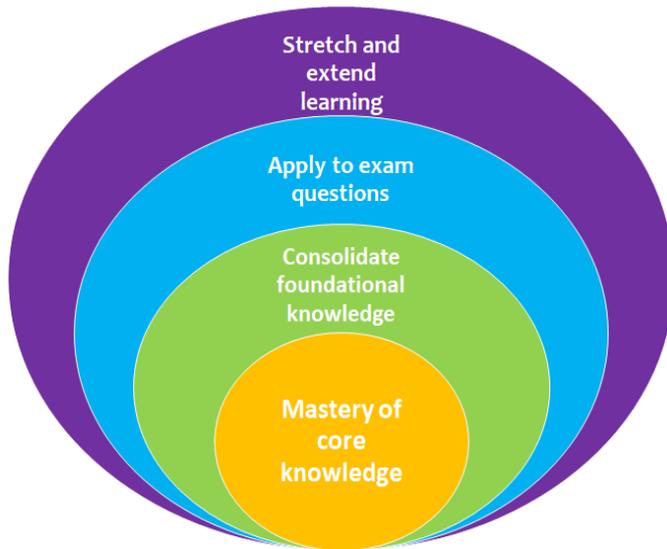




Ark Acton
Academy

Year 8
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-gcse-science.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 2-3 minutes.
 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 40 minutes.

Organising your self-quizzing book

Date of work completion

Date when work is due:

Subject

Work Completed: 29/3/20. Maths
 Work Due: 19/4/21

Attempt 1

Types of transformation: Reflection, rotation, enlargement, translation

Reflection = Mirror image, on opposite side of line, without changing size

Enlarge = make bigger or smaller

Rotation = turn around a point, without changing size

Translate = move? Change position of a shape, without change of size.

Rotation = ~~move~~^{turn} around a point, without changing size

translation = change of position, without changing size

Types of transformation = reflection, enlargement, rotation, translation.

Reflection = mirror image opposite side of line, without changing size.

Enlargement = make bigger or smaller.

Rotation = ~~move~~^{turn} around a point, no change of size.

translation = ~~move~~^{change position}, without change of size. *

Types of transformation = reflection, enlargement, rotation, translation.

Reflection = ~~move~~^{mirror} image opposite side of line, without changing size

Enlargement, making bigger or smaller.

Types of transformation = rotation, reflection, enlargement, translation.

Rotation = ~~move~~^{turn} around a point. ^{no change in size}

Enlargement = make bigger or smaller.

Reflection = mirror image, opposite side of line, no change in size.

Translation = change of position, no change of size.

Types of transformation = rotation, translation, enlargement, reflection.

Rotation = ~~turn~~^{turn} around a point, ^{no size change}

Translation = change of position. No change in size.

Reflection = mirror image on opposite side of line, no size change.

Enlargement = make bigger or smaller.

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.	Usurp	Someone who takes control of someone else's power when they do not have the right to.
The Elizabethan era	Elizabeth I was Queen of England from 1558 to 1603 and this era was full of exploration by land and sea	Vengeful	Wanting revenge.
The Jacobean era	James I became King of England after Elizabeth I so this historical period is named after him because Jacob is the Latin form of James.	Oppressed	Under harsh control with little freedom.
Tempest	A violent storm, in this case at sea.	Aside	A brief comment spoken aloud by a character to reveal their thoughts and feelings but only heard by the audience.
Colonialism	When one country establishes itself in another country, becoming colonisers and natives (people who have been colonised).	Soliloquy	A speech in a play that the character speaks alone, or to the audience, rather than to the other characters.
Block C		Block D:	
Narrative arc	The full story's progression from exposition to climax and resolution.	Alonso	The King of Naples. He helped Antonio to steal power from Prospero 12 years ago. He believes that his son died in the storm. His brother, Sebastian, plots to kill him.
Stagecraft	The effective management of dramatic techniques and staging to bring the play to life.	Prospero	He used to be the Duke of Milan, but his brother Antonio stole his power. He now lives on the island with his daughter, Miranda, and has 2 slaves, Ariel and Caliban.
Dramatic irony	A situation in drama that is understood by the audience but not known or understood by other characters.	Miranda	Prospero's daughter. She has lived on the island with Prospero since he was banished 12 years ago from Italy. She falls in love with Ferdinand.
Pathos	A pathetic situation is one that makes us feel sympathy or sorrow.	Ariel	A magical spirit and a slave to Prospero.
Empathy	Compassion by way of understanding someone else's experience.	Caliban	A deformed slave and a native of the island. He hates Prospero and unsuccessfully plots to kill him.

