

Year 7 Knowledge Organiser Autumn Term (1) 2022

What you need to know!

Knowledge Organisers – FAQ

What is a Knowledge Organiser?

Every ½ term this academic year, a new Knowledge Organiser will be produced and put on the school website. These documents are produced for Year 7, Year 8 and Year 9 students and contain key information, specific subject terminology and links to additional resources to help you and your child fully understand topics within the different subject areas.

Can Knowledge Organisers be used for revision and preparing for assessments?

These Knowledge Organisers are designed around the content delivered in lessons each half term in Year 7, 8 and 9. Therefore, they are an excellent revision tool to help prepare your child for end of unit tests as well as their end of year exams which cover previously learned subject content.

How should I use the Knowledge Organiser?

In order that these documents are useful and not too complicated, the Knowledge Organiser is designed to include the basic facts and information being covered in a specific subject over that half term. You may choose to print a version in order that you annotate or tick off aspects once they are fully understood. You may also choose to use this as an electronic revision guide, using the hyperlinks to webpages to secure or deepen understanding.

What are the Arrow Tasks?

At Liskeard School & Community College, teachers use Arrow Tasks as a way of stretching your child. These tasks often involve extending their knowledge through research or applying a learned concept in another way. Try to complete all the Arrow Tasks within the Knowledge Organiser to increase your knowledge and extend your conceptual understanding.

Contents

Art

Drama

English

Ethics, Philosophy and World Views

French

Geography

History

ICT and Computer Science

Maths

Music

Physical Education

Science

Spanish

Technology: Food

Technology: Product Design

Technology: Textiles

A guide to revision strategies

Please note: These subjects are hyperlinked. Click on the subject to take you to the relevant pages.

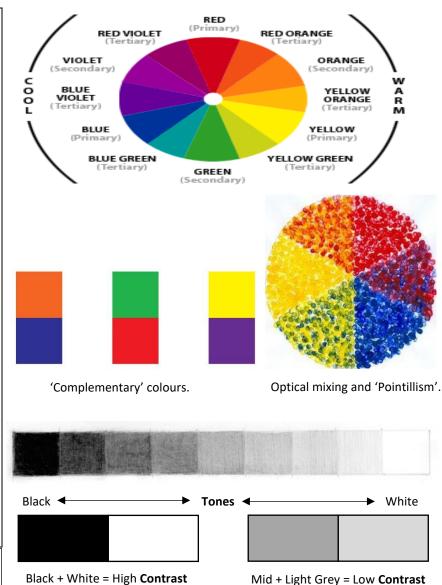
Subject: Art and Design Year: 7 Autumn Term

Topic: Abstraction: Science / Particles. (2D Colour and Mixed Media).

I need to know: How to mix and apply colour, demonstrating an appreciation of basic colour theory and its impact upon composition.

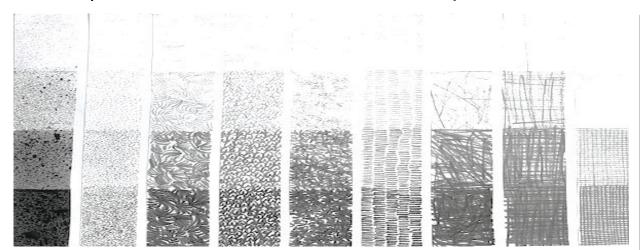
Key Words	Definitions	
Primary	Red, Yellow, Blue. Primary colours cannot be made by mixing other colours together.	
Secondary	Orange, Violet, Green. Secondary colours are made by mixing two primary colours.	
Tertiary	Tertiary colours are between, or a mix of primary and secondary colour.	
Complimentary	Complimentary colours are opposite each other on the colour wheel. Put together they	
	provide a strong contrast. Blue and orange are the coldest and warmest colours on the	
	colour wheel. Yellow and purple are the palest and darkest colours on the colour wheel.	
Tone	Black and white are the darkest and lightest tones. Mixing the two provide a range, or	
	gradation, of tones from dark grey to light grey.	
Shades	Mixing a small amount of black to a pure colour will make a shade.	
Tints	Mixing a small amount of white to a pure colour will make a tint.	
Translucency	Translucent media permits light to pass through but diffuses it so that objects on the	
	opposite side are not clearly visible. i.e. frosted glass.	
Transparency	Transparent media permits light to pass through and does not diffuse the light so objects on	
	the opposite side can still be seen clearly.	
Pigment	A substance or compound that gives something a particular colour.	
Ground	A ground or primer is the background surface on which you paint. It separates your painting	
	from the supporting paper, canvas or board.	
Impasto	The technique of applying paint or pigment thickly so that it stands out from a surface.	
Fresco	A painting done rapidly on wet plaster, on a wall or ceiling, so that the colours penetrate the	
	plaster and become fixed as it dries.	
Resist	A resist medium prevents ink, paint from adhering to the ground. It can be used as a masking	
	agent or to create the impression of texture.	
Optical	Optical mixing, is a visual phenomenon that occurs when unmixed colours are placed side by	
	side on a painting. Rather than see the individual colours, the viewer perceives a single	
	colour that is a blend of the others.	
Pointillism	A technique developed in the mid 1800's. Relying on optical mixing, the technique of	
	applying small strokes or dots of colour so that from a distance they blend together.	
Layering	In technique, this simply means building up multiple layers of paint one on top of the other.	
	In art theory it can also refer to layers of meaning.	
Weight	The weight of a colour refers to its dominance within the composition or painting as a whole.	
Composition	In the visual arts, composition is the arrangement of visual elements in a work of art. Space	
	and silence are all important and can be seen and heard in music, writing and photography.	

