

Preparation for Year 7 Summer Pack



We hope you are as excited about starting at The Milton Keynes Academy in September as we are about welcoming you to our school.

As you already know, here at the Academy we see homework as an important part of every student's learning and overall development. When you start with us in September, you will be completing homework on a weekly basis.

To help you prepare for this and so that you make a strong start to your time here, we have produced this pack of work for you to complete over the summer.

Please take the opportunity to complete as many of the tasks as you can. Please do not worry if there are some questions that you cannot complete.

Then, when you come to the Academy in September, bring your pack with you and hand it to you tutor during the first week.

We understand that some of you may not have the opportunity to complete all the work in here, but we would like to recognise those of you who do complete the tasks. So, as I said at the transition evening in July, we will be holding a pizza party for all students who do complete this pack on Friday 13th September.

Good luck and see you all soon.

Mr Boyce

Contents

1. Get to know me better activity.
2. Get to know me better mood board.
3. Maths – Codebreaker Challenge.
4. History – Meanwhile Elsewhere.
5. English – Harry Potter activity.
6. Geography – Getting to know the world.
7. Science – All about cells.
8. Art – Drawing challenge.
9. Languages – Getting to know France & Spain.

GET TO KNOW ME BETTER

My name is...

I was born in...

My hobbies are...

One thing I am good at is...

My favourite memory of primary school is...

My favourite memory of my childhood is...

My favourite food is...

My favourite movie is...

My favourite song is...

I have lived in Milton Keynes for...

My family is...

Three words I would use to describe myself are...

TASK: Create a mood board for your Form Tutor in the space below to help them to get to know you better. Tell them about your interests and hobbies and your plans for when you grow up.

You can use images and colour, newspaper articles and magazines or different textured items to produce your board. The students with the best mood boards will win a prize in September.

This Mood Board belongs to:



MATHS CODEBREAKER CHALLENGE

Part 1 - Instructions:

- Work out the answer to each question.
- From the key, find the letter that matches your answer to each question.
- Write the letter in the correct box on the answer grid.

Question 2 has been completed for you as an example.

1. 9^2	12. 11×5
2. Half of twenty-eight 14	13. 14.6 rounded to the nearest whole number
3. $33 + 57$	14. The number of degrees in a right angle
4. Your change of a pound after spending 85p	15. The value of a bullseye in darts less two
5. Seven less than twenty-one	16. $3 \times 4 \times 5 - (4 + 1)$
6. $9 \times (4 + 4)$	17. The highest factor of six
7. The lowest common multiple of 3 and 4	18. $3 \times 3 \times 3 \times 3$
8. $100 - (3 \times 6 + 1)$	19. 6^2
9. $69.5 + 3.7 - 1.2$	20. six dozen add nine
10. The number of days in a fortnight	21. $24 \div 4$
11. 21×3	22. $15 \times (4 - 1) - 30$

Key:

A	B	C	D	E	F	G	H	I	J	K	L	M
14	108	8	48	81	27	63	55	72	18	25	12	99

N	O	P	Q	R	S	T	U	V	W	X	Y	Z
36	21	54	132	90	15	6	35	144	44	33	24	10

Question	5	21	14	9	2	19	11	7	20	16	10	4
Letter					A							

Question	17	12	3	18	8
Letter					

MATHS CODEBREAKER CHALLENGE

Part 2:

Create a codebreaker of your own. You can use the template below to help. Your solution needs to be a mathematical fact (you may use your own paper if you wish).

Questions

Key:

A	B	C	D	E	F	G	H	I	J	K	L	M

N	O	P	Q	R	S	T	U	V	W	X	Y	Z

Question
Letter

Question
Letter

History

The Roman Empire was at the height of its powers...

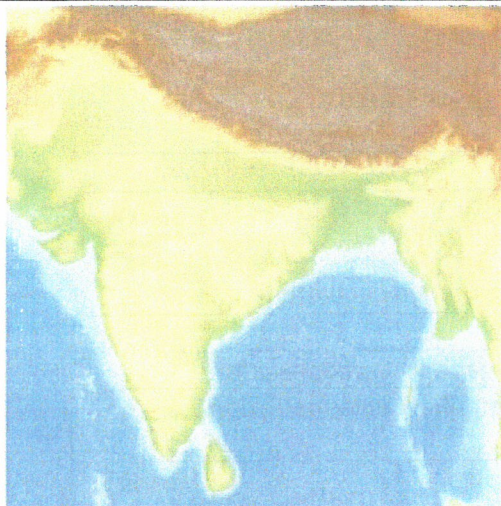
meanwhile, elsewhere...