Mathematics

Spring Knowledge

Block A		Block B	
Scale factor	The ratio between the scale of a given original number/object and the new one. Used in both ratio/proportion and shape.	Linear Relationship	Relationship in which two variables have a direct connection, which means if the value of x is changed, y must also change in the same proportion. Expressions of rate.
Constant of Proportionality	The constant value (often written k) relating amounts that rise or fall uniformly together. Used in both ratio/proportion and shape.	Piecewise Relationship	A graph made up of a straight line with changing gradients. Expressions of changing rate.
Block C		Block D:	
Directly Proportional Graphs	Linear graphs starting from the origin: Start from the origin (0,0) and have a constant gradient.	Univariate Data	Data dealing with only one variable, the simplest form of statistical analysis.
Inverse Proportion	Where the rate of change of one variable is inverse to the other.	Data Terminology	<ul style="list-style-type: none"> Quantitative (numerical data e.g., age) Qualitative (non-numerical data e.g., colour) Discrete (only takes certain values; usually integers e.g, shoe size) Continuous (infinte values, can take any value between two numbers e.g., height)
Speed, Distance, Time	Speed is the rate of change of distance over time. $S = \frac{D}{T}$ Gradient of distance-time graphs. 	Question Types	Ambiguous (unclear) Leading (encouraging a certain response) Restrictive (not allowing a wide-enough range of answers)

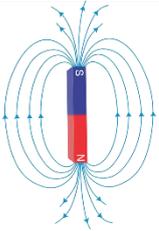
Directly Proportional Graphs	Linear graphs starting from the origin: Start from the origin (0,0) and have a constant gradient.	Averages and Measures of Spread	<ul style="list-style-type: none"> • Mean ('central' term, sum terms and divide by number of terms) • Median ('middle' term, order terms and identify the middle) • Mode (most common) • Range (spread of data, largest value subtract smallest value)
Block E			
Bivariate Data	Data dealing with two variables.		
Correlation	A relationship or connection between variables.		
Line of Best Fit	A straight line that minimises the distance between it and the data, giving a reference point for interpretation and calculation averages.		
Causation	A correlation exists between two variables and one is directly caused/affected by another.		

Science

Science

Spring Knowledge

Biology		Chemistry		Physics	
Lifestyle Factors	An action that affects the chance of you getting a disease (e.g smoking, lack of exercise)	Law of Conservation of Mass	The mass of the reactants is equal to the mass of the products – atoms cannot be made or destroyed	Magnetic force	A non-contact force between a magnet and a magnetic metal.

Aerobic	Requiring oxygen	Oxidation	The gain of oxygen	Magnetic field	The area around a magnet where the magnet applies a force to the magnetic object.
Anaerobic	Not requiring oxygen	Reduction	The loss of oxygen	Magnetic materials	Iron, cobalt and nickel (plus their alloys e.g. steel).
Word equation for aerobic respiration	Glucose + oxygen --> carbon dioxide + water	Neutralisation	The reaction of an acid and an alkali/base.	Permanent magnets	Objects that are magnets all the time (e.g. bar magnets)
Word equation for anaerobic respiration	Glucose --> lactic acid	Equation for the reaction between an acid and base	Acid + base --> salt + water	Induced magnets	Objects that become magnetic only when placed in a magnetic field
Photosynthesis	The process by which plants make glucose using water, light and carbon dioxide	Equation for the reaction between an acid and a metal carbonate	Acid + metal carbonate --> salt + water + carbon dioxide	Magnetic field diagram of a bar magnet	
Limiting Factor	A factor such as temperature, carbon dioxide concentration and light intensity, which can limit the rate of photosynthesis	Equation for the reaction of metals with acid	Metal + acid --> salt + hydrogen <i>e.g. Sodium + Nitric Acid --> sodium nitrate + hydrogen</i>	Solenoid	A wire wrapped into a coil shape.
Rate	The change in a value over time. For example, heart rate or rate of photosynthesis.	Test for hydrogen	Hold a burning splint to the edge of a test tube filled with the gas. This burns rapidly with a squeaky pop sound.	Electromagnet	A solenoid with an iron core.
Stomata (singular. Stoma)	Openings in the leaves of plants, particularly on the underside, controlled by guard cells, allowing gases to diffuse in/out	Test for carbon dioxide	The gas is shaken with limewater (calcium hydroxide) and the limewater turns cloudy.	Increasing the strength of an electromagnet	Have more coils in the solenoid Increase the current Adding a core of a magnetic material
Guard Cells	Surround the stomata and control the opening/closing	Features of a good method	Numbered steps	How is the magnetic field of Earth	Through the molten (liquid) iron and nickel core.

