

Reflection Worksheet

Year 8

Half-Term 3

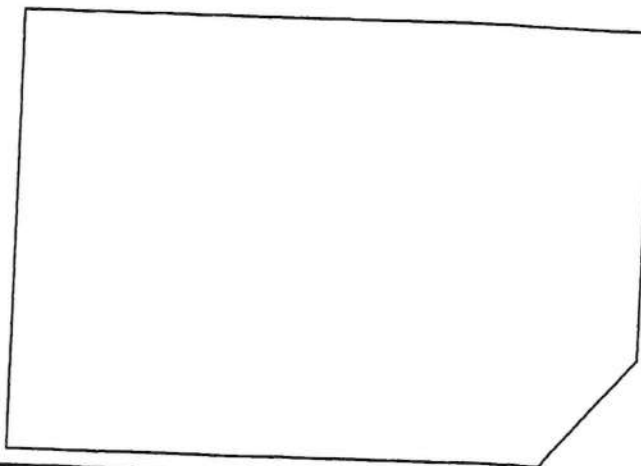
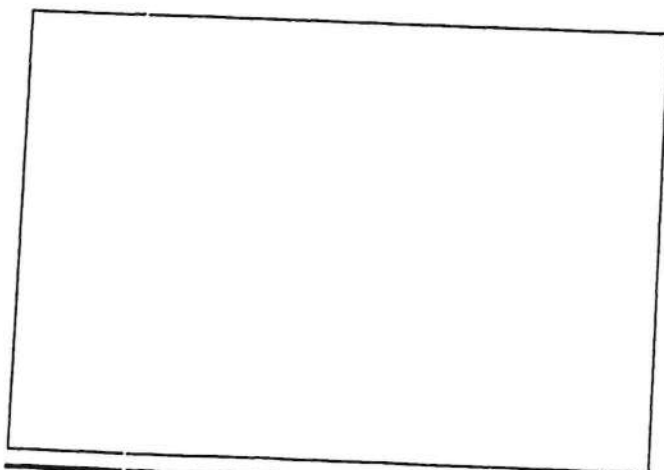
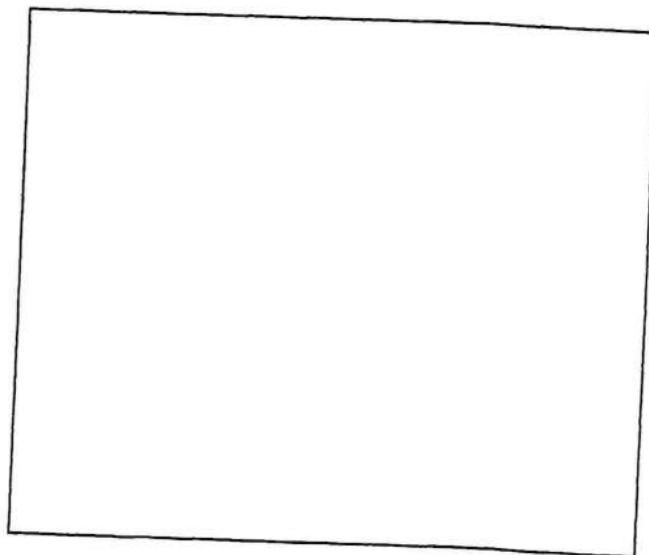
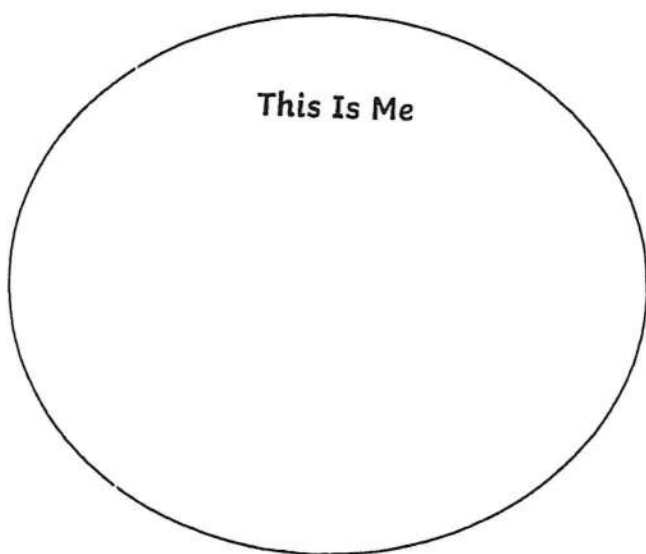
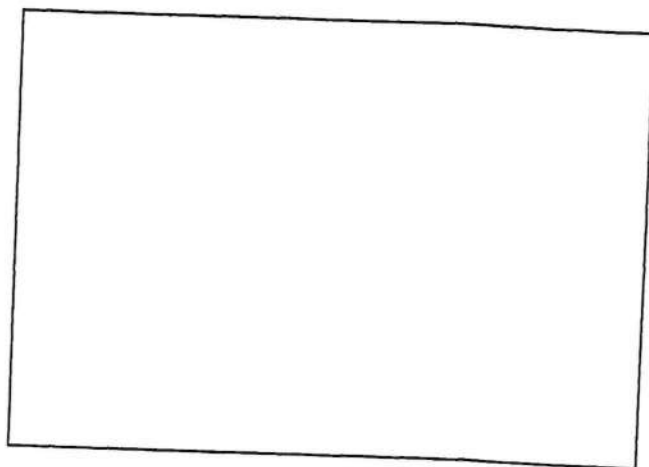
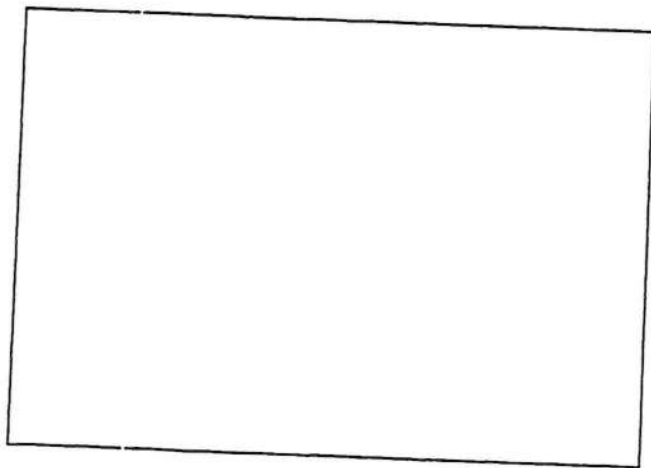
English, Maths, and Science



LIBERTY
ACADEMY
CHURCH OF ENGLAND

People I Can Talk To

Wherever we are, it can be helpful to know who we can talk to. This might be helpful if we are worried about something, excited about something, feeling confused or even just want to chat. In the boxes below, draw a picture of yourself surrounded by people you can talk to at school.



Post-16 Transition Planning

How to Use This Worksheet

Planning for post-16 transition should begin in Year 9, enabling students to think about what their strengths and weaknesses are and what career paths they are interested in. This worksheet is designed to be a working document that can be added to throughout KS4, in preparation for leaving school.

Name:		Date:
My interests/passions/hobbies:	My qualities:	
Careers that interest me:	Things I don't like:	
Location:	Colleges near me:	

Yr 8 Science Instructions

Use lined paper to complete the home learning tasks; each task is asking you to answer some question; if you are struggling with the topics, you will find the answers for each topic on the following page.

