells) is involved. All _____ are identical to the parent. Examples include mushroom spores, daffodil _____, crocus corms, potato tubers, iris rhizomes, strawberry runners and all cuttings and graftings.

Sexual reproduction occurs when a male gamete (sex cell) fuses with a female _____ (sex cell). _____ attract insects by their colour and scent.

The flower produces pollen, which contains the male sex cells.

Word Box

bulbs	gamete	petals
asexual	offspring	

2. Explain the following words. Use your dictionary and textbook to help you.

fusion _____

offspring _____

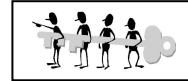
cutting _____

grafting _____

scent _____

3. List the examples of asexual reproduction from the text.

Language Level: A2 / B1
Type of activity: individual
Suggested time: 30 minutes



Multiple choice

Read the text below and choose the best answers.

Pollination is the transfer of pollen from the anther to the stigma.

Methods of pollination

- Insect: Bees and other insects carry pollen from one flower to another.
- Wind: The wind blows pollen from one flower to another.

Part of flower Insect pollinated Wind pollinated

Petals Large, coloured, scented often scented

Stamens Inside flower Hang outside flower

Pollen grains Large Small

Stigma Small, inside flower Feathery, hang outside.

1. What is the transfer of pollen called?

- | | |
|--------------|----------------|
| a) stamen | b) pollination |
| c) pollution | d) gamete |

2. What do bees and other insects carry?

- | | |
|-----------|------------|
| a) pollen | b) leaves |
| c) carpel | d) flowers |

3. What does the wind do?

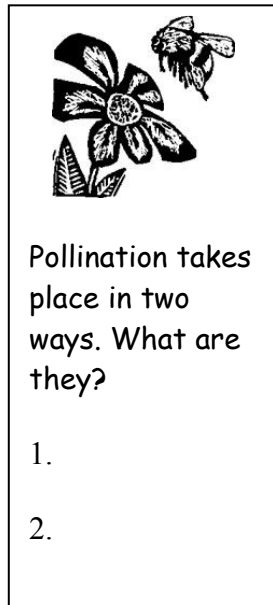
- | | |
|-----------------|------------|
| a) blows pollen | b) nothing |
| c) ovary | d) sleeps |

4. Plants are pollinated by either insects or the wind.

- | | |
|---------|----------|
| a) True | b) False |
|---------|----------|

5. Is the stamen inside the flower?

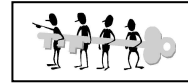
- | | |
|--------|-------|
| a) Yes | b) No |
|--------|-------|



NAME: _____ DATE: _____

SCIENCE: Plant Reproduction

Language Level: All
Type of activity: pairs / individual
Suggested time: 30 minutes



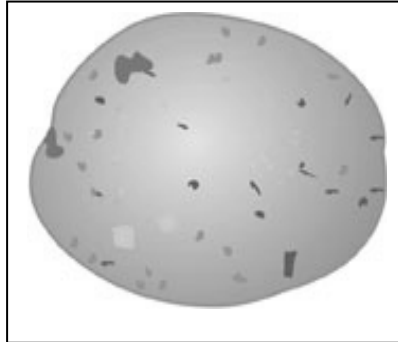
Asexual reproduction

1 Use your textbook and put the correct labels on these diagrams.
Examples are provided to help you.



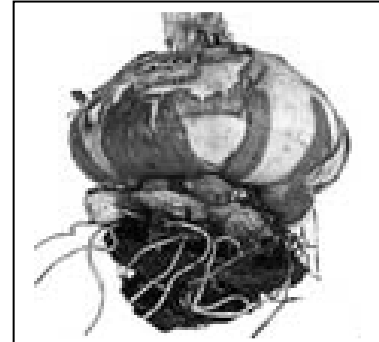
1 _____

(iris)



2 _____

(potato)



3 _____

(crocus)



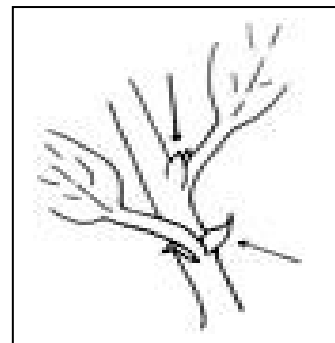
4 _____

(daffodil)



5 _____

(mushroom)



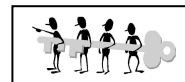
6 _____

Levels A2 and B1

2 Write a note on how asexual reproduction takes place in plants. Use these examples in your answer.

NAME: _____ DATE: _____
SCIENCE: Plant Reproduction

Language Level: All
Type of activity: pairs / Individual
Suggested time: 30 minutes



Verbs

Put the correct verbs, from the box below, into these sentences. Be careful with your spelling!

- 1 Flowers _____ bees with their colour and scent.
- 2 Bees _____ pollen from the flowers.
- 3 Wind also _____ pollen from one flower to another.
- 4 Pollen _____ from the anther to the stamen.
- 5 Asexual reproduction _____ one parent.

to gather to transfer
to involve to blow
to attract

Fill in the past tense of these verbs. Be careful!

Verb	Past tense
to grow	
to cut	
to transfer	
to occur	

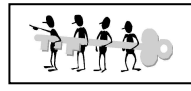
Adjectives

We came across these adjectives in this Unit. Write the opposites in the blank boxes.

female	
	asexual
	similar
new	

NAME: _____ DATE: _____
SCIENCE: Plant Reproduction

Language Level: A2 – B1
Type of activity: individual/pair
Suggested time: 30 minutes



Vocabulary

1 Word building

How many other words are related to each of these words. Find as many words as you can and write whether they are verbs, nouns, adjectives or adverbs.

