



# Gloucester Academy

*Unit 3*

*Year 11*

*Knowledge Organiser*

*CORE SUBJECTS*

Knowledge is power. Information is liberating.

## Logins:

### School email



Username: \_\_\_\_\_@gloucesteracademy.co.uk

Password: \_\_\_\_\_

### School computer



Username: \_\_\_\_\_

Password: \_\_\_\_\_

### sparx.co.uk



Username: \_\_\_\_\_

Password: \_\_\_\_\_

## Homework Guidance:

**Knowledge Organiser homework is based on self-quizzing.** It is expected that you complete one page of self-quizzing, every day. This should take around 30 minutes. You should not leave blank lines on the page, including in between pieces of information (if you are self-quizzing diagrams, you can use more than one line to copy the diagram into your practice book). The information you self-quiz should be numbered in your practice book with the same numbers used on the Subject Knowledge Organiser. Tutors will check your practice book. They will be looking for a full page of self-quizzing on the correct numbers of the Subject Knowledge Organiser, as well as for purple pen ticks/corrections and good presentation (including your H/W, Title and Date underlined with a ruler). Your writing needs to be neat and legible. If we feel that any of these elements are not up to standard, you will be issued with a same day detention.

A demonstrational video can be found here:

<https://www.gloucesteracademy.com/students/homework-and-revision-guidance/knowledge-organisers>

**These are the steps you should follow to complete effective self-quizzing:**

**look □ repeatedly say aloud □ cover □ write □ check**

1. **Identify** the Subject Knowledge Organiser segment for the day from your homework timetable.
2. **Open up your practice book** and on the top line, write 'H/W' in the margin. On the other side of the margin line, write the Title (the subject you are completing) the Week (which week you are completing). Write the Date on the right hand side. Underline everything with a ruler.
3. **Place your Subject Knowledge Organiser segment in front of you.** Start with the first numbered piece of information within the weekly segment. Read and memorise the information - we recommend saying it aloud. Repeat the process several times, until you are confident to write the knowledge point down.
4. **Close your Subject Knowledge Organiser** or cover up the piece of information, and try to recall the knowledge. On the line directly beneath your H/W, Title and Date, write the correct number from the Subject Knowledge Organiser and the piece of information from memory, ensuring there are no blank lines.
5. **Check it and correct any mistakes.** Open up your Subject Knowledge Organiser and look at the piece of information – using a purple pen tick the piece of information in your practice book if you have recalled it correctly (word for word, correctly spelled). If you have incorrectly recalled or missed any part of the information, use your purple pen to put a cross next to that knowledge point.
6. **If you recalled the piece of information incorrectly,** go back to step 3 and **in purple pen,** repeat the process again for the same piece of information (cover up previous attempts in your practice book as well as the piece of information in your Subject Knowledge Organiser). When you have recalled the information correctly, tick the attempt and move on to the next piece of information within the weekly segment.
7. **Repeat the steps above** until you have recalled and written down all pieces of information within the weekly segment. If this has not filled one full page of your practice book, go back to the first piece of information within the weekly segment and repeat the process again, until you have filled an entire page.

Example page:

H/W Science week 3

21 September 2020

1. A cell. This is the simplest unit of a living organism. ✓
2. Cell membrane. This is a ~~partaly~~ permeable barrier and controls what goes in and out of the cell. X
2. Cell membrane. This is a partially permeable barrier and controls what goes in and out of the cell. ✓
3. Cytoplasm. This is a jelly-like substance in cells where chemical reactions occur. ✓
4. Nucleus. This contains DNA and controls the cell. ✓
5. Mitochondion. A sub-cellular structure where respiration takes place to make energy. X
5. Mitochondrion. A sub-cellular structure where respiration takes place to make energy. ✓
6. Hypothesis. An idea that explains how or why something happens. ✓
7. Prediction. A statement suggesting what you think will happen in an experiment / investigation ✓
8. Control variable. The variable that must be kept constant so that it doesn't affect the outcome of the investigation. (variable = something that can change in an experiment). ✓
9. Independent variable. The variable that is changed in an experiment / investigation. (variable = something that can change in an experiment) ✓
10. Dependent variable. The variable that is recorded and measured for each change of the independent variable. (variable = something that can change in an experiment) X
10. Dependent variable. The variable that is measured

## Homework Timetable:

You are expected to complete at least 30 minutes of homework in your practice book every day. You are expected to complete Sparx Maths homework which we recommend you split into three sessions, per week. Each of these are expected to take up to 1 hour.