Arrow Tasks: Compare and reflect upon the art work of Kupka, Balla, Boccioni, and Kandinsky. Consider how their use of colour captured abstract ideas of space, time, movement and developments in science.



Subject: Art and Design Year: 7 Autumn Term

Topic: Abstraction: Science / Particles. (2D Colour and Mixed Media).



Tone and Mark Making



Georges Seurat 1889 'Pointillism'.



František **Kupka** 1871 – 1957.



Yr 7 Student Resolution.

Thinking, questioning and communicating your visual intelligence using practical skills in ART.

You will be able to organise your thoughts, understanding and expertise in **ART** this term under the following headings.

Skills: Mixing paint, adding water, experimental mark making, scale. **Contexts:** History, reasoning, ideas, genre, culture, responsibility, connections...

Rules: Values, taking risks, experimentation, compositions, adaptability.

Audience: Personal, commercial, ethics, morals, age, empathy, critique.

Resolution: Sources, scale, conceptual, representational, decisions, ending.

Communication: Represent, truth, collaborate, infer, evaluate, talk, show.

Legacy: Material, vision, honesty, heritage, culture, accuracy, pollution.

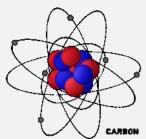
Throughout the year we will be asking you to articulate (to say, explain and use), a number of Personal, Learning and Thinking skills to help you develop your knowledge and understanding. This term we will be asking you to reflect upon your Creative Learning Skills. i.e. How you generate ideas, explore, ask questions, extend thinking, question assumptions, experiment and adapt.

Further thinking (why does this matter?):

On a functional level, it is important to us all that we can interpret the abstract symbolism of colour and its spacial relationships.

On a more complex level, our ability to visualise and record abstract concepts is intricately linked to our ability to question and develop our thinking. Pictures and models enable us to learn more about the ideas we have in our heads.





Subject: Drama Year: 7 Autumn.

Topic: Silent Movies

• I need to know: The key elements of physical acting skills in Drama to create an impact on my audience.

How to use movement, gesture, posture, expression and proxemics to tell a story, demonstrate character and create comedy.

Key Words	Definitions
Posture	Use of stance/bearing to show feelings.
Facial expression	Using your face to show emotion.
Gesture	Use of hands and head to express emotion or thought
Proxemics	Positioning of actors and objects on stage.
Movement	The way in which an actor uses their body to move like a character.
Audience	People watching a performance.
Character	The role you play.
Still image	A picture you create in a group.
Suspension of disbelief	Convincing the audience about what you are doing.
Mime	A style of theatre that focuses on physical movement or creating the impression of a prop that isn't there.
Plot	The Story.
Placards	A caption or title for a scene.
Body as prop	Using your body to create props and scenery.
Slapstick comedy.	Physical comedy that is exaggerated.
End on stage	A staging configuration with the audience at one end.



Arrow Tasks: Using a prop in a sketch, using placards to make the plot clear.



Wider Reading

Watch a Buster Keaton or Charlie Chaplin clip.

Watch a clip from Mr Bean and study Rowan Atkinson's facial expressions!

Research the history of silent movies.

What We Do:

- Explore physical acting skills, essential in any performance.
- Watch and analyse a short silent movie.
- Learn and experiment with a range of mime and slapstick techniques.
- Create and perform a silent movie scene to entertain an audience.
- Evaluate the work of another group.

Subject: English Year: 7

Topic: 'Coraline' by Neil Gaiman

I need to know some of the ideas associated with fantasy fiction. I need to begin to understand how to analyse a piece of text for the language used and the structures applied to it by the writer. I need to understand how writers entertain, scare and enthral their readers.