Biology Unit 1: Cells

Key points to learn:

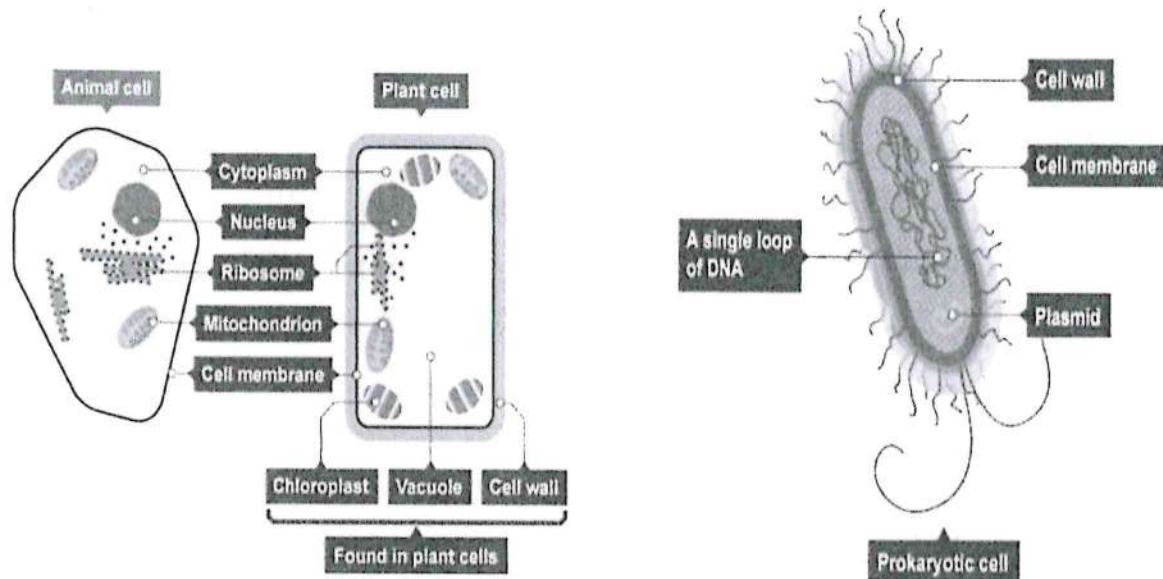
1. How to label an animal cell.
2. How to label a plant cell.
3. How to label a prokaryotic (bacterial) cell.
4. The function of each sub-cellular structure.
5. The different parts of a microscope.
6. How to use a microscope.
7. How to calculate magnification.
8. The differences between plant and animal cells.
9. The differences between prokaryotic and eukaryotic cells.

Practice Tasks/Questions

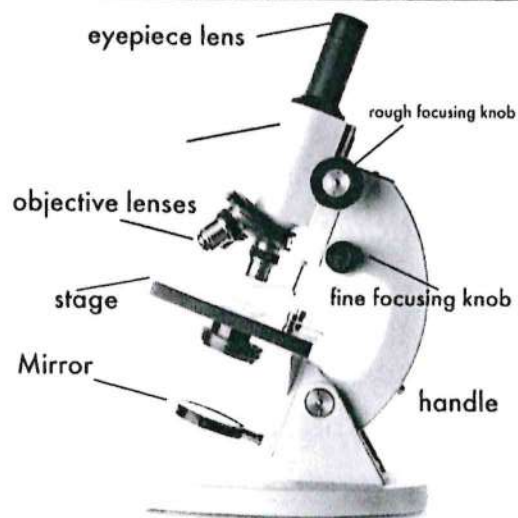
1. Draw and label an animal cell.
2. Draw and label a plant cell.
3. Write down the functions of the nucleus, cell membrane, cytoplasm, ribosomes, mitochondria, vacuole, cell wall and chloroplast.
4. Write down the 3 sub-cellular structures found in plant cells but not found in animal cells.
5. Prokaryotic cells have a nucleus – True or false?
6. Complete the equation for magnification:
Image size = Actual size x _____
7. When would you change the objective lens to a higher magnification when using a microscope?
8. When would you rotate the focussing wheel when using a microscope?

Biology Unit 1: Cells

Key information to learn:



Sub-cellular structure	Function
Nucleus	Controls the activities of the cell
Cell membrane	Controls what goes in and out of the cell
Cytoplasm	Where most chemical reactions take place
Ribosomes	Where proteins are made
Mitochondria	Where aerobic respiration takes place
Vacuole	Stores cell sap
Cell Wall	Give cells structure and support
Chloroplast	Where photosynthesis takes place



Microscope key points

- If the image is too small, change the objective lens to a higher magnification.
- If an image is blurry, rotate the focussing knob until the image is in focus.
- If an image is too dark, adjust the mirror to add light to the sample.
- Image size = Actual Size x Magnification

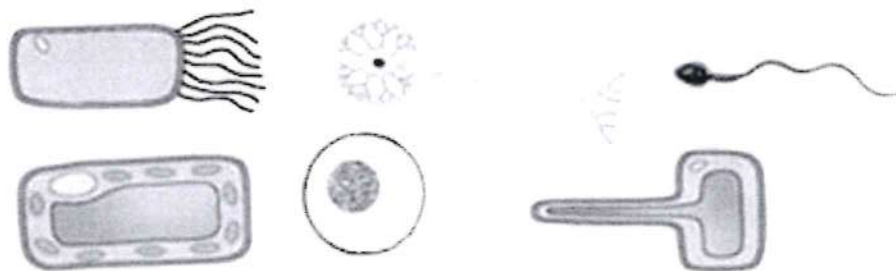
Biology Unit 2: Organisation

Key points to learn

1. How to label a specialised animal cell.
2. How to label a specialised plant cell.
3. Examples of specialised cells in animals and plants.
4. The four components of blood.
5. The names of the three types of blood vessel.
6. The function of the three types of blood vessel.
7. The main parts of the heart.
8. The parts of the digestive system.
9. The pathway the food takes through the digestive system
10. The role of enzymes in the digestive system.

Practice Tasks/Questions

1. Draw and label a specialised animal cell.
2. Draw and label a specialised plant cell.
3. Write down examples of specialised cells in animals and in plants.
4. a) What 3 structures do all these cells have?
b) Which two cells are plant cells? What other structures do they have?
c) Name each cell

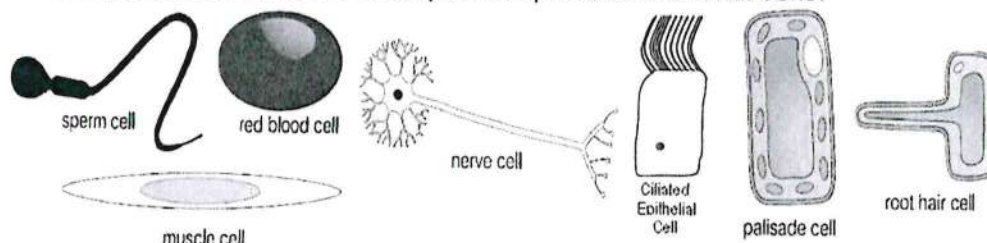


5. State the four main components of blood and what they do.
6. What are the three main types of blood vessel?
7. What does each blood vessel do?
8. a) What are the names of the top two chambers of the heart?
b) What are the names of the bottom two chambers of the heart.
c) What type of blood vessel takes blood into the heart?
d) What type of blood vessel takes blood out of or away from the heart?
9. What are the main organs in the digestive system?
10. Outline the pathway the food takes through the digestive system.
11. How do enzymes help in digestion?

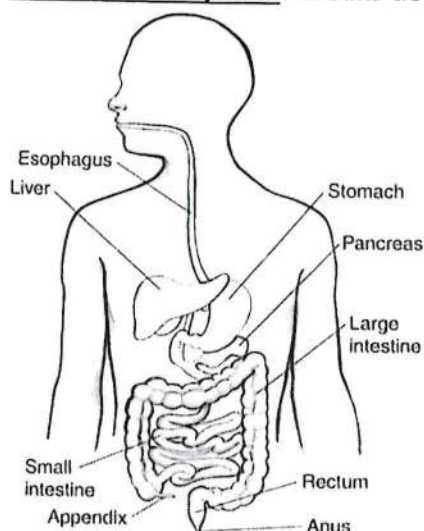
Biology Unit 2: Organisation

Key information to learn:

Specialised cells - Root hair cells and palisade cells are examples of plants cells (they both have a cell wall). All the others are examples of specialised animal cells.



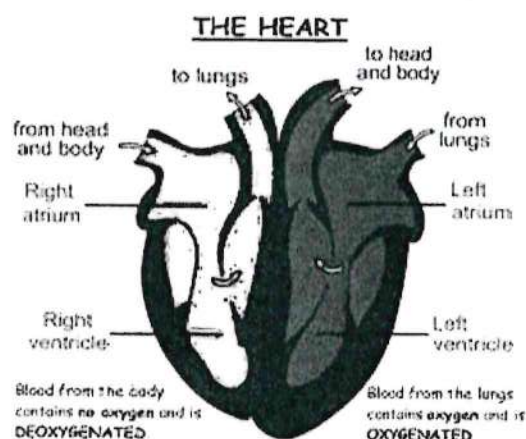
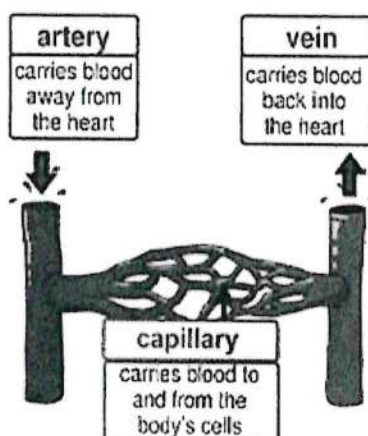
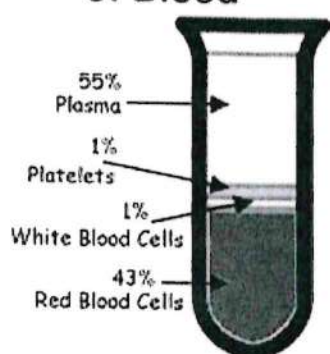
The digestive system: breaks down food and absorbs it into the blood



- The food is chewed in the **mouth** and mixed with saliva
- The chewed food then moves down the **oesophagus** to the stomach
- In the **stomach**, the food is mixed with acid (which kills microbes) and other chemicals
- The mixture then passes into the **small intestine** where it is mixed with more chemicals (enzymes and bile).
- *The nutrients are absorbed into the blood*
- In the **large intestines** water is removed and the waste is then stored in the **rectum** until it can be removed, through the **anus**
- Enzymes are very special chemicals that help to break the food down more quickly.

