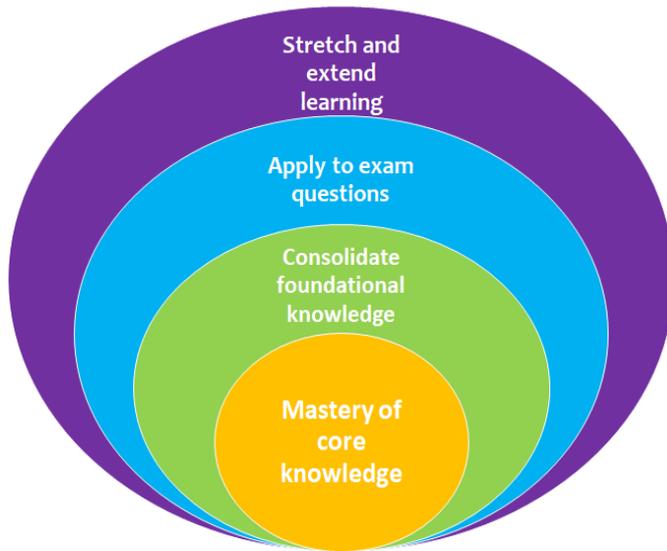




Ark Acton
Academy

**Year 9
Knowledge
Booklet
Spring 2023**

What does great independent studying look like?



1. Use self quizzing to master core knowledge.

Give yourself frequent opportunities to practise recalling the core knowledge - this knowledge must be automatic to make rapid progress.

2. Consolidate foundational knowledge.

Use online platforms and revision guides to check you know how this core knowledge fits into a bigger picture. You will receive rewards via assemblies to celebrate how frequently you use these platforms.

- A. www.hegartymaths.com: KS3 & KS4 maths
- B. www.senecalearning.com: English, history, geography, religious studies, music, KS3 science
- C. www.my-gcsescience.com: KS4 biology, physics, chemistry
- D. <https://uk.language-gym.com>: French and Spanish
- E. www.groklearning.com: computer science
- F. www.quizlet.com: all subjects

3. Apply your knowledge to practice exam questions

See your teacher to receive sample exam questions.

4. Stretch and extend your learning.

Independently research the topics you are interested in and read widely around your favourite subjects. The below platforms will help:

- a. www.startprofile.com: careers
- b. www.thisislanguag.com: French and Spanish
- c. www.digitaltheatreplus.com: access to live theatre
- d. <https://www.newscientist.com/>: news and developments in science
- e. <https://www.britishmuseum.org/collection>: British museum online collection [history, geography and RS].

5. Read widely for pleasure: www.sora.com

How to use this booklet for self-quizzing

Self-quizzing is a powerful strategy to get knowledge stuck in your long-term memory. And it's so simple to do!

Watch this video to learn how to self quiz: <https://tinyurl.com/AGFSIL>

How should I self-quiz?

1. Look at no more than 10 terms at a time.
 2. Read the terms and say them over and over again in your head (**without speaking aloud**) for 2-3minutes.
 3. Cover the terms on the following pages with an exercise book, **with a black pen**, write down as many terms and definitions as you remember.
 4. **With a green pen**, uncover the terms and check you have correctly spelled and defined each term. Refine your spelling and definition in blue.
 5. Spend 2-3 minutes reading the terms again and saying them in your head.
 6. Fold your piece of paper so you cannot see the first round of quizzing, cover the terms and write down as many terms and definitions as you remember.
 7. **With a green pen**, uncover the terms and check you have correctly spelled and defined each term. Refine your spelling and definition in blue.
 8. Repeat this process until you can correctly spell and define each term.
- **If you run out of space in your quizzing book, you should use lined paper to complete your self quizzing.**
 - You will be asked to place your quizzing on your desk to show your teacher on the day it is due.