Key Words	Definitions
Fantasy	The activity of imagining impossible or improbable things
Science fiction	fiction based on imagined future scientific or technological advances and major social or environmental changes, frequently portraying space or time travel and life on other planets.
Dystopia	an imagined state or society in which there is great suffering or injustice, typically one that is totalitarian or post-apocalyptic.
Foreshadow	be a warning or indication of (a future event).
Distort Allegory	pull or twist out of shape a story, poem, or picture that can be interpreted to reveal a hidden meaning, typically a moral or political
Illusion	one. an instance of a wrong or misinterpreted perception of a sensory experience

Big questions of the text

- How does Coraline define bravery? In what ways does Coraline demonstrate bravery?
 What is your definition of bravery?
- Do the mirrors Coraline encounters in the real world and the other world reflect reality or illusion? How do you know? What is the significance of mirrors in Coraline?
- On page 120, Coraline says, "I don't want whatever I want. Nobody does. Not really. What kind of fun would it be if we just got everything we wanted? Just like that, and it didn't mean anything. What then?" Do you agree or disagree with her? How would you respond to her question?
- What is courage?
- How does Neil Gaiman use the features of a scary novel to entertain and interest his readers?
- What kind of a novel is this? How do we know?
- ? How do we know?

Key characters

- Coraline Jones The young explorer. She is curious, intelligent, resourceful, and courageous. Coraline is not afraid to face anyone; she is the most adventurous person in the book.
- Mrs. Jones Coraline's mother. She is very busy most of the time, and sometimes a little inattentive, but she loves and cares about Coraline.
- Mr. Jones Coraline's father. He works at his house on the computer. He cares about Coraline very much and is kind, brave, and helpful.
- The Cat A black cat from Coraline's world. The cat acts as a mentor to Coraline and guides her through her journey.
- The Other Mother An evil witch, who created much of the Other World, and the primary
 antagonist of the novel. She looks similar to Coraline's real mother but taller and thinner
 She cannot create, but only copy, twist and change things from the real objects
- The Other Father A creation of the Other Mother in the image of Mr. Jones, the Other Father is used to help trick Coraline into staying in the Other World
- Miss Spink and Miss Forcible A pair of retired actresses who live in the flat under Coraline's.
- Mr. Bobo A retired circus performer living in the flat above Coraline's; he is commonly
 referred to as the Crazy Old Man Upstairs. mice to train, and doesn't listen to what he says
 to be messages from the mice.
- The three ghost children The spirits of three children who were previous victims of the Other Mother.

Key themes

- The Importance of Overcoming One's Fears.
- Identity
- The Potential of Imagination.
- The Power of Choice.
- Deception and Illusions.
- The Harm of Manipulation
 - The Truth about Family

Suggested activities:

- o Find another fantasy, scary or sci-fi novel to read. How many of the same techniques and ideas does the author use?
- o As you read any fiction, think about what the key words of the extract are: why have they been used and what effect do they have?
- What order do the events get revealed in a book why does the author decide to reveal them like that? What difference would it make if they had revealed information in a different order?

Links to further resources: https://www.neilgaiman.com/

https://www.mousecircus.com/

https://www.readbrightly.com/best-young-adult-fantasy-books/

Subject: English Year: 7

Topic: 'Treasure Island' by Robert Louis Stevenson

I need to know some of the ideas associated with nineteenth century fiction. I need to begin to understand how to analyse a piece of text for the language used and the structures applied to it by the writer. I need to understand how writers entertain, scare and enthral their readers.

Main Characters

Jim Hawkins

The first-person narrator of almost the entire novel. Jim is the son of an innkeeper near Bristol, England, and is probably in his early teens. He is eager and enthusiastic to go to sea and hunt for treasure.

Long John Silver

The cook on the voyage to Treasure Island. Silver is the secret ringleader of the pirate band. His physical and emotional strength is impressive. Silver is deceitful and disloyal.

Dr Livesev

The local doctor. Dr. Livesey is wise and practical. Livesey exhibits common sense and rational thought while on the island, and his idea to send Ben to spook the pirates reveals a deep understanding of humanity.

Key themes

The search for heroic role models; the futility of desire; the lack of adventure in the modern age; the hunger for adventure; the vanity of pursuing wealth; the process of growing up and proving oneself.

Context

Sea faring

With a tradition of seafaring, Britain was well regarded as a maritime nation. It was a time of exploration with ships exploring the east/America etc.