The circulatory system: blood, blood vessels and the heart – transports blood around the body.

Four Components of Blood



Plasma	Liquid part of the blood. Transport nutrients
Platelets	Help to clot the blood
White blood cells	Help to fight organisms causing disease (pathogens)
Red blood cells	Transport oxygen around the body to the cells

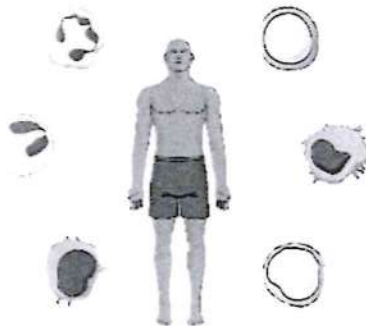
Biology Unit 3: Infection and Response

Key points to learn

1. Describe health.
2. Factors that can affect health.
3. The description of a 'pathogen'.
4. The four microorganisms that can be a pathogen.
5. The ways that disease/pathogens can be spread.
6. How the body can prevent microbes getting into the blood.
7. How the white blood cells can destroy microbes if they do get in to the blood.

Practice Tasks/Questions

1. State the definition of the term 'health'.
2. State two factors that can affect health.
3. What is a 'pathogen'?
4. State the four microorganisms that can be pathogens.
5. Name three ways that pathogens can spread disease.
6. State three ways that the body prevents pathogens from entering the body?
7. Describe how the white blood cells can destroy pathogens.
8. The main function of white blood cells (WBCs) in the body is to:



- A – carry oxygen
- B – Help in clot formation
- C – Produce more red cells
- D – protect body against pathogens

Biology Unit 3: Infection and Response

Key information to learn:




Health:

Health is "a state of complete physical, mental, and social well-being and not merely the absence of disease"

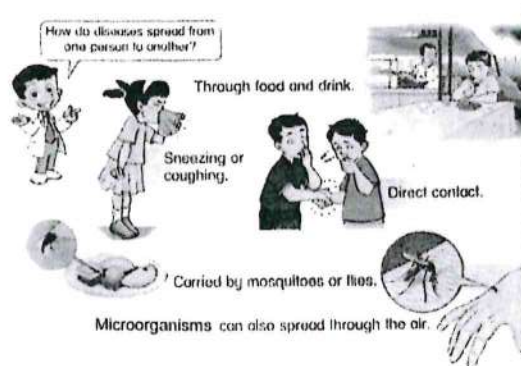
Physical is about the body. Mental is about how people think and feel.

Social well-being is the extent to which you feel a sense of belonging.

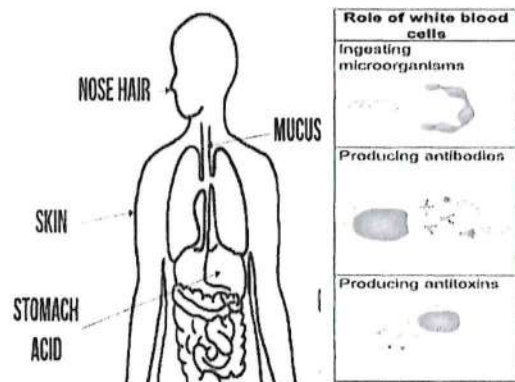
Pathogens: a microorganism that can cause disease (viruses are the **smallest**)

Type of pathogen	Description	Human diseases caused by pathogens of that type
Bacteria <i>Escherichia coli</i> 	Single-celled organisms without a nucleus	Strep throat, staph infections, tuberculosis, food poisoning, tetanus, pneumonia, syphilis
Viruses <i>Herpes simplex</i> 	Thread-like particles that reproduce by taking over living cells	Common cold, flu, genital herpes, cold sores, measles, AIDS, genital warts, chicken pox, small pox
Fungi <i>Death cap mushroom</i> 	Simple organisms, including mushrooms and yeasts, that grow as single cells or thread like filaments	Ringworm, athlete's foot, leish, candidiasis, histoplasmosis, mushroom poisoning

Spreading pathogens:



Body responses to pathogens:



Facts:

Pathogens can be spread by air (sneezing), by contact (touching) and by water (if it is contaminated)

The body will try and stop pathogens getting into the blood – the skin acts as a barrier, the nose has hairs and mucus that trap the pathogens and the stomach has acid which will kill the pathogens.

If the pathogens do get into the blood then the **white blood cells** will try and destroy them by **ingesting** them or producing **antibodies** and **antitoxins**.

Biology Unit 4: Bioenergetics

Key points to learn

1. What do we mean by photosynthesis?
2. What are the reactants and products of photosynthesis?
3. How do plants get the reactants of photosynthesis?
4. How can we test whether photosynthesis has happened?
5. What do we mean by respiration?
6. How is respiration different from breathing?
7. What is aerobic respiration?
8. What is anaerobic respiration?
9. What are the differences between anaerobic respiration in animals and in plants/microorganisms?

Practice Tasks/Questions

1. Explain what photosynthesis is and write down the word equation for the reaction.
2. How do plants transport the water from the soil to the leaves for photosynthesis?
3. How does the starch test show whether photosynthesis has occurred and what does a positive result look like?
4. Explain what the difference between respiration and breathing (ventilation) is.
5. Explain what aerobic respiration is and write down the equation for the reaction.
6. Explain what anaerobic respiration is and how it differs from aerobic respiration.
7. Compare and contrast anaerobic respiration in plants/microorganisms and animals, including noting down the equations.

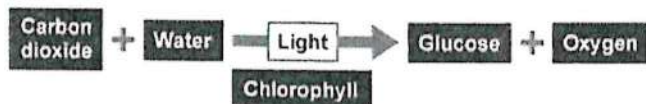
Biology Unit 4: Bioenergetics

Key information to learn:

Keyword	Definition
Reactant	The substances go into the reaction, these are a bit like the ingredients.
Product	The substances made in the reaction.
Photosynthesis	A chemical reaction in plants where they make glucose and oxygen from carbon dioxide and water using light energy.
Chlorophyll	A green pigment/chemical found in chloroplasts of plant cells.
Stomata	Small holes on the bottom of a leaf which allow carbon dioxide to enter and oxygen to leave.
Roots	Organs of plant that are underground which keep the plant anchored and absorb water and nutrients.
Xylem	Tube found in the stem which transport water and minerals to the leaf.
Respiration	A chemical reaction in which energy is released from glucose (sugar).
Ventilation	The process of breathing air into and out of the lungs.
Aerobic Respiration	The type of respiration which needs oxygen.
Anaerobic Respiration	The type of respiration which does not need oxygen.
Fermentation	Anaerobic respiration in yeast cells. It is used to make beer, bread and wine.

Photosynthesis

Photosynthesis is the process in which plants make their



The leaves of the plant are the organ at which photosynthesis happens.

The reactants of photosynthesis are water and carbon dioxide. The carbon dioxide enters the leaf through the stomata. The water enters the plant through the roots and is transported up the xylem to the leaf.

Light energy allows the reaction to occur but is not a reactant. It is absorbed by a green pigment called chlorophyll which is found in the chloroplasts in the cells of the leaves.

A variegated leaf is one which has white parts and green parts. The white parts have no chloroplasts and so cannot photosynthesise.

The plant may convert some of the glucose made in photosynthesis to starch so it can be stored for later use. We can test for whether photosynthesis has happened by testing for starch using iodine. If the leaf turns blue/black, then starch has been made which means photosynthesis has happened.

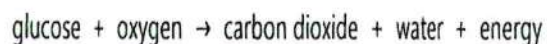
Respiration

Respiration is a chemical reaction which releases energy from glucose (sugar). It is not ventilation which is the process of breathing in and out.

The energy released in respiration is needed for many things, e.g. movement and other chemical reactions needed to keep living organisms alive.