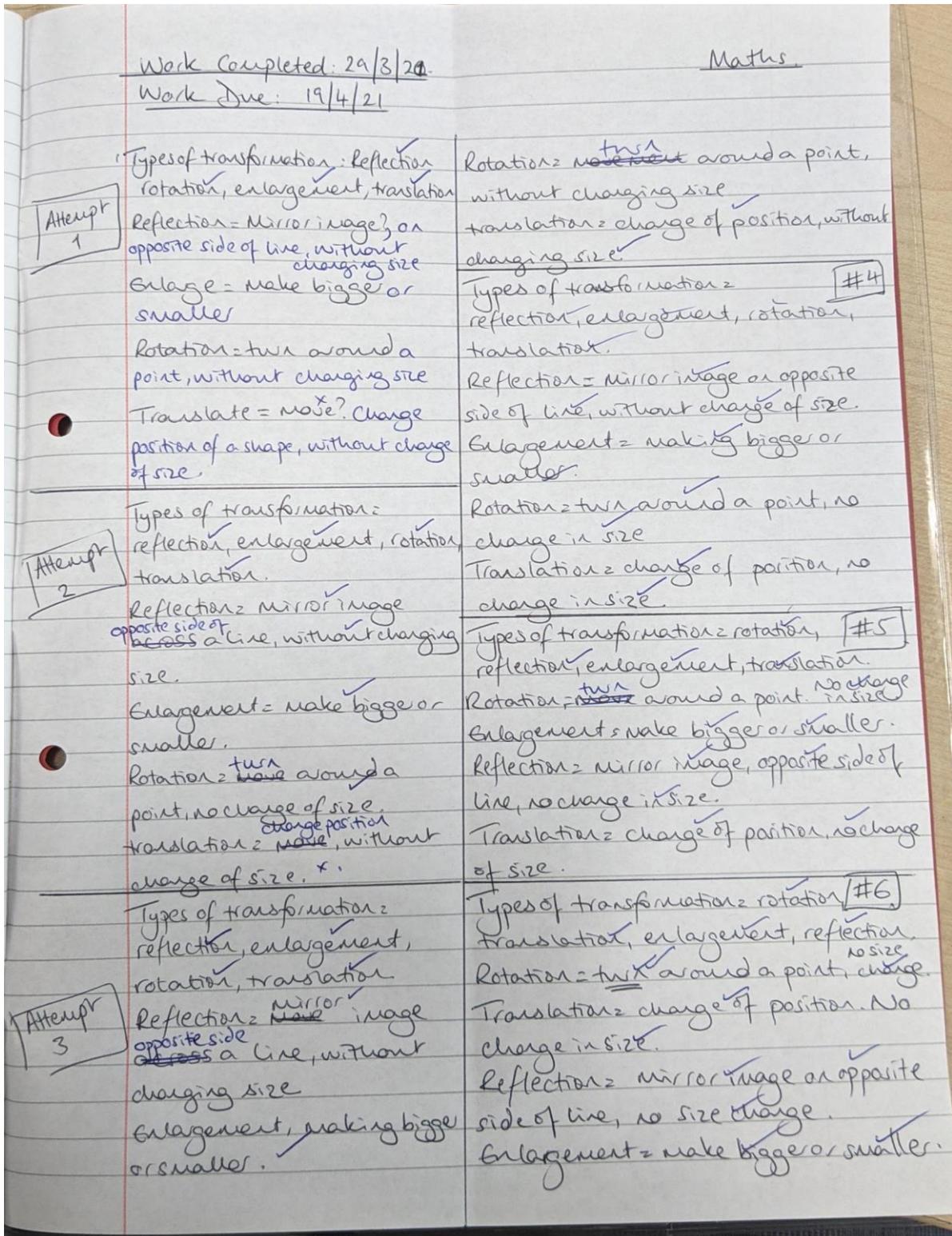
To space your quizzing out to maximise retention of knowledge, change subjects after 40minutes.

Organising your self-quizzing book

Date of work completion

Date when work is due

Subject



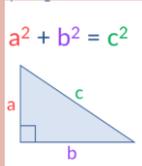
English

Spring Knowledge

Block A		Block B	
William Shakespeare	Known as 'The Bard', he was a poet and playwright born in 1564 and died in 1616.	Hamartia	The fatal character flaw of the tragic hero
The Elizabethan era	The historical period from 1558 to 1603.	Catharsis	The release of the audience's emotions through empathy with the characters.
The Jacobean era	The historical period named after the King of England and Scotland from 1603 to 1625.	Soliloquy	A speech in a play that the character speaks alone, or to the audience, rather than to the other characters.
Patriarchy	Male dominated societies and their rules prioritise men, for example rules that do not permit women's freedom.	Dramatic irony	A situation in drama that is understood by the audience but not known or understood by other characters.
Tragedy	Features of a tragedy include: 1. the tragic hero; 2. their tragic flaw; 3; an obstacle; 4. their catastrophe/death	Aside	A brief comment spoken aloud by a character to reveal their thoughts and feelings but only heard by the audience.
Block C		Block D:	
Prologue	Introduction to a play traditionally recited by the chorus. In <i>Romeo and Juliet</i> it is in the form of a sonnet.	Romeo Montague	The son and heir of Lord and Lady Montague. The tragic hero of the play.
Sonnet	A 14-line poem with a formal rhyme, rhythm and structure.	Juliet Capulet	The daughter of Capulet and Lady Capulet. The tragic heroine of the play.
Impulsive	Acting on a whim, without thinking.	Tybalt	Juliet's cousin
Idealistic	Believing whole-heartedly in something, even if it is unrealistic.	Mercutio	Kinsman to the prince and one of Romeo's closet friends
The status quo	The current state of affairs or situation. The way things are in society at any given time.	Friar Lawrence	Romeo's friend and guidance counsellor