	Monday	Tuesday	Wednesday	Thursday	Friday	Weekend
Knowledge Organiser in your practice book <b>30 minutes</b>	Science & Maths	English Language & English Literature	Choice 1 _____	Choice 2 _____	Choice 3 _____	Choice 4 _____
Online session <b>30 minutes</b>	Sparx Maths		Sparx Maths		Sparx Maths	

## Maths Homework – Sparx Maths

You will get one [sparxmaths.com](https://www.sparxmaths.com) assignment to complete each week. Your homework is made up of personalised questions that will help you develop your learning in maths. This will include topics you have covered within the past week and some older material for you to revise. The homework may include multiple tasks. We suggest you split it into three manageable chunks and complete this every Wednesday, Friday and Monday.

You should be able to complete all of the questions without too much support, however, if there is a question which you are finding hard to complete, we recommend you watch the video. If you are still unable to solve the question, move on to the next one and talk to your teacher before it's due.

**Don't forget every lunchtime there is homework support!**

For more information and guidance please go to:

<https://www.gloucesteracademy.com/students/homework-and-revision-guidance/sparx-maths>

# Science Knowledge Organiser - Mondays

Week 1	Piece of Information	Answer
1	Glowing splint relights	Positive test for oxygen gas.
2	Squeaky pop' upon ignition	Positive test for hydrogen gas.
3	Cloudy Lime Water	Positive test for carbon dioxide gas.
4	Bleached damp litmus paper	Positive test for chlorine gas.
5	Peer review	Results reviewed by other scientists to help prevent false claims, avoid bias, and make sure that conclusions are valid.
6	Pure Substance	A single element or compound that is not mixed with any other substance.
7	Chromatography	A technique used to separate and analyse mixtures.
8	Mixtures	Contain more than one substance that are not chemically joined.
9	Formulation	A mixture that has been designed as a useful product.
10	R <sub>f</sub> Value	The ratio of the distance a substance moves to the distance moved by the solvent.

Week 2	Piece of Information	Answer
1	Magnetic	Materials that are attracted by a magnet
2	Magnetic Field	The area around a magnet in which a magnetic force acts on magnetic objects or other magnets.
3	Permanent Magnet	A magnet which produces its own magnetic field - it always has a north and south pole.
4	Induced Magnet	A magnet which becomes magnetic when placed in a magnetic field - temporary.
5	Solenoid	A long coil of wire.
6	Flux Density	the number of lines of magnetic flux on a given area.
7	Motor Effect	The force produced between a conductor carrying a current within a magnetic field and the magnet producing the field.
8	North seeking pole	The end of a magnet that points north.
9	South seeking pole	The end of a magnet that points south.
10	Right hand grip rule	A way to work out the direction of the magnetic field in a current carrying wire.

Week 3	Piece of Information	Answer
1	carbon dioxide + water --light--> glucose + oxygen.	Photosynthesis
2	Limiting Reactant	The reactant that determines the amount of product formed.
3	Chlorophyll	A green pigment, found in chloroplasts, which traps sunlight.
4	Endothermic	A reaction that takes in energy from the surroundings.
5	Limiting Factor	Anything that reduces or stops the rate of reaction.
6	Deficiency	A lack or shortage.
7	Yield	The amount of agricultural product.
8	Glucose + oxygen	The products of photosynthesis.
9	Aerobic	In the presence of oxygen.
10	Oxidation	A reaction that uses oxygen.










# Maths Knowledge Organiser - Monday







Week 1	Piece of Information	Answer
1	1, 4, 9, 16, 25, 36, 49, 64, 81, 100, 121, and 144	The first 12 square numbers
2	1, 8, 27, 64 and 125	The first 12 cube numbers
3	Solve	When we find the value of an unknown variable using the inverse and balance method
4	Variable	An unknown value, often represented by a letter
5	Simplify	When we collect like terms, or divide by common factors
6	$x^a \times x^b = x^{a+b}$	The multiplication law for indices
7	$x^a \div x^b = x^{a-b}$	The division law for indices
8	$(x^a)^b = x^{a \times b}$	The power of a power law for indices
9	1	$a^0 =$
10	x	$x^1 =$











Week 2	Piece of Information	Answer
1	Coefficient	The number (or sometimes a letter representing a constant) that a variable is multiplied by, it sits immediately in front of the variable
2	Expand	To remove the brackets by multiplying
3	Factorise	To put the brackets back in by dividing terms by the highest common factor
4	Difference of two squares	A quadratic in the form $ax^2 - c$ where c is a square number e.g. $x^2 - 25$
5	$(x + 5)(x - 5)$	Fully factorise $x^2 - 25$
6	Median	The middle value or 50th percentile
7	Lower Quartile	The 25th percentile, represents the first 25% of the data
8	Upper Quartile	The 75th percentile, represents the first 75% of the data
9	Upper Quartile - Lower Quartile	How to calculate the interquartile range (IQR)
10	$\frac{1}{x^a}$	$x^{-a} =$