Piracy

The golden age of pirates was 1650-1680 and piracy often occurred in the Caribbean and Pacific Oceans. There were many real life pirates e.g. Blackbeard, a notorious pirate probably born in Bristol and who died in battle. Colonial powers (Britain, France, Spain) were trying to expand their colonies by sailing around the world and trading valuables, encountering pirates frequently.

Key skills we are working on

Writing in clear, controlled, varied sentences. Correct use of punctuation. Correct and controlled use of tense. Dialogue punctuated correctly. Extensive and ambitious vocabulary.

Chapter Summaries

PART I—"THE OLD BUCCANEER" An old sailor "Billy" Bones—lodges at the Admiral Benbow Inn, paying Jim Hawkins, a few pennies to keep a lookout for a one-legged "seafaring man". When Billy dies; Jim finds a sea chest, containing money, a journal, and a map. He and Dr.Livesey decide on an expedition to find buried treasure.

PART II—"THE SEA COOK" Jim and friends travel to Bristol to find a ship (Hispaniola) and crew for the journey. We are introduced to "Long John" Silver and Captain Smollett. During the voyage Jim—concealed in an apple barrel—overhears Silver planning a mutiny.

PART III—"MY SHORE ADVENTURE" They arrive at the island and Jim sneaks ashore. While exploring he overhears Silver plotting and murdering several crewmen. Jim meets Ben Gunn who was marooned on the island by Silver and he agrees to help Jim.

PART IV—"THE STOCKADE" Jim's friends have abandoned ship and come ashore to occupy an old stockade. There is a battle for the stockade with the pirates. Jim finds the stockade and joins them. The next morning, Silver appears under a flag of truce. Jim and friends refuse to hand over the map and Silver threatens attack, another battle begins.

PART V—"MY SEA ADVENTURE" After the battle several of Jim's friends are either killed or wounded. Jim escapes and finds the pirate ship abandoned, which he then takes control of. Once on board he realises a pirate still remains. They reach a truce but in the end the pirate betrays Jim. There is a battle which Jim wins. Jim returns to the stockade to find Silver has taken it over.

PART VI—"CAPTAIN SILVER" Silver and the others argue about whether to kill Jim, Silver finds out that Jim knows the whereabouts of the ship. Silver and the others set out with the map, taking Jim along as hostage. On their way, they are ambushed.

Robert Louis Stevenson was born in 1850 in Edinburgh, Scotland. Treasure Island features a conflict between respectful gentlemen and carefree pirates. In his works, like in Dr. Jekyll and Mr. Hyde, the good and the bad are always bound to each other: the dastardly pirate Long John Silver remarks how similar he is to the novel's upstanding young hero, Jim Hawkins.

Stevenson also travelled to California and eventually moved to Samoa, in the Pacific Ocean, to try to recover from illness. He died here in 1894.

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Topic: Ultimate Questions

I need to know:

- What Ultimate Questions are, and why there are a range of answers to them.
- The different beliefs about the existence of God and reasons why they have those beliefs.
- The different ideas of how the universe and humans came to exist.
- A wide range of views and arguments on the issue of the existence of the soul.

Key Words and Definitions (*Key concepts used in GCSE)



Atheist - Someone who believes that there is no God

Theist – Someone who believes that there is a God

Agnostic – Someone who believes that we cannot know if there is a God.

Fundamentalist Christian – A Christian who believes that the Bible contains the direct words of God and describes actual events that have occurred. For example, they would believe the story of creation in the Bible literally describes how God created the universe.

Liberal Christian – A Christian who believes in God and the moral teachings of Christianity, but believe the Bible contains the words of people about God and therefore should not be taken literally. For example, they would not believe the creation story is literally true but a metaphor to show God's power.

Big Bang theory – A scientific explanation of the first moments of the existence of the universe, describing how a dense, hot point of singularity expanded and formed matter.

Evolution* – The process by which different living creatures are believed to have developed form earlier less complex forms during the history of the earth.

Soul* – The spiritual aspect of a being; that which connects someone to God. The soul is often regarded as non-physical and as living on after physical death, in an afterlife.

Dualism – The idea that there are two parts of a person: the physical body and the spiritual soul. The soul can separate after death.

Materialism – The idea that a person is made up of their physical body only and there is no other separate part to a person.

Ultimate Ouestions:

- An Ultimate Question is a question that does not have an answer, or where people cannot agree what the answer might be.
- The answers groups and individuals may give to answer ultimate questions are influenced by their worldviews.
- A worldview is a wide-ranging idea or image of the universe and of humanity's relation to it.
 Worldviews are like coloured glasses; colouring & influencing everything at which we look.