			State volumes / amount of substance Names of equipment Repeat and calculate mean	generated ?	
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Geography

Spring Knowledge

Block A		Block B	
Energy	Power used for an activity	The tropics	The Tropic of Cancer and the Tropic of Capricorn. These are lines of latitude 23.5 degrees north and 23.5 degrees south of the equator.
Economic Development	A country or area becoming wealthier	Infrastructure	Basic systems and services, such as transport, roads, buildings and power supplies.
Renewable	something that does not run out when used.	Political Tension	Lack of trust between two countries.
Finite	Has limits or an end.	Energy Mix	The total amount and types of energy that a place uses.
Distribution	How something is spread out.	Biofuels	A fuel that is made from living things or their waste.
Block C		Block D:	
Climate	an area's long-term average weather conditions, calculated using 30+ years of data.	Sediment core	a long tube of mud extracted from the ocean floor.
Latitude	Degrees of distance North or South from the Equator.	Relief	The shape of the land, especially height and steepness
interglacial	Warmer periods in the Earth's climate	Correlation	the relationship between two factors e.g. positive correlation means as x rises y rises.
Greenhouse effect	a process that maintains temperatures for life on Earth, by trapping the sun's heat in the atmosphere.	Initiative	a scheme or plan with an intended goal, e.g. national initiatives to reduce carbon emissions.
Enhanced greenhouse effect	an intensified version of the greenhouse effect. It is caused by humans adding more greenhouse gases to the atmosphere.	Paris Agreement	an agreement of 190 countries to reduce carbon emissions to zero by 2050 to prevent average temperature rise above 2°C.

History

Spring Knowledge

Block A		Block B	
1660	The Restoration of Monarchy, Charles II was crowned King of England, Scotland and Ireland.	Nonconformist	Christians who did not conform to/were not a part of the Church of England
The Great Plague	Between 1665 and 1666, the Great Plague killed an estimated 100,000 people	Glorious Revolution 1668	After James II fled the country, he was replaced as monarch, England, Scotland and Ireland by his Protestant daughter, Mary, and her Dutch husband William of Orange
1666	The Great Fire of London	Act of Union	In 1707, the Acts of Union led to the creation of the United Kingdom of Great Britain
Popish Plot	A story made up by Titus Oates that caused people to hate Catholics between 1678 and 1681	Anglo Dutch Conflict	This was a conflict between the Commonwealth of England and the Netherlands over trade and power
Test Acts	A series of laws that punished Catholics and nonconformists	Colonialism	The policy or practice of controlling and taking over lands/ countries and exploiting it economically.
Block C		Block D	
Enslavement	The act of making someone a slave. Enslaved people were not seen as people, but as commodities to be bought, sold and exploited. Enslavement was a dehumanising process.	Quakers	A Christian movement founded by George Fox. They seek religious truth in their inner experiences of God, rather than through rituals or ceremony
Triangular Mechanism	Trade that connected Europe, West Africa and the Americas as ships carried goods and people to exchange on each of the three journeys	Virginia	A southern colony in America, largely driven by profit
Sugar Revolution	The Sugar Revolution increased the demand for labour in the Caribbean. Enslaved Africans provided a cheaper and more reliable source of labour than European indentured servants.	Massachusetts	A northern colony in America, largely driven by family and religion.

Indigenous Tribes	Native Americans or the 'First Americans'. Their populations declined following European colonisation of the Americas.	Barbados Slave Code	This set out the organisation of labour and society in Barbados, and influenced virtually all other English colonies
Indentured Labourers	A form of unpaid labour in which a person is contracted (a form of agreement) to work without a salary for a specific number of years	Thirteen Colonies	The Thirteen Colonies were created through people from Britain (and Europe) migrating to the east coast of America and setting up new communities
Block E			
East India Company	An English company formed for the exploitation of trade with East and Southeast Asia and India. It was founded so that England could participate in the East Indian spice trade.		
Commercialism	The buying and selling of things to make profits		
Imperialism	A policy of extending a country's power and influence through colonisation or use of military force		
Monopoly	A company with a monopoly has all the power to control prices and has all the influence in the market		

French

Spring Knowledge

A		B	
J'habite	I live	Un salon	A living-room
dans	in	Une chambre	A bedroom
Une maison	A house	Une salle de bain	A bathroom
Un bateau	A boat	Une salle à manger	A dining-room
C		Une cuisine	A kitchen
Un château	A castle	Un jardin	A garden
Des bâtiments	buildings	D	
Un marché	A market	Plus ... que	More ..than
Un supermarché	A supermarket	Moins ... que	Less....than
Une école	A school	animée	lively
Des magasins	shops	bruyante	noisy
Un centre commercial	Shopping centre	polluée	polluted
Une gare	A station	sale	dirty
Un centre de loisirs	Leisure centre	propre	clean
E		F	
Il fait chaud	It's hot	Faire des promenades	Go for walks
Il fait froid	It's cold	Faire les magasins	Go shopping
Il fait beau	The weather is nice	Louer des vélos	Rent bikes
Il fait mauvais	The weather is bad		
Il pleut	It's raining		
Il neige	It's snowing		
Il y a du soleil	It's sunny		
Il y a du brouillard	It's foggy		
Il y a du vent	It's windy		
Il y a un orage	There is a storm		