India experienced its own 'Golden Age' under the rule of the **Gupta Empire**.



Coin of Chandragupta II

KEY INFORMATION: The Gupta Empire, founded by Maharaja _____, was an ancient Indian realm that covered much of the Indian subcontinent from approximately _____ - _____ AD. Gupta rule began a period of **peace** and **prosperity** marked by **advancements** in science, technology, engineering, art, literature, mathematics and astronomy.



Mark on the map of India the area ruled by the Gupta Empire.

Aryabhata

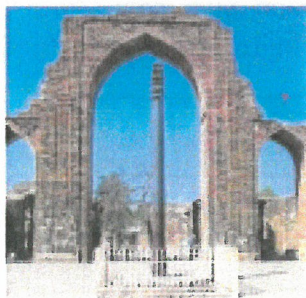
The Gupta Empire is sometimes known as the 'Golden Age' of Indian history. One of the reasons for this is the advances made in mathematics by people such as Aryabhata, who worked for Maharaja Chandragupta II.

Find out three things discovered by Aryabhata.

1. _____
2. _____
3. _____

How is Aryabhata remembered in India today? _____

The Iron Pillar of Delhi



Find out three facts about this artefact:

1. _____
2. _____
3. _____

What can this artefact tell us about the Gupta Empire? _____

What **evidence** can you find that multiple religions were practised in the Gupta Empire? _____

Decline and Fall of the Gupta Empire

Why did the Gupta Empire collapse? Try to give three reasons.

1. _____
2. _____
3. _____

What happened to the lands of the Gupta Empire? _____

Useful websites, videos and podcasts

<https://courses.lumenlearning.com/boundless-worldhistory/chapter/the-gupta-empire/>

<https://www.atiasobscura.com/places/iron-pillar-delhi>

<https://www.youtube.com/watch?v=tZWY7IFBCEQ>

English

Read the extract from Harry Potter and the Chamber of Secrets and answer the following questions.

1. What technique is used in the quote 'The enormous serpent, bright, poisonous green, thick as an oak trunk, had raised itself high in the air'?

(1 mark)

2. Which definition from below best matches what the word 'weaving' means in the extract?
(Tick one)

A) To move around	
B) To go in and out of something quickly	
C) To join two or more things together	

(1 mark)

3. Find and copy down one piece of evidence to show that Harry is scared.

(1 mark)

4. Complete the table below by circling the correct technique used in each quote.

Evidence	Technique
‘Blood was streaming to the floor’	Simile/ Metaphor/ Personification
‘The Hat contracted, as though an invisible hand was squeezing it very tightly’	Simile/ Metaphor/ Personification

(2 marks)

5. Using your understanding of what is happening in the extract, write a paragraph to show how the writer presents the scene as frightening. Try to use a SEIZE paragraph (Statement, Evidence, Inference, Zoom in, Effect).

(8 marks)



Extract from *Harry Potter and the Chamber of Secrets*

by J.K. Rowling

Harry tripped. He fell hard onto the stone and tasted blood. The serpent was barely feet from him, he could hear it coming. There was a loud, explosive spitting sound right above him and then something heavy hit Harry so hard that he was smashed against the wall. Waiting for fangs to sink through his body he heard more mad hissing, something thrashing wildly off the pillars.

He couldn't help it. He opened his eyes wide enough to squint at what was going on.

The enormous serpent, bright, poisonous green, thick as an oak trunk, had raised itself high in the air and its great blunt head was weaving drunkenly between the pillars. As Harry trembled, ready to close his eyes if it turned, he saw what had distracted the snake.

Fawkes was soaring around its head, and the Basilisk was snapping furiously at him with fangs long and thin as sabres.