Aerobic Respiration

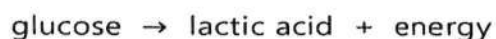
This is the type of respiration which releases energy from glucose by combining it with oxygen. It happens in the mitochondria within cells.



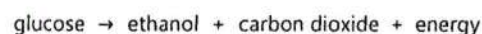
Anaerobic Respiration

This is the type of respiration which does not require oxygen but releases less energy.

Anaerobic Respiration in Animals



Anaerobic Respiration in Yeast (Fermentation)



Biology Unit 5: Reproduction and Variation

Key points to learn

1. To explain what reproduction is and to identify the cells involved in human reproduction.
2. To label and explain the functions of the human reproductive system.
3. To explain what fertilisation is and the processes involved.
4. To explain what happens during gestation and birth.
5. To explain what puberty is and identify the changes which occur to males, females and both.
6. To explain what happens during the menstrual cycle.
7. To explain what contraception is used for and list several methods of contraception.
8. To explain how plants can reproduce and label the reproductive system of the plant.
9. To explain what is meant by variation and how variation can be caused.

Practice Tasks/Questions

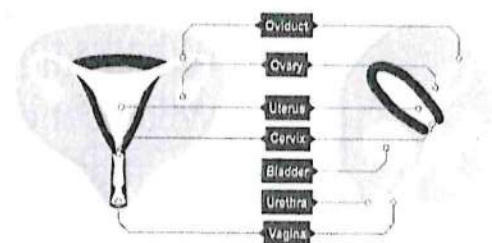
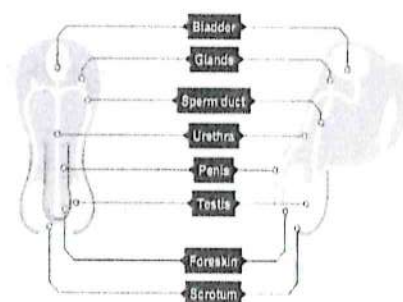
1. What is the male reproductive cell and how is it adapted to its job?
2. What is the function of the ovaries and the uterus in the female reproductive system?
3. What is meant by fertilisation and where does it happen?
4. What is the difference between an embryo and fetus?
5. What is the function of the amniotic fluid in gestation?
6. What happens during the first stage of the menstrual cycle?
7. Explain how condoms prevent both pregnancy and STIs.
8. What is the function of the anther in plant reproduction?
9. What do we mean by the term 'variation' and what are its possible causes?
10. List two characteristics that show environmental variation.

Biology Unit 5: Reproduction and Variation

Key information to learn:

Keyword	Definition
Reproduction	The creation of new members in a species to prevent extinction and pass down genes.
Sperm Cell	The male sex cell which is produced by the testes in animals.
Egg Cell (Ovum)	The female sex cell which is produced by the ovaries in animals.
Fertilisation	The fusing of the sperm and the egg cell. This happens in the oviduct.
Implantation	The sinking of a fertilised egg into the lining of the uterus (womb).
Gestation	The time during which a fertilised egg develops into a baby ready to be born. This happens in the uterus (womb).
Embryo	An unborn baby before the 8 th week of gestation in humans.
Fetus	An unborn baby after the 8 th week of gestation in humans.
Puberty	Time during which sexual maturity happens.
Menstruation	The loss of blood and tissue from the uterus through the vagina during the first stage of the menstrual cycle. It is also called a period.
STI	A sexually transmitted infection, e.g. genital herpes, chlamydia, and gonorrhoea.
Pollination	The fertilisation of flowers by passing on their pollen.
Variation	The differences in characteristics between members of the same species or between members of different species.

Structure	Male or Female	Function
Testis	Male	Produces sperm cells
Scrotum	Male	Skin which protects the testis
Sperm Duct	Male	Tube which the sperm travels out of the testis in.
Glands	Male	Produces nutrient-rich fluid that mixes with the sperm cells to produce semen.
Penis	Male	Carries semen and urine out the body.
Ovary	Female	Produces egg cells (ova).
Oviduct	Female	Tubes which connect ovaries to uterus (womb).
Uterus	Female	This is where the fertilised egg develops into a baby that is ready to be born.
Cervix	Female	Ring of muscle at bottom of uterus which keeps baby in place during pregnancy.
Vagina	Female	Muscular tube which leads from the cervix to outside of the body.



Fertilisation is where the sperm and the egg fuse together, it happens in the oviducts. The fertilised egg will then travel down the oviduct to the uterus where implantation happens. If implantation does not occur, then women will experience menstruation. If implantation does occur, then gestation begins which lasts for 40 weeks/9 months in humans.

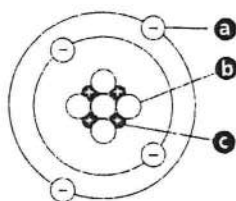
Chemistry Unit 1: Atomic Structure

Key points to learn:

1. What an element is.
2. What a compound is.
3. What a mixture is.
4. What an atom is.
5. What parts an atom contains.
6. What the symbols of the periodic table represent.
7. What the different parts of the periodic table are.
8. How do groups such as group one react.

Practice Tasks/Questions

1. Define an element.
2. Define a compound.
3. Define a mixture.
4. Label the image of an atom.

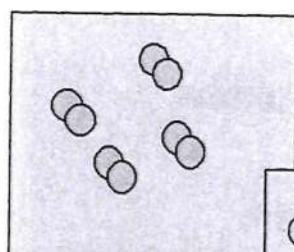


5. Find the symbol for the following element.
O = N = C = H = Cl =
6. What does a column on the periodic table represent?
7. What does a row on the periodic table represent?
8. What are the elements above the stepped line called?
9. How do the group 1 metals react with water?

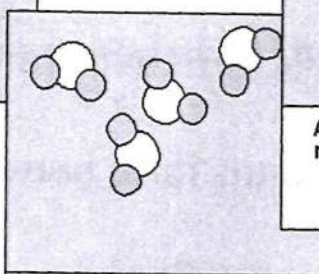
Useful links: <https://www.youtube.com/watch?v=DZ6Ap8Zyb9w>
<https://www.youtube.com/watch?v=cpBb2bgFO6I>
<https://www.youtube.com/watch?v=0RRVV4Diomg>

Chemistry Unit 1: Atomic Structure

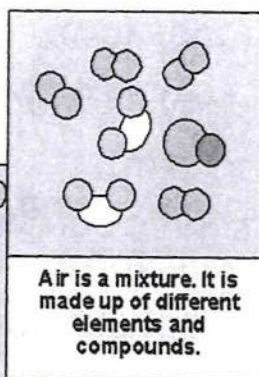
Key information to learn:



Hydrogen gas is an element. As you can see above it is made up of molecules containing the same atom. Only one type of atom appears in hydrogen gas.

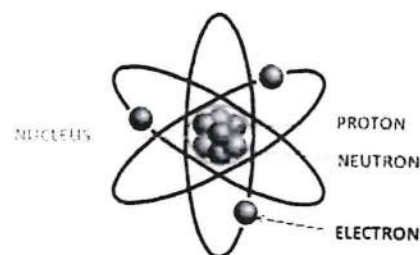


Water is a compound. It is made up of molecules with two different types of atoms.



Air is a mixture. It is made up of different elements and compounds.

An atom is the smallest part of a chemical element.



The periodic Table

Periodic Table of the Elements

H																	Nonmetals									
Li	Be																	B	C	N	O	F	Ne			
Na	Mg																	Al	Si	P	S	Cl	Ar			
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr									
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe									
Cs	Ba	La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu										
Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr										

Metals

Group 1

3	Li	Lithium
11	Na	Sodium
19	K	Potassium
37	Rb	Rubidium
55	Cs	Cesium
87	Fr	Francium

ALKALI METALS

GROUP 1

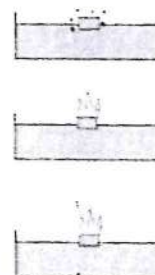
PROPERTIES:

- All metals
- 1 electron in outer shell
- Very reactive; most reactive metals

1
Li
Na
K
Rb
Cs
Fr

REACTIVITY

The reactivity increases as you go down group one.



Group 1

3	Li
11	Na
19	K
37	Rb
55	Cs
87	Fr

Group 1 with water

Yr 8 Maths Instructions

Use lined paper to complete the home learning tasks; each task has some key information you have to read; then, you are given some questions to answer for each topic, once you have read the information on the topic.

Ratio & Proportion

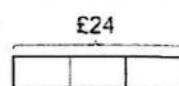
Worked example

3 memory sticks cost £24.
How much do 7 memory sticks cost?

$$1 \text{ memory stick} = £24 \div 3 = £8$$

$$7 \text{ memory sticks} = £8 \times 7 = £56$$

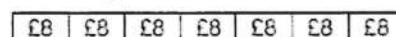
Draw a bar model to show this.
Each equal section represents
1 memory stick.