Origins of the universe

- Many theists, including Christians, believe the universe was created by God.
- Fundamentalist Christians believe the Book of Genesis in the Bible describes how God created the world in seven days.
- Genesis describes how God made light first and humans last. Humans were specially made differently from animals and given a specific role in Creation.

"God said 'Let there be light' and there was light." (Genesis 1:3)

"God said 'Let us make mankind in our image, in our likeness, so that they may rule over ... [all the animals] ..." (Genesis 1:26)

- Liberal Christians believe that this description in Genesis is a metaphor to show that God created the world (but not how) and to show God's omnipotence.
- Liberal Christians believe science explains how the universe began and how humans developed.
- Atheists also believe that the universe began through scientific processes. They would reject beliefs in a creator God.

"Science is the poetry of reality" (Richard Dawkins)

The Soul

- There are many views on the soul, including: -
 - The soul is a part of us, separate to our physical bodies
 - It gives us the ability to be good and moral
 - It is very special
 - It is God-given and connected to God
 - It makes us human
 - o It does not exist
- Fundamentalist Christians believe that God gave Adam his soul

"Then the LORD God formed a man from the dust of the ground and breathed into his nostrils the breath of life, and the man became a living being." (Genesis 2:7)

- People who believe in a soul may use the following evidence to support this:
 - We can reason
 - We can make moral decisions
 - o N.D.E.s
- People who reject the belief in a soul may use the following evidence to support this:
 - No conclusive scientific evidence
 - We have evolved to make moral decisions



"There is no mystic jelly..."
(Richard Dawkins)

Arrow Tasks: You could enhance your learning by visiting one of the suggested websites below. Evaluation question challenges - 'It is reasonable to have a belief in God.' Discuss. 'Science is the only explanation for the origins of the universe'. Discuss. 'There is no such thing as a soul.' Discuss. 'Scientific advances means there are no longer ultimate questions.' Discuss.

Subject: French

Year: 7 Autumn Term 1

Topic: Accès français!

I need to be able to: recognise and use a range of verbs, nouns and adjectives. I need to be able to describe myself and aspects of daily life.

Key Words	Definitions	
Verb	Words which tell you the action	
Subject pronouns	Words that tell you who is doing the action.	
Noun	A place, person or a thing.	
Gender	In French, nouns and adjectives can be either masculine or feminine.	
Adjective	Words which describe nouns. In French adjectives are the same gender as the noun which they describe.	
Definite article	'the'	
Indefinite article	'a' 'some'	
Singular	One of something	
Plural	More than one of something	
Positive phrase	'is', 'do' 'does	
Negative phrase	'is not',' does not', 'don't', 'never'	
Possessive adjectives	My, your, his, her (+ noun) (in French, there are 3 forms; masculine, feminine and plural)	

Avoir = to have

J'ai = I have

Tu as = You have

Il a = He has

Elle a = She has

On a = we have

Nous avons = We have

Vous avez = You have (pl)

Ils ont = they have (m)

Elles ont = they have (f)

Être = to be

Je suis = I am

Tu es = You are

Il est = He is

Elle est= she is

On est = we are

Nous sommes = We are

Vous êtes = You are (pl)

Ils sont = they are (m)

Elles sont = They are (f)

There will be more specific vocabulary.

This will be given to you by your class teacher.

<u>PHONICS</u>: You will learn how to pronounce letters and combinations of letters in class. Follow this link to hear vowel sounds and the sounds of common combination of letters in French. Listen and repeat the sounds to improve your spoken French.

Create a sentence in French using a range of 'French sounds'. Share it with your teacher for an Oracy merit!

https://www.youtube.com/results?search_query=%23frenchlessons

Arrow Tasks: Click on to this link. Read the information sections and have a go at the self-test sections. Show the results to your teacher for a merit!