Fawkes dived. His long golden beak sank out of sight and a sudden shower of dark blood splattered the floor. The snake's tail thrashed, narrowly missing Harry, and before Harry could shut his eyes, it turned. Harry looked straight into its face, and saw that its eyes, both its great bulbous yellow eyes, had been punctured by the phoenix; blood was streaming to the floor and the snake was spitting in agony.

'No!' Harry heard Riddle screaming. 'Leave the bird! Leave the bird! The boy is behind you! You can still smell him! Kill him!'

The blinded serpent swayed, confused, still deadly. Fawkes was circling its head, piping his eerie song, jabbing here and there at the Basilisk's scaly nose as the blood poured from its ruined eyes.

'Help me, help me,' Harry muttered wildly, 'someone, anyone!'

The snake's tail whipped across the floor again. Harry ducked. Something soft hit his face.

The Basilisk had swept the Sorting Hat into Harry's arms. Harry seized it. It was all he had left, his only chance. He rammed it onto his head and threw himself flat onto the floor as the Basilisk's tail swung over him again.

'Help me ... help me ...' Harry thought, his eyes screwed tight under the Hat. *'Please help me!'*

There was no answering voice. Instead, the Hat contracted, as though an invisible hand was squeezing it very tightly.

Something very hard and heavy thudded onto the top of Harry's head, almost knocking him out. Stars winking in front of his eyes, he grabbed the top of the Hat to pull it off and felt something long and hard beneath it.

A gleaming silver sword had appeared inside the Hat, its handle glittering with rubies the size of eggs.

'Kill the boy! Leave the bird! The boy is behind you! Sniff – smell him!'

Harry was on his feet, ready. The Basilisk's head was falling, its body coiling around, hitting pillars as it twisted to face him. He could see the vast, bloody eye sockets, see the mouth stretching wide, wide enough to swallow him whole, lined with fangs long as his sword, thin, glittering, venomous ...

It lunged blindly. Harry dodged and it hit the Chamber wall. It lunged again, and its forked tongue lashed Harry's side. He raised the sword in both his hands.

The Basilisk lunged again, and this time its aim was true. Harry threw his whole weight behind the sword and drove it to the hilt into the roof of the serpent's mouth.

But as warm blood drenched Harry's arms, he felt a searing pain just above his elbow. One long, poisonous fang was sinking deeper and deeper into his arm and it splintered as the Basilisk keeled over sideways and fell, twitching, to the floor.

Key:

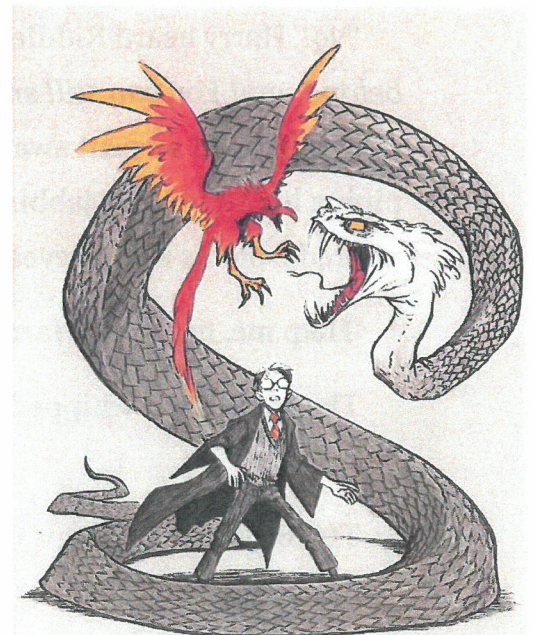
Verbs

Adjectives

Nouns

Adverbs

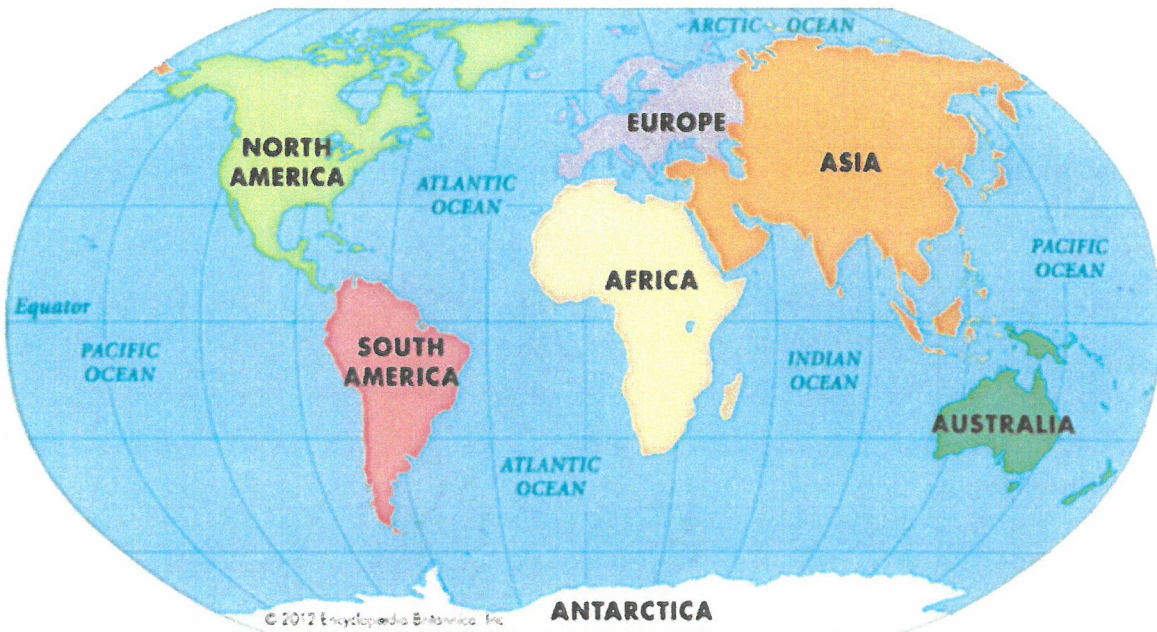
Connectives



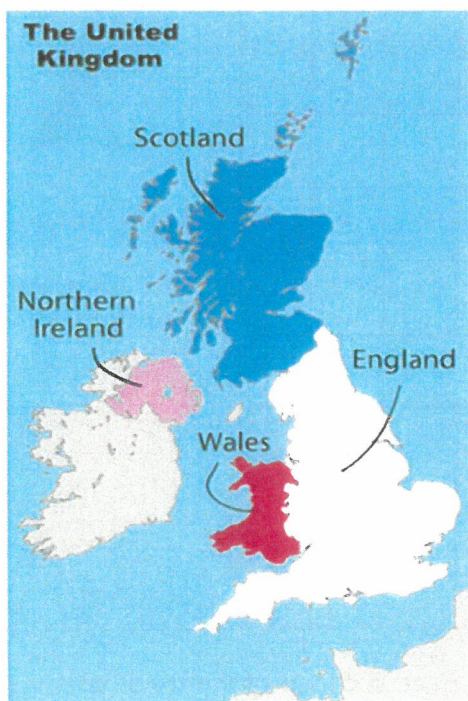
Geography

Geography is the study of our world and how humans interact with it. Below is some information that will help you when you start Geography at MKA. Practice identifying the continents and oceans of the world, countries of the UK and compass directions. Make sure you can spell them correctly too! Then complete the tasks on the next page.

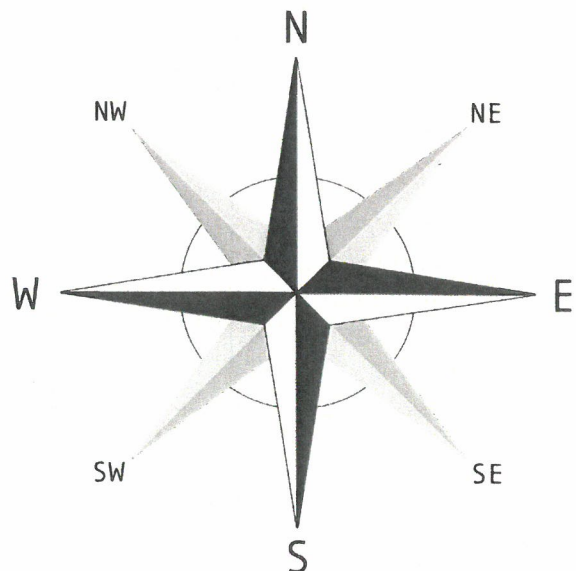
A. Continents and oceans of the world:






B. Countries of the United Kingdom:



C. Compass directions



<p>1. Here is a map of the world.</p> <p>a. Label the world's continents (there are seven).</p> <p>b. Label the world's oceans.</p> <p>c. Draw an X where the United Kingdom is (where we live).</p>																																																																																																						
<p>2. Here is a map of the United Kingdom.</p> <p>a. Label the four countries.</p> <p>b. Do you know the capitals of these countries? If so, label them on your map.</p> <p>c. Draw an X where Milton Keynes is (where we live).</p>																																																																																																						
<p>3. From the star, draw:</p> <p>a. A circle 3 squares north.</p> <p>b. A pentagon 3 square south-east.</p> <p>c. A triangle 1 square south.</p> <p>d. A square 4 squares east.</p> <p>e. A rectangle 2 squares west.</p> <p>f. A heart 2 squares north-west.</p> <p>g. A smiley face 3 squares south-west.</p> <p>h. A moon 4 squares north-east.</p>	<table border="1" data-bbox="470 1310 1125 1971"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td>★</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>															●																														★																																																								
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Optional Extension: Complete the fact file on the next page about any country of your choice. You may need to do some research.



Country Fact File



Capital City:

Continent:

Population:

Climate:

Spoken Languages:

Major Religions:

Currency:

Life Expectancy:

GDP per Capita (wealth):

Map:

Flag:

Foods:

Famous Landmarks:

Science

Plant and Animal Cells

1. Learn these definitions.

Cells – The smallest unit of a living organism. It contains parts to carry out life processes.

Organelle – Part of a cell that has a specific function

Nucleus – The control centre of the cell containing the DNA

Cell Membrane – Surrounds the cell and controls movement of substances in and out

Mitochondria – Structures in the cytoplasm of all cells where aerobic respiration takes place (singular: Mitochondrion)

Cell Wall – Supports and strengthens plant cells. Made of cellulose

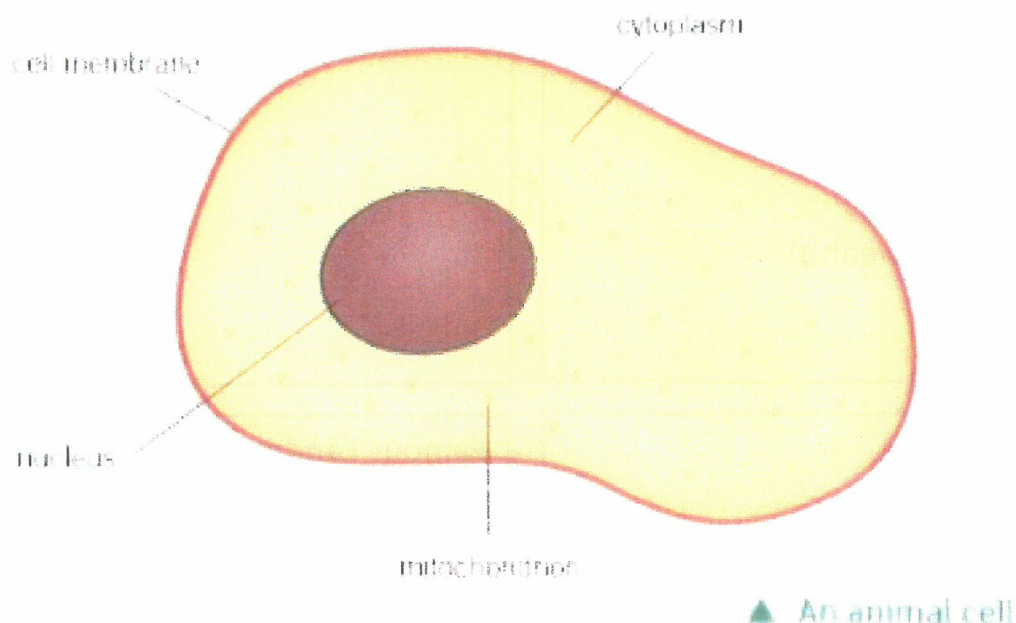
Chloroplast – Absorbs light energy for photosynthesis

Cytoplasm – Where the chemical reactions happen in a cell

Vacuole – Stores sap in plant cells used to keep the cell turgid

2. Read this text.

Cells are the building blocks of life.