Mathematics

Spring Knowledge

Block A		Block B	
Equidistant	<p>Equal distance from each other.</p> <p>For example: Parallel lines are always equidistant.</p>	Scale factor	<p>The ratio between the scale of a given original number/object and the new one.</p> <p>Used in both ratio/proportion and shape.</p>
Bisector	<p>A line that divides something (either another line segment or an angle) into two equal parts.</p>	Constant of Proportionality	<p>The constant value (often written k) relating amounts that rise or fall uniformly together.</p> <p>Used in both ratio/proportion and shape.</p>
Congruent	<p>Two figures or objects are congruent if they have the same shape and size.</p> <p>They can be reflected, rotated or translated versions of the other, but not enlarged (changes the size) or any vertices moved (changes the shape).</p>	Enlargement	<p>A type of transformation in which only the size of the original shape is changed by multiplying all sides by a scale factor.</p> <p>The proportions of the shape, given as the constant of proportionality, remain the same.</p>
Similar	<p>Two figures or objects are similar if they have the same shape.</p> <p>They will have congruent corresponding angles and there will be scale factor between</p>		
Pythagoras' Theorem	 <p>$a^2 + b^2 = c^2$</p> <ul style="list-style-type: none"> c is the hypotenuse <ul style="list-style-type: none"> It is the longest side It is always opposite the right angle a and b are the two shorter sides <ul style="list-style-type: none"> They are always adjacent to the right angle 		
Block C		Block D:	
Trigonometric Functions	$\sin \theta$ $\cos \theta$ $\tan \theta$	Simplify (algebra)	<p>Write in the simplest form possible, so that nothing more (i.e., the four operations) can be done to the expression.</p>

Trigonometric Ratios	$\sin \theta = \frac{O}{H}$ $\cos \theta = \frac{A}{H}$ $\tan \theta = \frac{O}{A}$ <p>SOHCAHTOA</p>	Expand (brackets)	Multiply out all terms in the brackets by all terms outside the brackets; 'getting rid of the brackets'.
Inverse Trigonometric Functions	$\sin^{-1} \theta$ $\cos^{-1} \theta$ $\tan^{-1} \theta$	Factorise (algebra)	Writing an expression as a product of its factors; 'putting brackets back in'.
		Rearrange	Make a different variable the subject of the equation; tells you to use inverse operations to isolate the needed variable.
		Solve	Find a solution to; tells you to find the value of the missing variable(s).

Science

Spring Knowledge

Biology		Chemistry		Physics	
Meiosis	Cell division that forms gametes.	The four state symbols are	(s), (l), (g) and (aq)	Internal energy	The sum of the kinetic energy and potential energy of the particles in a system
Gene	A small piece of DNA which codes for a protein.	An aqueous solution is	a substance dissolved in water	Temperature	A measure of the motion and energy of the particles. It is related to their kinetic energy.
Allele	Different versions of genes	The relative atomic mass (A_r) is	is the average mass of the atoms of an element compared to the mass of carbon-12.	Fluid	A substance with no fixed shape – liquids or gases
Genotype	The set of alleles an individual has. E.g. Bb	The relative formula mass (M_r) of a substance is	the sum of the A_r of all the atoms in the formula.	Conduction	Thermal transfer by vibration of particles
Phenotype	The characteristics expressed in an individual E.g. Brown fur	Resolution	the smallest interval that can be measured	Convection	Thermal transfer when particles in a heated fluid rise.
Dominant	An allele which is always expressed. Uses UPPER CASE to represent the allele.	Uncertainty	+/- half of the resolution	Radiation	The transfer of thermal energy as a wave.
Recessive	An allele which is only expressed when there are 2 copies of it. Uses lowercase to represent the allele.	Law of Conservation of Mass	The mass of the reactants is equal to the mass of the products – atoms cannot be made or destroyed	Δ	Delta, symbol that means the change in a variable
Homozygous	An individual which has 2 copies of the same allele. E.g. BB or bb	Concentration (g/dm^3)	$\frac{\text{mass of solute (g)}}{\text{volume of solution (dm}^3\text{)}}$	Specific heat capacity equation	$\Delta \text{ energy} = \text{mass} \times \text{specific heat capacity} \times \Delta \text{ temperature}$
Heterozygous	An individual has 2 different alleles. E.g. Bb	Why do we stir and mix?	To separate soluble and insoluble substances.	Energy transfers in a vacuum	Only radiation can occur as conduction and convection