https://www.bbc.co.uk/bitesize/topics/zjx947h/articles/z7ftwty

	français	anglais
1	Bonjour! Salut!	Hello! Hi!
2	Comment t'appelles-tu?	What is your name? / What are you called?
3	Je m'appelle Jules, ça s'écrit J_U_L_E_S.	I am called Jules, that is spelt 'J_U_L_E_S'
4	Ça va, toi?	How are you?
5	Moi, ça va très bien merci!	Me, I am good thank you.
6	Mon anniversaire, c'est le vingt août, et toi?	My birthday is the 20 th of August, and yours?
7	Quel âge as-tu? Moi, J'ai treize ans.	How old are you? I am 13 years old.
8	J'ai un frère. L'anniversaire de mon frère, c'est le premier janvier.	I have a/one brother. His birthday is the 1 st of January.
9	Mon frère est très sympa et super cool!	My brother is nice and super cool!
10	Mes parents sont gentils, ma mère est généreuse et mon père est compréhensif.	My parents are kind, my mum is generous and my dad is understanding.
11	Moi, je suis assez créatif et toujours actif, je ne suis pas timide, je suis vraiment sociable. Et toi?	Me, I am quite creative and always active, I am not shy, I am really sociable. What about you?
12	Ma meilleure amie, Sophie, je la connais depuis 4 ans, elles généreuse et marrante.	I have known my best friend Sophie, for 4 years, she is generous and funny
13	Mon meilleur s'appelle Simon, il dit que je suis branché et assez gentil, je le connais depuis 2 ans.	My best friend is called Simon, he says that I am trendy and kind, I have known him for 2 years.
14	Pour moi, un bon ami, c'est quelqu'un de sincère et fidèle	For me, a good friend is someone who is sincere and loyal
15	J'ai les cheveux longs, raides et blonds, et toi?	I have long, straight, blonde hair, and you?
16	J'ai les yeux verts, mon copain a les yeux marron, il est grand	I have green eyes, my friend has brown eyes, he is tall.

17	Simon aima la football mai augai ilaima la foot	Simon likes football me too T like football
	Simon aime le football, moi aussi j'aime le foot	Simon likes football, me too, I like football.
18	J'aime jouer au foot avec Simon car il est	I like to play football with Simon because he is sporty
	sportif et amusant!	and fun!
19	Aimes-tu la musique? Moi, J'aime le punk-	Do you like music? I like punk rock, it is great.
	rock, c'est génial	gramme gramm
20	Mon frère aîné s'appelle Fréd, il a beaucoup de	My older brother is called Fréd, he is very talented,
	talent, il aime jouer de la guitare et de la	he plays the guitar and the drums.
	batterie	The proof of the same of the
21	Ma soeur est impatiente cependant elle est	My sister is impatient however she is very clever.
	très intelligente, elle a les cheveux roux et	She has ginger hair and she is called Scarlett.
		one has ginger han and she is carred ocarrer.
	elle s'appelle Scarlett.	
22	Mes parents sont sortifs, ma mère aime le	My parents are sporty, my mum likes tennis and my
	tennis et mon père aime l'escalade, être actif	dad likes climbing to be (being) active is important for
	c'est important pour moi, qu'en penses-tu?	me, what do you think?
23	J'aime sortir avec mes copains parce que c'est	I like to go out with my friends because it is fun.
	amusant.	2 12 ge 24, ;
24		
24	Au revoir!	Goodbye!
25	À bientôt!	See you soon!

Subject: Geography Year: 7 Autumn 1

Topic: Global Issues

I need to know: In this topic, you will explore different issues that are impacting our planet today. From natural hazards, health, and inequality to a rapidly growing global population, you will investigate what these issues are, who is most affected and come up with your own solutions. This introduction topic will get you thinking like a Geographer!

Key Words	Definitions	
Global	in or having to do with the whole earth.	
Global Issue	a global issue is any issue that negatively affects the global	
	community and environment.	
Population	the whole number of people living in a country, city, or area.	
Impact	something has on a situation, process, or person is a sudden and	
	powerful effect that it has on them.	
Environmental	An effect on the environment (nature).	
Impact		
Social Impact	An effect on humans (people).	
Economic Impact	An effect on money and jobs (wealth).	
Standard of living	How well a person or a population lives. For example, are they	
educated? Do they have a safe/ secure home? Do they have		
	to healthy food and water?	
Global Citizen	A global citizen is someone who is aware of and understands the	
	wider world – and their place in it. They take an active role in their	
	community and work with others to make our planet more	
	peaceful, sustainable and fairer.	
Your teacher will give you any more key words that you learn about		



Arrow Tasks:

These tasks will be asked of you in lesson to help extend and further your understanding. Can you have a go at any now?

- If we know deforestation is damaging the planet and wildlife, why do humans continue to chop the rainforest down?
- Why do you think that there is inequality in the way people live across the world?
- How does health affect people's standard of living?
- What is the biggest global issue facing us today? Use evidence and examples to answer this question.

Homework Tasks: These are some examples of homework tasks you might get for this topic to help develop your geographical skills. Your teacher will explain the tasks in more detail, especially if they give you one not listed here.

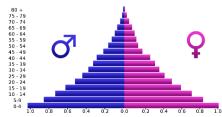
 Research another natural disaster, pick one that you are really interested in. Find out where, when, what, why and who (was most affected). Subject: Geography

Topic: Global Issues

What are global issues?