Example: plans to plan (v), planner(n), planning(adj), planned(v and adj)

pollen... ..

grafting.. ..

fertilisation.....

2 Noun Hunt

Circle the 10 nouns below that are related to this Unit about Plant Reproduction. Score 4 points for each correct answer. Who will score the highest? Perhaps you will. Good luck!

- | | |
|---------------|------------|
| fertilisation | flower |
| seedlings | transfer |
| Disperse | fertilised |
| graftings | identical |
| stamen | planning |
| sexually | parent |
| pollen | cuttings |
| reproduction | cut |
| scent | compete |
| fuse | similar |
| grow | occur |

Score: _____ points

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.



Word search

Find the words in the box below.

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

APPARATUS	FLOWER	PLANT
ASEXUAL	FRUITS	POLLINATED
BLOTTING	GAMETE	REPRODUCTION
CARPEL	GEOTROPISM	SEEDS
CARPELS	GRAVITY	STAMEN
DISPERSAL	NUCLEUS	STIGMAS
FERTILISATION	OVARY	WIND

NAME: _____ DATE: _____

SCIENCE: Plant Reproduction

Play Snap

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



stigma	stigma
stamen	stamen
germination	germination

NAME: _____ DATE: _____
SCIENCE: Plant Reproduction

ovary	ovary
carpel	carpel
dispersal	dispersal

NAME: _____ DATE: _____
SCIENCE: Plant Reproduction

reproduction	reproduction
nucleus	nucleus
sexually	sexually

Answer key

Working with words, page 8

1. b, a

Picture Sentences, page 9

b,c,b

Petals attract insects.

Pollen is carried in two ways.

Plants reproduce by means of flowers.

Odd one out, page 10

Blue, pepper, snake, small

Key words, page 11

Stigma (noun), ovary (noun), stamen (noun), insects (noun)

Unscramble the letters, page 12

Flowers, stamen, ovary, insects

Secret code: insect

Completing text, page 13

1. **Asexual** reproduction involves only one parent. No fusion of gametes (sex cells) is involved. All **offspring** are identical to the parent. Examples include mushroom spores, daffodil **bulbs**, crocus corms, potato tubers, iris rhizomes, strawberry runners and all cuttings and graftings.

Sexual reproduction occurs when a male gamete (sex cell) fuses with a female **gamete** (sex cell). **Petals** attract insects by their colour and scent.

The flower produces pollen, which contains the male sex cells.

2. **fusion** *when two or more things join (are combined)*

offspring *the young of a plant or animal*

cutting *a piece cut from a plant in order to grow another plant*

grafting *a piece cut from one plant and fixed to another*

scent *a smell produced by a plant or animal*

3. List the examples of asexual reproduction from the text:

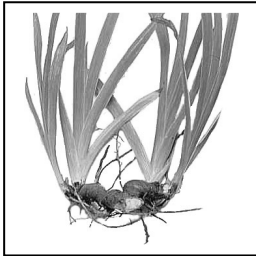
spores bulbs corms rhizomes
runners cuttings graftings

Multiple Choice, Page 14

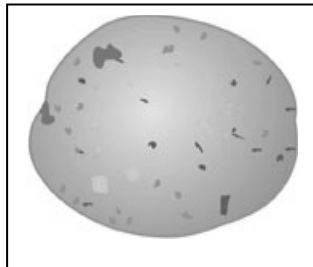
1b,2a,3a,4a,5a

Asexual reproduction, page 15

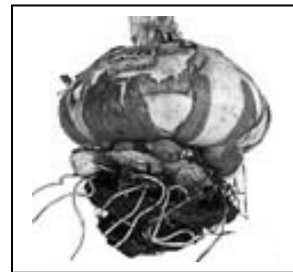
correct labels



1 rhizome



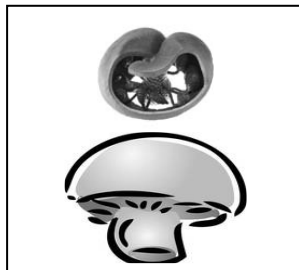
2 tuber



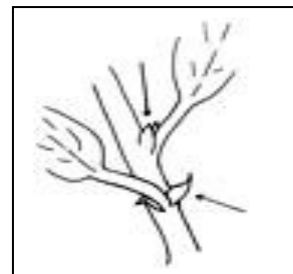
3 corm



4 bulb



5 spore



6 grafting

Verbs, page 16

- 1 Flowers **attract** bees with their colour and scent.
- 2 Bees **gather** pollen from the flowers.
- 3 Wind also **blows** pollen from one flower to another.
- 4 Pollen **transfers / is transferred** from the anther to the stamen.
- 5 Asexual reproduction **involves** one parent.

Verb	Past tense
to grow	grew
to cut	cut
to transfer	transferred
to occur	occurred

Opposites: female/male, sexual/asexual, dissimilar/similar, new/old

Vocabulary, page 17

Note: A good dictionary will provide more derivations but the more commonly-used forms are adequate for this exercise.

pollen... to pollinate (v), pollination (n), pollinated (v and adj)

grafting..... to graft (v), graft (n), grafted (v and adj)

fertilisation..... to fertilise (v), fertile (adj), fertilised (v and adj)

Noun Hunt

fertilisation

scent

seedlings

flower

graftings

stamen

pollen

parent

reproduction

cuttings

NAME: _____ DATE: _____
SCIENCE: Plant Reproduction

Word Search, page 19

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