Use the bar model to help you find the
cost of 1 memory stick.

£8

Use the bar model to help you find the cost of
7 memory sticks.

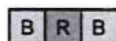


Key point

A **ratio** is a way of comparing two or more quantities.

Ratios are written as numbers separated by a colon ':'

For example, in this tile pattern there are 2 blue tiles for 1 red tile.



The ratio of blue tiles to red tiles is 2 : 1.

Worked example

The ratio of cows to sheep in a field is 2 : 3.

There are 20 cows in the field.

a How many sheep are there?

$$\begin{array}{ccc} & \text{cows : sheep} & \\ & 2 : 3 & \\ \times 10 \swarrow & & \searrow \times 10 \\ 20 : 30 & & \end{array}$$

The number of cows is multiplied by 10.
Therefore multiply the number of sheep by 10.

There are 30 sheep in the field.

b What is the total number of animals in the field?

$$20 + 30 = 50$$

There are 20 cows and 30 sheep. Add them to find the total number of animals.

There are 50 animals in the field.

Ratio & Proportion

3 packets of rice cost £1.50.

Work out the cost of

- a 2 packets b 4 packets
c 5 packets d 10 packets

Q4 hint Find the cost of 1 packet first.

Copy and complete to write each ratio in its simplest form.

a $\begin{array}{c} 2:4 \\ \swarrow \quad \searrow \\ \div 2 \quad \div 2 \\ \hline \square:\square \end{array}$ $2:4 = \square:\square$

b $\begin{array}{c} 6:3 \\ \swarrow \quad \searrow \\ \div 3 \quad \div 3 \\ \hline \square:\square \end{array}$ $6:3 = \square:\square$

c $\begin{array}{c} 3:12 \\ \swarrow \quad \searrow \\ \div \square \quad \div \square \\ \hline \square:\square \end{array}$ $3:12 = \square:\square$

d $\begin{array}{c} 30:5 \\ \swarrow \quad \searrow \\ \div \square \quad \div \square \\ \hline \square:\square \end{array}$ $30:5 = \square:\square$

e $6:8 = \square:\square$

f $6:27 = \square:\square$

g $16:24 = \square:\square$

Simplify

a $2\text{m}:150\text{cm}$

b $250\text{cm}:4\text{m}$

c $2\text{km}:1200\text{m}$

d $1.2\text{cm}:36\text{mm}$

e $1\text{ day}:6\text{ hours}$

f $8\text{ hours}:2\text{ days}$

g $63\text{kg}:200\text{g}$

h $2\text{ weeks}:14\text{ days}$

- 2 The ratio of adults to children on a bus is 1 : 6.

Copy and complete the calculations to work out how many children are on the bus when there are

a 2 adults

adults : children
 $\begin{array}{c} 1:6 \\ \swarrow \quad \searrow \\ \times 2 \quad \times 2 \\ \hline 2:\square \end{array}$

b 3 adults

adults : children
 $\begin{array}{c} 1:6 \\ \swarrow \quad \searrow \\ \times 3 \quad \times 3 \\ \hline \square:\square \end{array}$

c 7 adults

adults : children
 $\begin{array}{c} 1:6 \\ \swarrow \quad \searrow \\ \times \square \quad \times \square \\ \hline \square:\square \end{array}$

d Problem-solving On Friday, there is a total of 49 people on the bus.

i How many are adults?

ii How many are children?

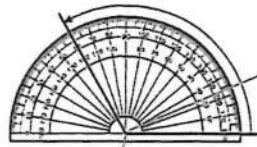
Angles

Worked example

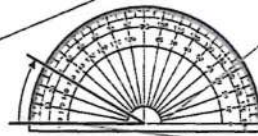
Measure these angles.


a 120°

b 30°



vertex (point) of the angle

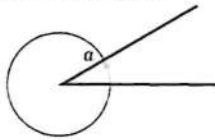


Place the  at the centre of the protractor on the vertex of the angle.

Line up the zero line with one line of the angle, and read up from 0° to the other line.

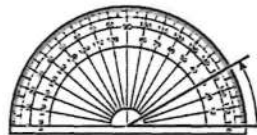
Worked example

Measure angle a .



The acute angle is 30° .

The reflex angle is $360^\circ - 30^\circ = 330^\circ$



Measure the smaller angle first.
There are 360° in a full turn so the reflex angle is
 $360^\circ - \text{smaller angle}$

Key point

Perpendicular lines meet at right angles (90°).

This symbol means the angle is a right angle.

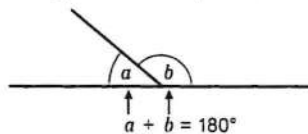


Parallel lines are always the same distance apart and never meet.
Lines that are parallel are represented by arrows.



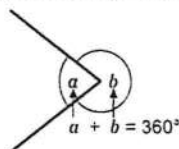
Key point

The angles on a straight line add up to 180° .



Key point

The angles around a point add up to 360° .



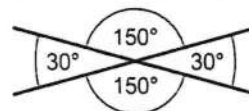
Key point

Angles in a triangle add up to 180° .

Key point

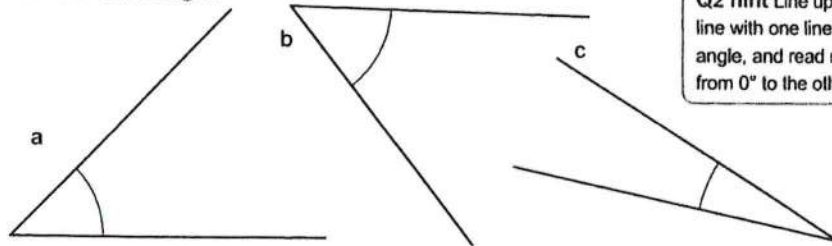
When two straight lines cross, the angles opposite each other are equal.

They are called **vertically opposite angles**.



Angles

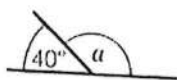
Measure each angle.



Q2 hint Line up the zero line with one line of the angle, and read round from 0° to the other line.

Work out the size of each unknown angle.

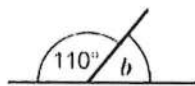
a



$$a = 180 - 40$$

$$= \square$$

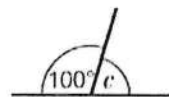
b



$$b = 180 - \square$$

$$= \square$$

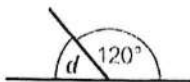
c



$$c = 180 - \square$$

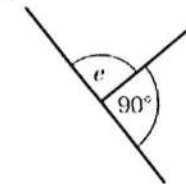
$$= \square$$

d



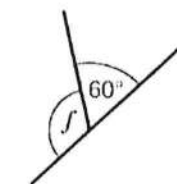
$$d =$$

e



$$e =$$

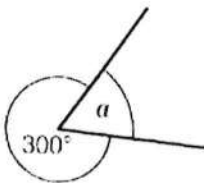
f



$$f =$$

Work out the size of each unknown angle.

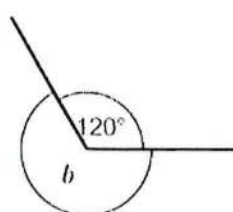
a



$$a = 360 - 300$$

$$= \square$$

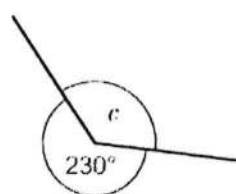
b



$$b = 360 - \square$$

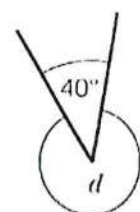
$$= \square$$

c



$$c =$$

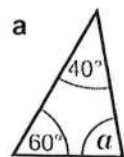
d



$$d =$$

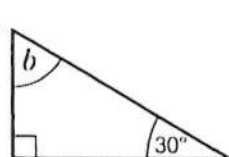
Work out the size of the missing angle in each of these triangles. One has been started for you.

a

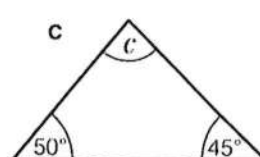


$$a = 180^\circ - \square - \square = \square$$

b



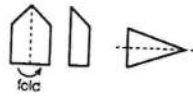
c



Transformations

Key point

A shape has **reflection symmetry** if one half folds exactly on top of the other half.



The dashed line is called a **line of symmetry** or mirror line.

Key point

A **rotation** is a type of transformation.

You rotate a shape by turning it around a point, called the **centre of rotation**.

To describe a rotation you also need to give the **angle** and direction (**clockwise** or **anticlockwise**).