Geography covers a huge variety of topics. Quite often, these are the issues and events that are 'in the news'. In this introductory unit into Geography at Liskeard school, we will investigate some of the biggest issues facing the Earth today using examples from current news. Below are images of some of the issues you may study...

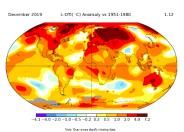












Investigating Global Issues:

Year: 7 Autumn 1

Why are we looking at global issues?

- You are part of what we call the 'global community', so it is important that you understand some of the problems that faces the world, as you are part of it!
- You will be able to link knowledge from your Geography lessons to what is going on around the world today. This means you will closely watch the news!
- You will develop empathy and understanding for different experiences and circumstances.
- You will form your own opinions based on information.
- You will develop as a global citizen.

Links to Further Resources

World Geography Games

This website may be useful for some of your skills homework tasks - https://world-geography-games.com/

Newsround

This will be helpful to stay up to date with the latest global issue

https://www.bbc.co.uk/newsround

Science Daily

For more geoscience topics, for example 'climate change'.

National Geographic

Attached are some activities and games that you may want to try for fun!

https://www.nationalgeographic.org/idea/fungeography/

Subject: History Year: 7 Autumn Term 1

Topic: Contenders for the throne in 1066

I need to know: In 1066, following the death of Edward the Confessor in January, it was not clear who should become the next king. This led to conflict between the three main contenders: Harold Godwinson, Harald Hardrada and William Duke of Normandy. William defeats Harold at the Battle of Hastings in October 1066. By Christmas Day 1066 William had been crowned the King of England.

Key Words	Definitions	
Heir	Next person in line	
Claimant	Someone who believes something should be theirs	
Witan	Group of important people who appointed the king	
Battle of Stamford Bridge	Location in the North of England where Harold and Harald fought	
Battle of Hastings	Location of the battle between Harold and William	
Shield Wall	A long defensive line that is difficult to break through	
Foot soldier	Member of the army who fights on foot	
Archers	Member of the army who uses a bow and arrow	
Cavalry	Members of the army who fight on horseback	
Housecarls	Harold's professional soldiers	
Fyrd	Harold's part time soldiers	

Arrow Tasks: What was the most important reason for Harold winning the Battle of Stamford Bridge?

Is there any way that Harold could have won the Battle of Hastings?

Contender for the throne	Information	
Harold Godwinson	 English. Edwards brother-in-law Popular Powerful and experienced His family had been Edward's advisors Good soldier Claimed Edward had promised him the throne just before he died 	
Harald Hardrada	 King of Norway - Norway used to rule England Related to one of England's previous kings Quite popular with people in the north of England Good soldier Powerful and experienced 	
William of Normandy	 From Normandy, France England had close ties with Normandy and Edward had lived there Powerful and experienced Good soldier Had helped Edward out of trouble. Edward promised him the throne 	



A scene from the Bayeux Tapestry. What can you learn about the Battle of Hastings?

Links to further resources: https://www.bbc.com/bitesize/guides/zsjnb9q/revision/1

Subject: Computing Year: 7 – Autumn Term 1

Topic: Impact of technology- Collaborating online respectfully

I need to know: In this unit you will need to develop your understanding of the school network, create memorable and secure passwords, remember the rules of the computing lab, construct effective emails, describe and explain the effects of cyberbullying and present to an audience.

Key Words	Definitions	
Online	While connected to a computer or under a computer control.	
Communication The imparting or exchanging of information speaking, writing or using some other med		
Password	sword A secret word or phrase that might be used to gair admission to a place.	
Privacy settings The part of the social networking website, interest browser, piece of software etc that allows you control who sees information about you.		
Cyberbullying	Like traditional bullying but takes place online. Can include discrimination and hate crimes.	
Audience	The assembled spectators or listeners at a public event e.g. play	



Tops tips for a good presentation in the class

- Keep your presentation simple.
- Prepare and practice.
- Start strong and tell stories.
- Show enthusiasm.
- Find a mentor or mimic other inspirational figures.
- Leverage body language, facial expressions and eye contact.

Which of these is the strongest password?

- Secure1
- 2MyStudioCardboard9
- Password1234
- P@ssword123
- Enter

Why?