Week 3	Piece of Information	Answer
1	Direct proportion	a type of proportionality relationship where as one value increases, so does the other value at a constant rate
2	k	The constant of proportionality
3	Inverse Proportion	a type of proportionality relationship where as one value increases the other decreases. The variables have a constant product
4	Reflection, rotation, translation and enlargement	The four types of transformation
5	Upper Bound	The maximum value a number could have been before rounding
6	Lower Bound	The minimum value a number could have been before rounding
7	$a^2 + b^2 = c^2$	Pythagoras theorem
8	$\sin\theta = \frac{o}{h}$	Sine ratio
9	$\cos\theta = \frac{A}{H}$	Cos ratio
10	$\tan\theta = \frac{o}{A}$	Tan ratio

# English Literature Knowledge Organiser - Tuesday

Week 1	Piece of Information	Answer	
1	"bright, filled paperweight"	A metaphor that presents the speaker's memory in 'The Emigree'	
2	"I am branded by an impression of sunlight"	A metaphor which adds to the semantic field of light in 'The Emigree'	
3	"My city hides behind me"	Personification in 'The Emigree' which highlights her patriotic sacrifice	
4	"Dem tell me what dem want to tell me"	The repeated opening line of 'Checking Out Me History'	
5	"Bandage up me eye [...] blind me to me own identity"	The metaphor of restriction used in 'Checking Out Me History'	
6	"I carving out me identity"	The final line from 'Checking Out Me History' with a metaphor emphasising the speaker's own self discovery	
7	"a shaven head full of powerful incantations"	The opening metaphor about the pilot's mind in 'Kamikaze'	
8	"gradually we too learned to be silent"	The line in the following stanza about how the children also begin to disown their father in 'Kamikaze'	
9	"wondered which had been the better way to die"	The closing line questioning the nature of death in 'Kamikaze'	
10	The Emigree	A woman positively remembers her homeland which is now in conflict	

Week 2	Piece of Information	Answer	
1	Checking Out Me History	A speaker conveys his anger about the eurocentric history he is taught	
2	Kamikaze	A pilot turns back from his mission and is disowned by his community	
3	Poppies	A mother comes to terms with the loss of her son at war	
4	Tissue	We give power to paper which is ultimately fragile - like humans	
5	"released a songbird from its cage"	A metaphor from 'Poppies' about the acceptance of loss and grief	
6	"leaned against it like a wishbone"	A simile which emphasises the mother's fragility in 'Poppies'	
7	"hoping to hear your playground voice"	The closing line from 'Poppies' where the mother wishes for her son to be alive and young again	
8	"Let the daylight break through"	An imperative phrase to emphasise nature's strength in 'Tissue'	
9	"might fly our lives like paper kites"	A simile which emphasises the temporary nature of life in 'Tissue'	
10	"pages smoothed and stroked and turned / transparent with attention"	A list of 3 with polysyndeton which emphasises our fixation with the records of human lives from 'Tissue'	

Week 3	Piece of Information	Answer	
1	"Go and look for the father of the child. It's his responsibility"	Mrs Birling's comment about who the inspector should speak to	
2	"alone, friendless, almost penniless, desperate"	The inspector's description of Eva/ Daisy's situation	
3	"that state when a chap easily turns nasty - and I threatened to make a row"	Eric's confession around the night he met Eva	
4	"I liked her – she was pretty and a good sport"	Eric's view of Eva and her personality	
5	"used her [...] as if she was an animal, a thing, not a person"	The inspector's comments on how Eric treated Eva	
6	"There are millions and millions and millions of Eva Smiths"	The inspector's view of how many people live like Eva	
7	"We are members of one body. We are responsible for each other"	The inspector's view on how society should behave	
8	"They will be taught it in fire and blood and anguish"	The inspector's view about what will happen in the future	
9	" <i>pleased with themselves</i> "	Stage directions to signify the family's behaviour at the start of the play	
10	" <i>leaving them staring, subdued and wondering</i> "	Stage directions to describe the family when the Inspector leaves	

# Character Education

## Our vision

Character Education will help you to develop your confidence, compassion, and enable you to contribute effectively to society, be a successful learner and a responsible citizen. By focusing on these character challenges you will also develop self esteem and a better understanding and respect for others, as well as an awareness of wider spiritual and cultural issues. The challenges and experiences listed below will ensure you are able to climb your own personal mountain to the very best universities and professions.