Key point

A **translation** is a type of transformation. A translation of a 2D shape is a slide across a flat surface. To describe a translation you need to give the movement left or right, followed by the movement up or down.

A translation does not change the size or shape of an object.

Key point

When a shape is transformed by a translation, rotation or reflection, the image has exactly the same side lengths and angles as the object.

This means that the original shape and the transformed shape are **congruent**.

Key point

An **enlargement** transforms a shape. It is a type of **transformation**.

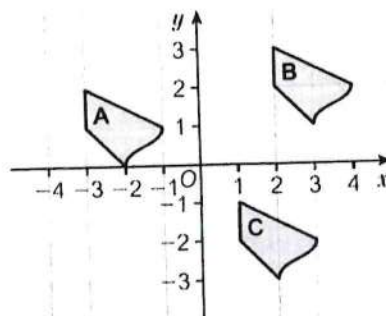
When enlarging a shape, you multiply all its side lengths by the same number.

The number you multiply by is called the **scale factor**.

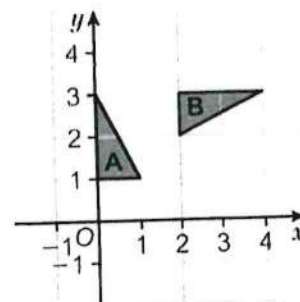
Transformations

Describe each translation.

- Shape A to shape B
- Shape B to shape C

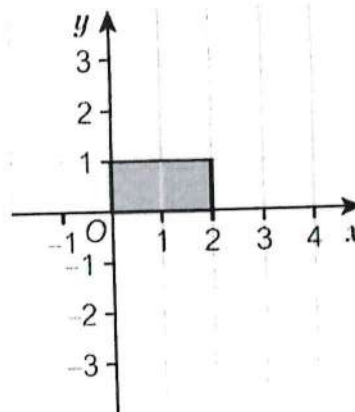


The diagram shows two shapes, A and B.
Shape A has been rotated to give shape B.
Arthur describes the rotation as rotation, 90° , about (2, 1).
What is missing from Arthur's description?



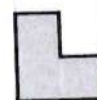
Copy the diagram and draw the image of the rectangle after these rotations.

- 90° anticlockwise about (0, 0).
Label your rotated shape A.
- 90° clockwise about (2, 0).
Label your rotated shape B.
- 180° about (0, 0).
Label your rotated shape C.



Problem-solving This shape is enlarged by scale factor 5.

- Without drawing the enlargement, work out
 - the perimeter of the enlargement
 - the area of the enlargement.
- Draw the enlargement to check that your answers to parts **a i** and **ii** are correct.



Mixed 'exam style' questions...

1) A group of children have to study either French or Spanish.

15 girls study Spanish and 21 boys study French.

There are 26 girls altogether.

A total of 40 children study Spanish.

a Complete the two-way table.

	French	Spanish	
Boys			

b How many children are in the group?

2 Work out $\frac{7}{8} + \frac{3}{4}$ giving your answer as a mixed number.

.....

3 Work out $\frac{3}{8} \times \frac{16}{27}$ giving your answer in its simplest form.

.....

4 Write these numbers in order. Start with the smallest number.

0.370 -0.13 0.098 0.2 0.17

.....

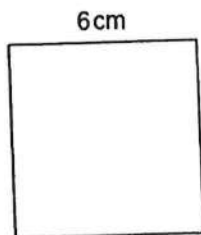
5 Annie throws a biased coin once.

The probability that the coins lands Heads is 0.4

Write the probability that the coin lands Tails.

.....

- 6 Here is a square.



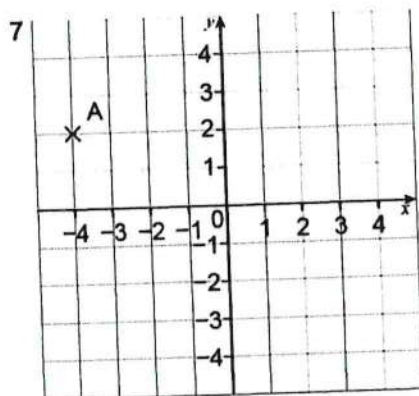
Work out

- a its perimeter

.....cm

- b its area.

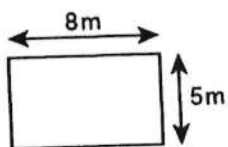
.....cm²



- a Write the coordinates of the point A.
- b Plot the point (4, -4). Label your point B.
- c M is the midpoint of the line AB. Find the coordinates of M.

- 8 320 adults and 140 children were at a cricket match.
Half the adults paid £25 each. The rest of the adults paid £20 each.
Each child paid £5.
Work out the total amount of money paid.

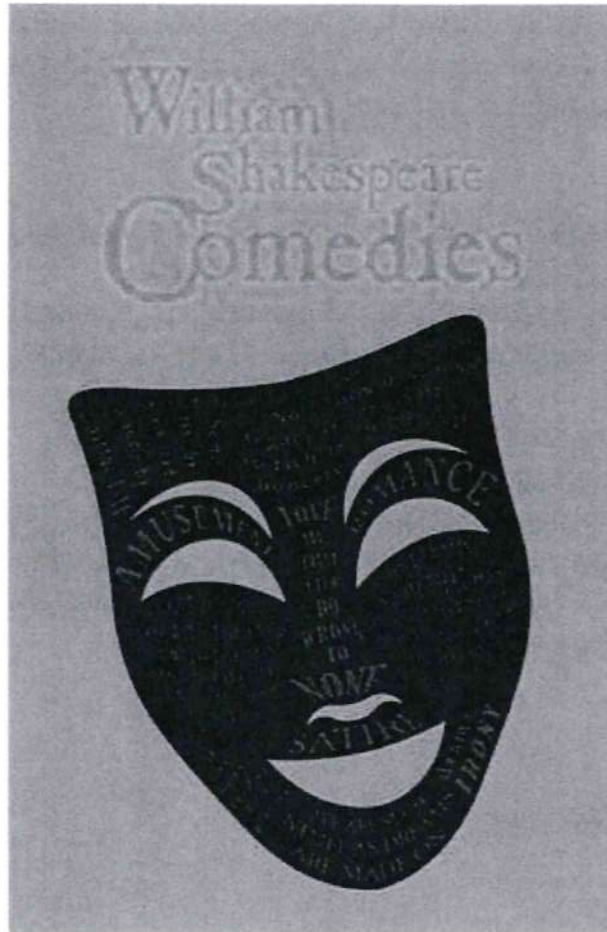
- 9 Here is a lawn in the shape of a rectangle.



- Liz wants to put fertiliser on the lawn.
She wants to put 20 grams of fertiliser on each square metre of lawn.
Work out how much fertiliser she will need.

.....g

Shakespeare and his comedies



Name: _____

Class: _____

Teacher: _____

In this unit you will explore who William Shakespeare was, look at one of his comedies and explore how he created humour within his plays. You will analyse the different ways humour is created and understand a little about life during Shakespeare's time.

Lesson 1- Who was Shakespeare?

Shakespeare lived around the late 16th century and early 17th century, and in between the reigns of Queen Elizabeth I and King James I. Both of them saw some of the plays he wrote, which are still performed today. Some of the phrases that Shakespeare wrote have even become part of our everyday language!

Top facts

1. William Shakespeare was born in Stratford-upon-Avon in April 1564.
2. Shakespeare's wife's name was Anne Hathaway.
3. Shakespeare had three children: Susanna, Hamnet and Judith.
4. Shakespeare worked as actor with the Lord Chamberlain's Men, later called the King's Men.
5. Shakespeare wrote 154 sonnets and around 40 plays.
6. One of Shakespeare's first plays was *Henry V*.
7. Shakespeare's plays were performed for both Queen Elizabeth I and King James I – James I was the patron of Shakespeare's theatre group.
8. Shakespeare's theatre group performed in the Globe Theatre and the Blackfriars Theatre.

Research Task:

Find out 5 additional facts about Shakespeare.

Lesson 3 - Life for men and women in Shakespeare's day.

Life has changed dramatically since Shakespeare was alive - but who has it changed for most?

Task: Read the statement below and write true or false next to each statement.



1. A woman today can marry whoever they want.
2. Women today are the property of men.
3. A woman in Shakespeare's time could be married to a man she didn't know without her consent.
4. A woman's father would have to pay someone to marry her.

Women's fashion has changed a lot since Shakespeare was alive. One of the fashion icons of the era was Queen Elizabeth 1.

Task:

What do you notice about her appearance?

Annotate the image with your thoughts e.g.

Pale face



Read the information below and summarise it into your own words.