Cells are made up of different parts. These are called organelles. In an animal cell there is:-

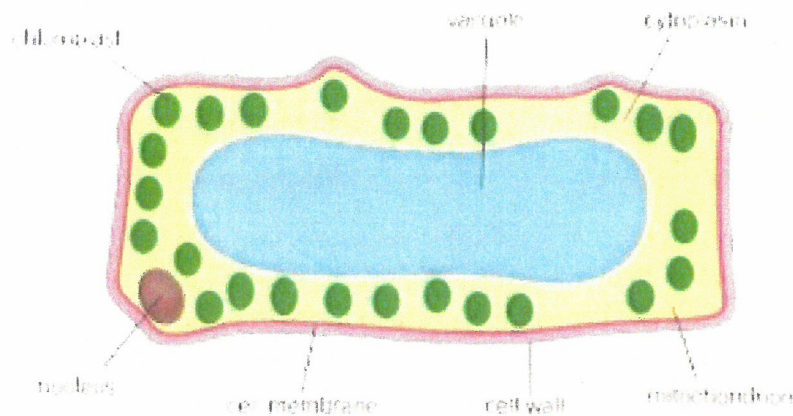
Science

Cytoplasm - Where the chemical reactions take place

Cell membrane - This is the barrier around the cell. It controls what can come in and go out.

Nucleus - This controls the cell. It contains genetic information which is needed to make new cells.

Mitochondria - This is where respiration takes place. Respiration is a reaction that transfers energy for the organism.



A plant cell also has:-

Cell wall - This strengthens the cell. It is made of cellulose, which makes the wall rigid.

Vacuole - Contains a liquid called sap. It keeps the cell firm.

Chloroplasts - Contain a green substance called chlorophyll which traps energy transferred from the Sun.

3. Answer these questions.

Animal and plant cells have the following things in common:-

Animal and plant cells have the following differences:-

Science

Match each part of a cell to its function.

Controls the cell's activities:-

Vacuole

Controls what comes into and out of a cell:-

Nucleus

Where chemical reactions take place:-

Cell Wall

Where respiration occurs:-

Cytoplasm

Where photosynthesis occurs:-

Chloroplasts

Contains cell sap to keep the cell firm:-

Cell Membrane

Rigid structure that supports the cell:-

Mitochondria

Think about the job of mitochondria. Which types of cell in your body do you think will have lots of mitochondria? Why do they need them?

Think about the job of the vacuole. Why do plants go limp if they do not receive water?

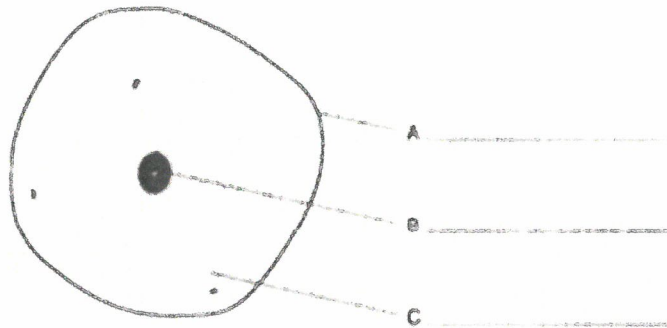
Think about the job of chloroplasts. Which part of a plant will have cells with chloroplasts in?

Science

Try these questions:

The diagram below shows a cell from the inside of a human cheek

(a) On the diagram label parts A, B and C



3 marks

(b) Plant cells have some parts which animal cells do **not** have. Name **two** of these parts.