					require particles
Carrier	An individual who is heterozygous for a recessive disorder. They have 1 faulty allele, but do not have the disorder.	Sometimes reactions appear to change mass because	A gas is produced and released	Specific Latent Heat	The energy needed to change the state of 1 kg of the substance with no change in temperature.

Geography

Spring Knowledge

Block A		Block B	
Economic Activity	something that people do to earn money, e.g. farming, fishing, manufacturing	Globalisation	the process whereby the world becomes increasingly interconnected, due to advances in transport, trade, and technology.
Raw Materials	materials that are extracted from Earth's surface or oceans, e.g. coal or crops. They are manufactured into products.	Interconnected	when there are lots of links, e.g. between people and places around the world.
GNI	the total income of a country including income from the businesses it holds within the country and overseas.	Supply Chain	the journey that a product goes through, starting as a raw material in one location, being manufactured in another, then sold and used in yet another.
Industrialisation	when a country develops its manufacturing and other heavy industries.	Multiplier effect	when employment in one sector leads to growth of other businesses as employees spend their wages.
Deindustrialisation	when a country's manufacturing sector or heavy industries decline	Cultural diffusion	when ideas or goods from one region spread into other regions,

			changing or replacing their cultures.
	Block C	Block D	
Quality of Life	the standard of health, comfort, happiness, wealth, and opportunity in a place.	Trend	The general direction of data over time. E.g increasing or decreasing.
Indigenous	a person or people who are originally from an area.	colonisation	When one country takes control of another, usually for its resources.
Development indicator	a measure of an aspect of development, e.g. the percentage of people who can read and write.	Relief	The height and shape of the land.
disparity	A large difference that is unfair. A gap or inequality	Sustainable development	a project that balances economic, social and environmental concerns, and does not put the environment or future generations at risk.

History

Spring Knowledge

Block A: Civil Rights in the USA		Block B: Civil Rights in the USA	
1863	The Emancipation Proclamation was signed by Abraham Lincoln. This freed all slaves in America	White Supremacy	The belief that white people are the superior race and should dominate society
Reconstruction	To rebuild/improve something	Civil rights	The rights of citizens to political and social freedom and equality
Segregation	Keeping one racial group away from another	1952	Brown vs Board ends segregation in US schools
By the 1950s...	Black people in America faced racism, segregation and unequal treatment	Civil disobedience	A non-violent refusal to obey certain laws as a form of protest
De Jure/De Facto	Something changing in the law or in reality	Protest	A public expression of objection and disapproval towards an idea or policy
Block C: Civil Rights in the UK		Block D: Civil Rights in the UK	
Justice	The view that the appropriate action happened and someone got what they deserved	Notting Hill in the 1950s	A poor area of London with high crime rates and a shortage of housing
Injustice	The view that the appropriate action did not happen and someone did not get what they deserved	Riot	A violent protest to show disapproval
1939-1945	Black people come from all over the British Empire to help Britain fight in World War Two	Commonwealth	A group of countries who have previously been a part of the British Empire
Discrimination	To be treated unfairly due to your identity i.e.. race, religion, gender, sexuality	Conviction	When a judge or jury decides someone is guilty of a crime
Windrush Generation	People who moved from the Caribbean to Britain on the ship the 'Empire Windrush' in 1948	Government	Those in charge of running a country