Women and Marriage

Women were **subservient** to men which means they were considered to be below men's ranking in society.

Women depended on their male relatives to provide them with a home and were seen as the 'property' of their fathers. Often forged alliances were made between rich and powerful families and men arranged the marriage of their daughter as a bond. Marriage was a transaction from which the men benefited financially.

A woman would bring to the marriage a **dowry**; a bride or the bride's family would offer money, goods or property to the groom in exchange for his hand in marriage and as an agreement that he would support his wife.

There was little dispute in the matter as women were raised to believe they were their father's property. To do so would cause them many problems, often made an outcast or thrown out into the street so you can see why many women did as they were told! A woman would sometimes meet her husband on the wedding day. Girls were legal to marry at the age of 12.

Single women were looked upon with suspicion and often thought to be **witches** by their neighbours!

Once married, the main function of a wife was to produce a son to continue the family line. This was true for royalty right down to the common peasant. It was not unusual for wives to be **pregnant** every twelve months.

In Tudor England, pregnancy and especially childbirth was very dangerous. There were no trained **midwives** so pregnant women were helped by elderly female relatives or female neighbours with no medical knowledge. **Complications** were frequent and death not unusual - even if a baby was born healthy, the mother could still become ill due to the lack of hygienic conditions.

The law gave a husband full rights over his wife. She effectively became his property. A wife who committed **adultery** would be severely punished - even burned at the stake. A wife who killed her husband was not tried for murder but the far worse crime of petty treason which would also carry the death penalty. Wife beating was common and the logic of Tudor England was that the wife must have done something to provoke her husband!

In theory, a wife could walk away from a marriage – but to what? Who would keep her? Who would employ her? Therefore, women had to stay in a marriage even if it was a brutal one as there was very little else she could do.

How would you feel if you were an Elizabethan woman?

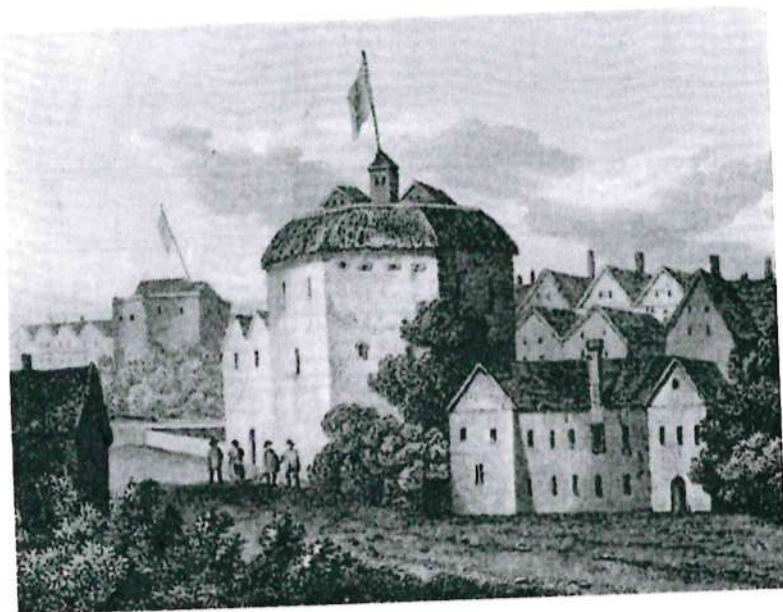
Write a diary entry of an Elizabethan woman using the information you have.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Lined area for writing, consisting of 25 horizontal lines.

Lesson 4 - Theatre in Shakespeare's day

Going to the theatre was an exciting experience; it was a relief from going to work and chance to be entertained by the latest plays. Theatres however, were vastly different from the ones we have now. William Shakespeare will take you on a tour of the theatre.



My open-air playhouse, The Globe, opened in Shoreditch, London, 1599. That was when queen Elizabeth I was on the throne.

In 1593, 1603, 1608 the theatre had to be temporarily closed; outbreaks of bubonic plague (The Black Death) was a common occurrence.

We even had our own type of Elizabethan advertising. We put up coloured flags to

indicate what type of play would be performed that day. For example a black flag meant a tragedy, white a comedy and red meant a history.

All different types of people came to my playhouse. But like theatres today people paid different prices for different areas to sit in.

The groundings (Elizabethan general public) paid a penny and stood in the pit under the open sky, whereas the gentry paid a little extra and sat in the galleries, under shelter and they often had cushions.

Days out at The Globe theatre would have been very exciting- with grounds surrounding the theatre: bustling with lots of people, stalls selling merchandise, and refreshments being sold. This would include pies and beers. There would even be people entertaining the crowds such as: dancing dogs, fire eaters and jugglers.

As you enter you will see an 'apron stage' which allows people to watch from all around it. Two pillars on the stage provide a roof for the actors.

The ceiling over the stage was called the 'heavens' and was painted with suns, moons and stars. We still had special effects in the Elizabethan era. We used the cannon to give



a character a dramatic entrance and used fireworks when there was a huge battle! The stage floor had a trapdoor. This was used for the entrance of ghosts and devils, this was seen as hell (the underworld). There were, from which spectacular 'flying' entrances from the rigging in the heavens.



Richer people could have a seat up in the galleries. Cost = 2-6 pennies
Rich nobles would watch the play from sitting on a chair at the edge of the stage! Cost = a shilling

Where the groundlings would stand. They would be very noisy and often shout at the actors on stage- sometimes throw fruit at them when they didn't like the play. Cost = 1 penny

Task: Imagine that You are living in 1592, Shakespeare's time, and you are on your way to see Shakespeare's 'Twelfth Night' at the Globe.

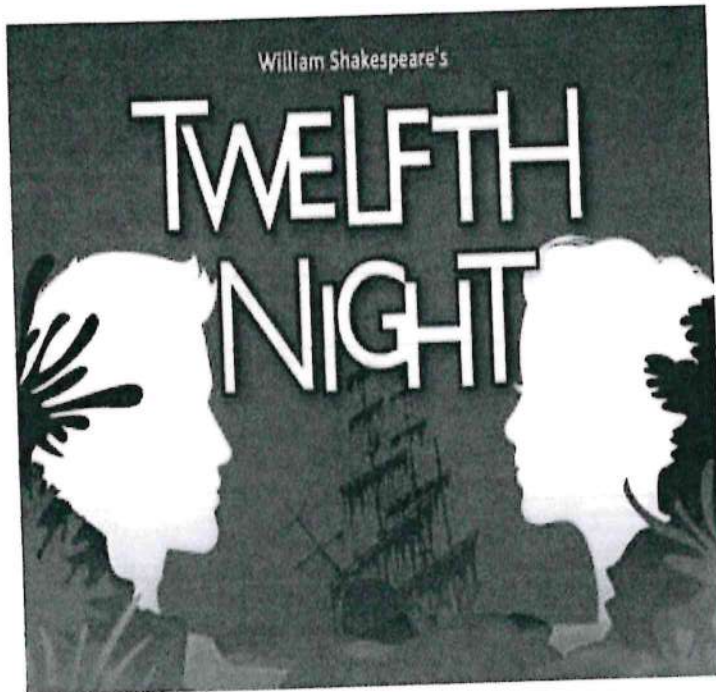
Write a descriptive piece of your journey through London towards the theatre based on what you have learnt about Elizabethan times and the Globe.

Handwriting practice lines consisting of 20 horizontal lines.

Handwriting practice lines consisting of 25 horizontal lines.