## How to earn and record your badges

- For each badge you complete you will need to have them signed off by a member of staff.
- Remember for some of your badges you will need to provide evidence.
- Miss Blick will then present you with your badge on completion.
- You will update your main Character booklet each week in tutor time.
- You will need to achieve each badge before being awarded the next, for example; you cannot achieve gold if you have not completed the bronze or silver in that badge category.

## Ambition - Excellence - Pride

<h1>Ambition</h1>				
Badge	Badge Level	You must...	Achieved?	Staff Signature
<p style="text-align: center;">Culture</p> <p><i>This is a demonstration of ambition because you are working outside of your comfort zone.</i></p>	Bronze	Perform your creative talent at school.		
	Silver	Take part in three different events within the following: school drama performance, dance performance, art exhibition, orchestra/ band or a sporting tournament.		
	Gold	Take part in ten or more different events listed above.		
<p style="text-align: center;">Academia</p> <p><i>This is a demonstration of ambition because you are exploring opportunities available to you after Gloucester Academy.</i></p>	Bronze	Attend 3 external Higher Academic Events (careers lectures/college/sixth form/university visit).		
	Silver	Visit a Russell Group University.		
	Gold	Successfully secure an offer at a sixth form or college to complete A-Levels / Apprenticeship.		
<p style="text-align: center;">Futures</p> <p><i>This is a demonstration of ambition because you are climbing your own personal mountain to the very best universities and professions.</i></p>	Bronze	Take part in a one-to-one interview with a career's advisor.		
	Silver	To produce a high-quality CV checked by SLT/Careers adviser.		
	Gold	To secure a professional work experience placement.		
<p style="text-align: center;">Literacy</p> <p><i>This is a demonstration of ambition because you are expanding your vocabulary.</i></p>	Bronze	To read 25 books and complete book reviews.		
	Silver	To read 50 books and complete book reviews.		
	Gold	To read 150 books and complete book reviews.		

# Ambition - Excellence - Pride

Excellence				
Badge	Badge Level	You must...	Achieved?	Staff Signature
<p style="text-align: center;">Sport</p> <p><i>This is a demonstration of excellence because you are representing your school.</i></p>	Bronze	Play in 10 competitive sports matches or competitions for the school team.		
	Silver	Play in 25 competitive sports matches or competitions for the school team.		
	Gold	Play in a competitive sports match or competition regionally or nationally.		
<p style="text-align: center;">Community</p> <p><i>This is a demonstration of excellence because you are helping others.</i></p>	Bronze	Be an active member of an in-school community for one unit; GA prep, an enrichment activity or homework support.		
	Silver	Write and propose a new community project to key stakeholders.		
	Gold	Organise and deliver a community project event.		
<p style="text-align: center;">Leadership</p> <p><i>This is a demonstration of excellence because you are being a role model to others.</i></p>	Bronze	Be on the student leadership team (sports captain, Character representative, mentor or ambassador).		
	Silver	Have impacted change or improvement as a leader (provide evidence of what you have achieved).		
	Gold	Create and lead your own leadership event.		
<p style="text-align: center;">Adventure</p> <p><i>This is a demonstration of excellence because you have challenged yourself.</i></p>	Bronze	Complete a school residential / Outdoor Adventure Activity.		
	Silver	Complete the Duke of Edinburgh BRONZE Award.		
	Gold	Complete the Duke of Edinburgh SILVER Award or Ten Tors challenge.		

## Ambition - Excellence - Pride

Pride				
Badge	Badge Level	You must...	Achieved?	Staff Signature
Charity <i>This is a demonstration of pride because you have helped others.</i>	Bronze	Volunteer 10 hours to the local community or charity.		
	Silver	Organise a charity event and raise more than £100.		
	Gold	Organise a charity event and raise more than £500.		
Commitment <i>This is a demonstration of pride because you have dedicated time and effort to something you enjoy.</i>	Bronze	Visit one of the following; art gallery, theatre, museum, concert, ballet, or similar. Or have 100% attendance at an enrichment activity for a unit.		
	Silver	Visit two different places from the above list. Or have 100% attendance at two different enrichment activities for two units.		
	Gold	Visit five of the following; art gallery, theatre, museum, concert, ballet, or similar. Or have 100% attendance at three different enrichment activities for three units.		
Environment <i>This is a demonstration of pride because you are making the world more eco friendly.</i>	Bronze	Take part in an event which improves your school environment.		
	Silver	Organise an event which improves your local environment.		
	Gold	Contribute to a national event, or movement which aims to improve the environment.		
Diversity <i>This is a demonstration of pride because you have celebrated all things that make us unique.</i>	Bronze	Take part in one event; assembly or festival which celebrates diversity (race, religion, LGBTQI+).		
	Silver	Take part in two events that celebrate two different types of diversity.		
	Gold	Organise an event, festival or assembly which celebrates diversity.		