Religious Studies

Spring Knowledge

Block A		Block B	
Enlightenment	The state of being awakened to the truth about life. Siddhartha achieved enlightenment under a Bodhi tree when he was 29 years old	The Dhammapada and the Dhammacakkappa vattana Sutta	Buddhist scriptures that contains the teachings and sayings of the Buddha
The Four Sights	Four things seen by Siddhartha when leaving the royal grounds – old age, sickness, death and a holy man	The Pali Canon	The main sacred text for many Buddhists which contains the teachings of the Buddha, rules for monks and nuns and the philosophy of Buddhism; also known as the Tipitaka.
The Middle Way	A lifestyle between luxury and having nothing at all	The Mahayana	A school of Buddhism that believes in the Bodhisattvas and that the term 'Sangha' applies to all Buddhists
The Four Noble Truths	The basis of the Buddha's teachings: all creatures suffer; suffering is caused by selfish desires; suffering can be ended; the way to end suffering is to follow the Eightfold Path.	Theravada	A school of Buddhism that views the Sangha as very important
The Eightfold Path	Eight instructions taught by the Buddha to help people overcome suffering and reach the contented state of enlightenment		
The Five Precepts	Five rules that all Buddhists are expected to follow.		
Block C – The Eightfold Path		Block D – The Five Precepts	
1. Right understanding	To see the world as it really is. To understand the teachings of the Buddha.	1. Refrain from taking life	Not killing any living beings, including animals
2. Right thought	To think well. To focus your mind on good thoughts and remove bad thoughts.	2. Refrain from taking what is not given	Not stealing from anyone.

3. Right Speech	To speak well. To say things which are kind and refrain from speaking harmful things.	3. Refrain from the misuse of the senses	EG Not committing adultery (cheating on your partner)
4. Right Action	To act in a way that is compassionate and avoids causing harm to all living beings.	4. Refrain from wrong speech	EG Not lying or gossiping about others
5. Right Livelihood	To work in a way that encourages kindness and compassion.	5. Refrain from intoxicants that cloud the mind	Not drinking alcohol or taking drugs as they do help you think clearly
6. Right Effort	To dedicate oneself to train the mind.		
7. Right Mindfulness	To be aware of one's thoughts and actions and be mindful of others.		
8. Right Concentration	To learn and practise meditation.		

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)
Treble clef	A symbol which tells you play the higher notes on the piano (right hand)	Sharp	A symbol (#) after a note which raises it half a step
Notation	Used to write music down	Natural	A symbol before a note which returns the note to the key signature
Block C		Block D	
Diminuendo	Getting quieter	Allegro	Fast
Crescendo	Getting louder	Largo	Slow
Dotted rhythms	Rhythms which use dotted notes (where the note length is increased by half when a dot is added)	Phrase	Musical sentence
Ornament	Added notes to make the music more interesting	Slur	A symbol that shows notes should be played in a legato way
Block E		Block F	
Section	A part in a song	Major	Happy sounding
Canon	Music where the same melody is played but starting at different times	Minor	Sad sounding
Contrapunta 1	Same meaning as polyphonic, but used to describe baroque music	Ground bass	A short repeating bassline (in Baroque era)
Passing notes	A note that doesn't belong to the chord being played and is used to create an interesting melody (stepwise)	Chords	Two or more notes played at the same time
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
Harpsichord	A baroque piano	Syncopated	Music that emphasises weak beats of the bar

Basso continuo	A group of accompanying instruments (cello, double bass, lute) that play the bassline and accompaniment	Baroque era	Musical era between 1600-1750, uses ornaments and terraced dynamics, use of a basso continuo and a harpsichord
Spread chord	Playing the notes of a chord one after another (in quick succession) rather than all at once	Pachelbel	Baroque composer
Block I		Block J	
Texture	The layers of sound	Triad	A chord made of three notes
Monophonic	One layer of sound	Trill	Two notes that are half a step away played quickly and repeatedly one after another
Homophonic	Same sound or melody and accompaniment	Root note	Lowest note in a chord (chord is named after)
Polyphonic (contrapuntal)	Two or more melodies at the same	Harmonise	Two or more pitches which create a pleasant sound (e.g. two singers who sing at different pitches)

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