TWELFTH NIGHT (by William Shakespeare)

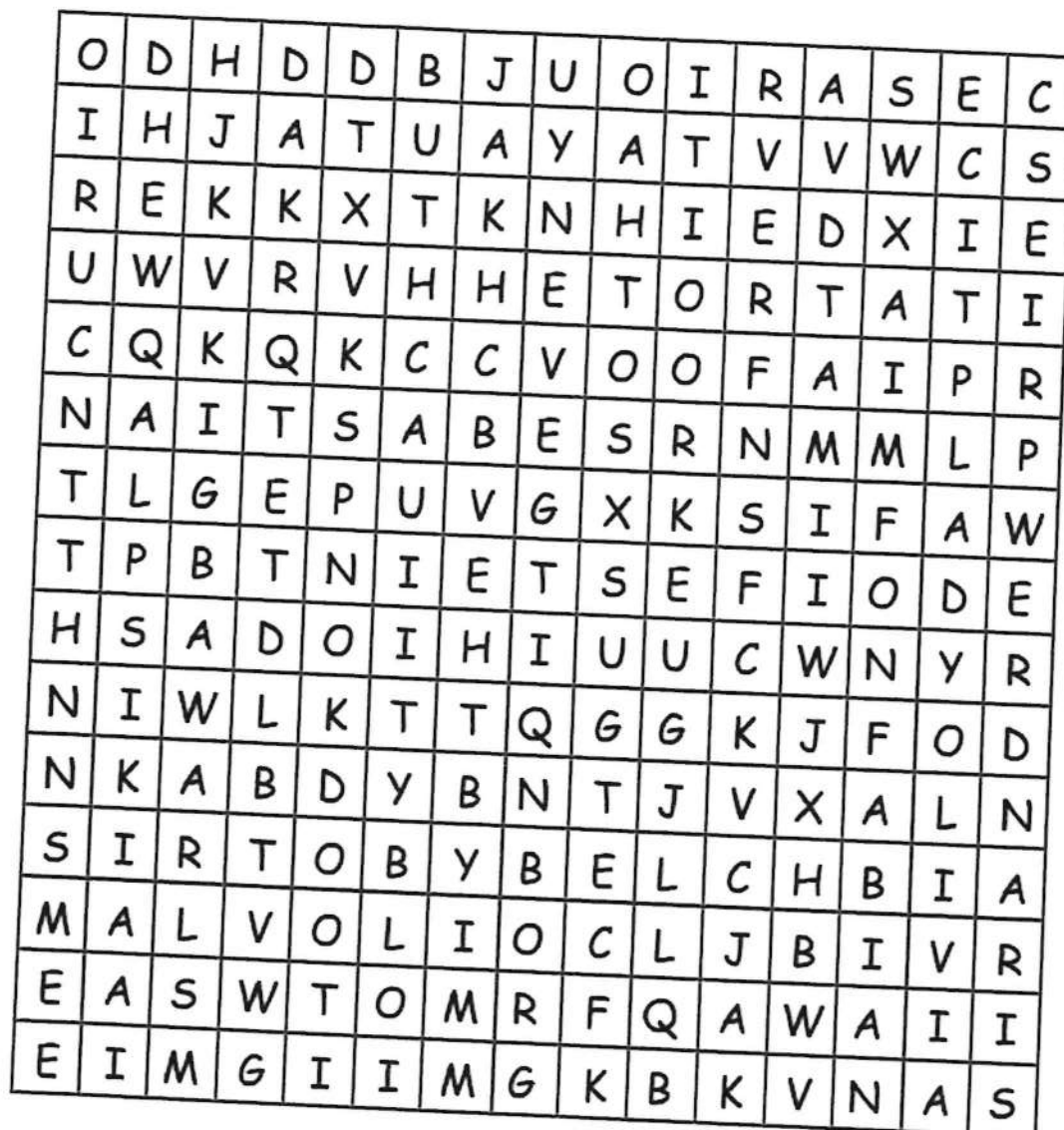
- **PRE- READING** → Look at the picture. What do you think the story is going to be about? Write at least 3 ideas.



- **PRE- READING** → Which of the following words do you think are possible **KEY WORDS** of this story? Circle your choices.

WEDDING – DEATHS – VOYAGE – TRAITOR – ISLAND – SHIPWRECK – CAPTAIN –
 JOB – MESSENGER – SERVANT – TO FALL IN LOVE – DUKE – TO DRESS UP –
 TO SURVIVE – TWINS – DESPERATED – HEARTBROKEN – HUGE WAVES –

Find the different characters of the play in the WORD SEARCH.



1. A shipwrecked lady, later disguised as Cesario	2. Olivia's uncle.
3. Duke of Illyria, in love with Lady Olivia	4. Friend of Sir Toby
5. A rich noblewoman too sad to love somebody.	6. Olivia's maid, a servant in her household.
7. Also shipwrecked, twin brother of Viola	8. Captain of the wrecked ship (no name)
9. Olivia's steward, managed her household	10. Another sea-captain, friend of Sebastian
11. Olivia's jester	12. Orsino's servant, his messenger to Lady Olivia

<i>Twelfth Night</i> - the plot				
Read through the passage and fill in the gaps with the most appropriate word				
brother and sister	Viola	Sebastian	Olivia	protection
Sir Andrew Aguecheek	Malvolio	pompous	love	ring
more cakes and ale	velvet gown	furious	letter	unknown beloved
All who looked upon him loved him	Orsino	sick	place	beautiful
yellow cross-gartered stockings	man	handwriting	mad	Illyria
My masters, art thou mad?	Fabian	seven	uncle	Cesario
thrust upon them	loves	smiling	shut	excellencies
music	madness	plague		

The play opens in the country of _____, at Duke _____'s palace. Illyria is a beautiful _____ but there is sadness too. Orsino is in love with Olivia, a _____ countess who lives nearby. He is _____ with love but the lady will have nothing to do with him or any _____. She is in mourning for her dead brother and has _____ herself away in her mansion, and vowed to see no suitors for _____ long years. "If _____ be the food of love, play on" Orsino says, wanting his fill of sad music to help him in his melancholy mood.

Olivia's _____ can not understand her mourning for her brother like this: "What a _____ means my niece to take the death of her brother thus?" Sir Toby Belch is a fat bag of wind and laughter. He lives in her house and floats between kitchen and cellar. He has brought a suitor to Olivia's home, a tall, thin knight by the name of _____ but Olivia is not interested in him.

One day, there is a shipwreck. On this ship are a _____. Never parted before in life, the sea tore them apart. Some sailors, the ship's captain and one passenger have survived. 'What country, friends, is this?' asks the girl. "This is Illyria," answers the captain. "And what should I do in Illyria?" she weeps, looking towards the sea. "My brother he is in heaven." Her name is _____ and her brother is called _____. but now she thinks he has drowned. They are twins. The kind captain tries to tell her that her brother might still be alive as he was seen, holding on to some wood.

Viola asks about Illyria and the Captain tells her about the Duke and his love for _____. Viola wishes to serve the lady who mourned a brother because it is a link between them but Olivia will not allow anyone to her house. Viola needs _____ because she is a woman all alone. So she begs the captain to bring her to the court of Orsino where, dressed as a man, she might be given a job as a page. She calls herself _____ and she looks like a handsome youth, almost like her brother.

The Duke likes Cesario and sends him to Olivia to plead his love. He tells her to "Stand at her doors."

"I'll do my best," promises Viola, and sets off to woo Olivia. But she feels sad. After being with the Duke for only three days, she is in love and she wishes that she could be his wife. Olivia is not pleased when she is told that there is a young man waiting at her gate who will not go away. She sends her steward _____ to tell the young man to go away. He is so _____ that Olivia is sure this person will go away. But even Malvolio can't send this boy away so Olivia sends for him. She sees that he is handsome and falls in _____ with him. Love is like a madness.

Olivia says she doesn't want Orsino's love and sends Cesario away. Quickly she sends Malvolio after him with a _____ to give to Cesario, pretending that Cesario has left it behind. Malvolio is very unhappy about this silly message and chases after Cesario moodily. Of course, Cesario can't understand what this ring is especially when Malvolio throws it down saying 'Take it so'. Suddenly Cesario realises that Olivia _____ her! 'Disguise,' she says 'I see thou art a wickedness'.

That night Sir Toby, Sir Andrew, Feste and Maria are up dancing and laughing and waking the whole household. Malvolio is shocked at their behaviour and stops the fun by saying '_____'. Sir Toby is furious: "Do you think because thou art virtuous there should be no _____?" he asks. Maria says she has a plan to revenge themselves on Malvolio as he is a Puritan and wants them all to be as serious as he is. She says he will fall for the trick as he believes himself to be so crammed with _____ that he thinks '_____'. The joke relies on the fact that Maria's _____ looks like Olivia's.

The next day Malvolio is walking about, imagining he is Count Malvolio, married to Olivia and that he is wearing a _____. He imagines telling Sir Toby to control himself and not to drink so much. Sir Toby, who is nearby, is _____. Malvolio discovers a _____ on the path. He thinks it is for him. It has all the letters of his name but in the wrong order. It is addressed to _____.

The letter says: 'Some are born great, some achieve greatness, and some have greatness _____.' Malvolio is convinced the letter is from OLIVIA and that she is in love with him. The letter tells him to turn around, smile and wear _____. Malvolio practises _____ and is delighted that Olivia loves him! Behind a box tree Sir Toby, Sir Andrew and another man, _____ are crying with laughter! How could Malvolio not spot them?

The jokers all have their revenge on the pompous and haughty Malvolio. Love has sent him _____!

Olivia

LO: To explore Olivia's introduction in Act 1 scene 5



Starter:

1. If you could dress up and pretend to be any character from Film or TV, who would you be and why?

2. **When in costume,** do people treat each other in the same way?

Write your answers in full sentences using your punctuation.