French

Spring Knowledge

Topic 1	
An/année	A year
Comme	As
Fort	Strong
Faible	Weak
Doué	Talented
Topic 2	
Sixième	Year 7
Cinquième	Year 8
Quatrième	Year 9
Troisième	Year 10
Seconde	Year 11
Première	Year 12
Terminale	Year 13
Etudier	To study
Topic 3	
Parler	
Apprendre	To speak
Etudier	To learn
Langue étrangère	To study
Utile	Useful
Travailler	To work
Topic 4	
Argent	Money
Vouloir	To want
Je vais	I am going to
Métier	Job
A l'étranger	Abroad
Topic 5	
En général	Generally

Gagner de l'argent	To earn money
Petit boulot	Holiday job
Fatigant	Tiring
Topic 6	
Lycée	Sixth Form
La fac	Uni
Apprentissage	Apprenticeship
Année sabbatique	Gap year
Bénévolat	Volunteering
Métier	Job

Religious Studies

Spring Knowledge

Block A – The Six Articles of Faith (Sunni Islam)		Block B – The Five Roots of Usul-ad-din (Shi’a Islam)	
Belief in Tawhid	The oneness and unity of Allah.	Belief in Tawhid	The oneness and unity of Allah.
Belief in angels	They are spiritual beings created from elements of light. They gave God’s messages to the prophets and watch over humans.	Belief in Adalat (Justice)	Part of the nature of God in Shi’a Islam; the belief that God is fair.
Belief in Holy Books	The holy books of Islam should be respected. This is especially true of the Qur’an, which is the unchanged word of Allah.	Belief in Prophets	Belief in the prophets as messengers sent by Allah to communicate to people.
Belief in Prophets	Belief in the prophets as messengers sent by Allah to communicate to people.	Belief in the Imamate	Belief in the twelve imams who succeeded Muhammad as the leaders of Islam.
Belief in the Day of Judgement	The day when Allah will decide about individual deeds and on reward or punishment.	Belief in the Day of Judgement / Resurrection	The day when Allah will decide about individual deeds and on reward or punishment. Muslims will be resurrected and judged by God.
Belief in predestination	The belief that everything that happens has been decided already by Allah.		
Block C – Declaration of Faith(s)		Block D – The Five Pillars	
Sunni Shahadah	‘There is no God but Allah and Muhammad is his prophet.’	Shahadah	Declaration of faith
Shi’a Shahadah	‘There is no God but Allah and Muhammad is his prophet and Ali is the friend of God.’	Salah	Prayer
		Zakah	Giving charity
		Sawm	Fasting during Ramadan
		Hajj	Pilgrimage to Mecca

Music

Spring Knowledge

Block A		Block B	
Conjunct	Two notes next to each other in pitch	Accent	Emphasising a note
Disjunct	Two notes not next to each other in pitch	Staccato	Notes which are separated (a gap between them)
Leitmotif	Recurring theme that represents a character or place	Tonal	Musical that is either major or minor
Sonority	The type of sound an instrument makes	Expression	Adding phrasing, articulation and dynamics to create feeling in a piece of music
Block C		Block D	
Diminuendo	Getting quieter	Allegro	Fast
Crescendo	Getting louder	Largo	Slow
Atonal	Music that is not major or minor (chromatic)	Cluster chord	2 or more notes next to each other in pitch played at the same time
Tension	A feeling of emotional strain, can be created using music	Glissando	A symbol that tells you to play all notes between two pitches as you move through the melody
Block E		Block F	
Section	A part in a song	Major	Happy sounding
Homophonic	Melody and accompaniment or the same sound	Minor	Sad sounding
Accent	Emphasising a note within a bar	Drone	A sustained note throughout a piece (often low in pitch)
Arrangement	A piece which uses copied melodies from other music, sometimes on different instruments	Dissonance	Two or more notes played together which clash and need resolving
Block G		Block H	
Instrumental family	Groups that instruments are put into based on how they produce sound	On the beat	Music that emphasises strong beats of the bar
Synthesizer	An instrument that can create the sound of	Syncopated	Music that emphasises weak beats of the bar

	another (looks like a piano)		
Chord sequence	A repeating pattern of chords	Underscore	Music that is played during a film clip
Foley	Creating and performing everyday sounds for film	FX	Sound effects
Block I		Block J	
Texture	The layers of sound	Motif	A melodic idea
Monophonic	One layer of sound	Consonance	Notes which sound pleasant together when played at the same time
Homophonic	Same sound or melody and accompaniment	Development	Changing a musical idea to create interest within a piece of music
Polyphonic	Two or more melodies at the same time	Genre	A style of film / music

--	--

--	--