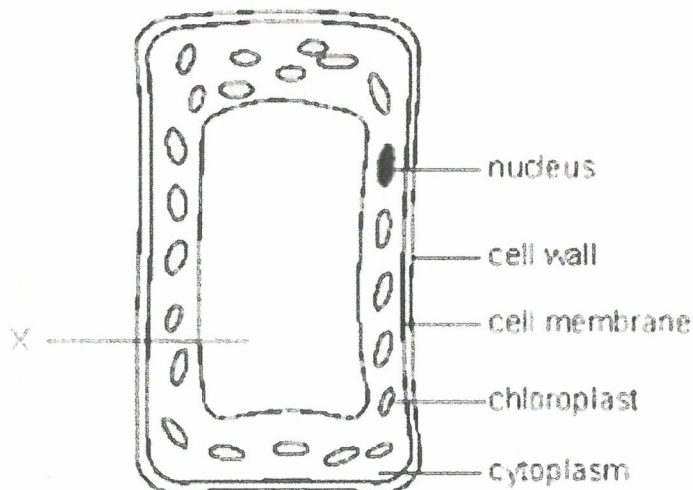
1.

2.

2 marks

Maximum 5 marks

2. The diagram shows a plant cell. Some parts of the cell are named.



(a) Which **two named** parts are present in plant cells but not animal cells?

1.

2.

2 marks

(b) Which **named** part contains the genetic information?

.....

1 mark

Science

- (c) Which **named** part absorbs light energy for photosynthesis?

.....

1 mark

- (d) Name the part labelled **X** on the drawing.

.....

1 mark

- (e) Where in a plant would you find a cell like the one in the diagram?

Tick the correct box.

in the centre of a root

☐

in the lower surface of a
leaf

☐

near the upper surface
of a leaf

☐

near the surface of a root

☐

1 mark

Maximum 6 marks

Year 7 Art Learning Challenge:

- Choose 8 items from the 30 images on the list. Each one must be only 5cm x 5cms
- You can use any materials you like to draw the images with, eg: pen, pencil, collage, paint, digital etc.
- Present the next few pages.

1. A building
2. A plant
3. A flower
4. Something yellow
5. A weird creature
6. A view from the window
7. A fragment
8. Your favourite food
9. A reflection in a mirror
10. Something rough
11. Your hand
12. Sweets
13. A green object
14. Something spiky
15. A door
16. Inside your fridge
17. A smooth object
18. Something close-up
19. A pet
20. A key

Try to be detailed and accurate as you can. You must complete all 8 drawings and remember that they have to be 5cm x 5cm

Best design will be displayed in the Art and Design Village and on the school website. If you want to send them to me, take a picture on your phone and send it to:

olivia.chopping@miltonkeynesacademy.org.uk

21. Something red
22. A knife and fork
23. Inside a bag
24. A mouth
25. Your eye
26. An insect
27. A journey
28. Your feet
29. Your name using an interesting font
30. A piece of fruit

Remember: They need to be drawn from your mind, but if you have any of these items in your pocket or bag...use them!



Languages



Use the internet to help you find the answers to the questions below.

French

1) Name the capital of France.	
2) Name the mountain ranges which border Spain France and Switzerland.	
3) Name the river which flows through the capital of France.	
4) What is the French name of what we call the English channel ?	
5) When was the channel tunnel opened and who opened it at the official ceremony ?	
6) Name 2 countries in Europe where French is the main official language.	
7) Name 3 countries in the world which have French as the main or official language.	
8) Name 2 islands in the Caribbean which are French territories.	
9) Translate these colours into English. They form the colours of the French flag – can you name the French flag?	bleu= blanc= rouge= name of flag=
10) Translate the following into French Hello = How are you = I am well, thank you = What is your name ? I am called = Goodbye=	



Spanish

1) Name the capital of Spain.	
2) Name the river which flows through the capital of Spain.	
3) Which countries in Europe have a border with Spain?	
4) What is the name of the famous cathedral in Barcelona and can you name of the architect?	
5) Name the King and Queen of Spain.	
6) Name 3 countries in South America where Spanish is the official language.	
7) Name 3 islands in the Caribbean which have Spanish as their official language.	
8) Translate these colours into English. They form the colours of the Spanish flag – can you name the national Spanish flag?	azul= rojo= amirillo= name of flag=
9) What sport is played at the Santiago Bernabéu Stadium in Madrid and by which team?	
10) Translate the following into Spanish. Hello = How are you = I am well, thank you = What is your name? = I am called = Goodbye=	

Well Done!

You have completed your summer homework pack.

Now enjoy the rest of your time before you start with us in September...