Email construction			
Subject	Subject Gives a short overview of what the email contains.		
It is polite to	 Use a salutation e.g. 'Dear Mrs Smith'. End an email formally e.g. 'Thanks you' or 'kindest regards'. Avoid sarcasm 		

Disrespectful way to compose an email	Respectful way to compose an email
Message	Message
From: Becky	From: Mr Hopper
Subject: Hi Miss!	Subject: Homework for Monday 8th
Can we not have any homework this week because I didn't like the last one that you sent out and I really wanted to play online instead. Soz. Lol.	Dear Class, This is a reminder that your homework project on volcanoes is due on Monday 8th. Please email me if you have any questions about the activity. Many thanks, Mr Hopper

Arrow Tasks: Practice sending emails to people, maybe your parents/ carers and learn how to attach a file e.g. a photo. Check that your have changed your privacy settings at home on all social media.

Subject: Mathematic

What do I need to be able to do?

By the end of this unit you should be able to:

- Describe and continue both linear and non-linear sequences
- Explain term to term rules for linear sequence
- Find missing terms in a linear sequence

QUESTIONS FOR PRACTISE – CLICK HERE

Keywords

Sequence: items or numbers put in a pre-decided order

Term: a single number or variable **Position:** the place something is located

Rule: instructions that relate two variables

Linear: the difference between terms increases or decreases by the same value each time

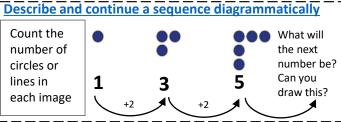
Non-linear: the difference between terms increases or decreases in different amounts

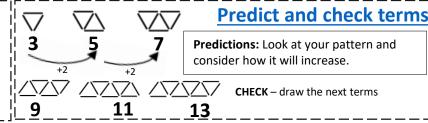
Difference: the gap between two terms

Arithmetic: a sequence where the difference between the terms is constant

Geometric: a sequence where each term is found by multiplying the previous one by a fixed non zero number

Year: 7 Autumn 1

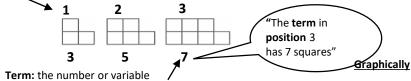




Topic: Algebraic Thinking - Sequences

Sequence in a table and graphically

Position: the place in the sequence



(the number of squares in each image)

In a table

Position 3 5 Term

Because the terms increase by the same addition each time this is linear – as seen in the graph

Linear and Non Linear Sequences

Linear Sequences – increase by addition or subtraction and the same amount each time

Non-linear Sequences – do not increase by a constant amount – quadratic, geometric and Fibonacci.

- Do not plot as straight lines when modelled graphically
- The differences between terms can be found by addition, subtraction, multiplication or division.

Fibonacci Sequence – look out for this type of sequence

Each term is the sum of the previous two terms.

Continue Linear Sequences

7, 11, 15, 19...

How do I know this is a linear sequence? It increases by adding 4 to each term.

How many terms do I need to make this conclusion?

At least 4 terms – two terms only shows one difference not if this difference is constant. (a common difference).

How do I continue the sequence?

You continue to repeat the same difference through the next positions in the sequence.

Continue non-linear Sequences

1. 2. 4. 8. 16 ...



It increases by multiplying the previous term by 2. – this is a geometric sequence because the constant is multiply by 2

How many terms do I need to make this conclusion?

At least 4 terms – two terms only shows one difference not if this difference is constant. (a common difference).

How do I continue the sequence?

Position

You continue to repeat the same difference through the next positions in the sequence.

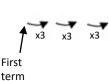
Explain term-to-term rule How you get from term to term

Try to explain this in full sentences not just with mathematical notation.

Use key maths language - doubles, halves, multiply by two, add four to the previous term etc.

found by tripling the previous term. The sequence begins at 4.

The next term is



To explain a whole sequence you need to include a term to begin at...

Subject: Mathematic

Year: 7 Autumn 1

Topic: Algebraic Notation

By the end of this unit you should be able to:

- Be able to use inverse operations and "operation families".
- Be able to substitute into single and two step function machines.
- Find functions from expressions.
- Form sequences from expressions
- Represent functions graphically.

QUESTIONS FOR PRACTISE – CLICK HERE

What do I need to be able to do? | Single function machines

__ operation_

This box gives the calculation instruction INPUT ---OUTPUT II The number that The number that goes IN comes out To find the input from the output Use the INVERSE

Using v + y + y + y20 ÷ h letters to 3 x 5 v x 4 20 represent 5 x 3 4 x y Addition and numbers multiplication can be done in any order 20 shared into 'h' number of Commutative 4 lots of 'v' groups calculations

OUTPUT Single 10a function machines (algebra) To find the input from the output Use the **INVERSE** operation

Find functions from expressions

OUTPUT INPUT

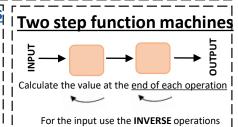
Find the relationship between the input and the output

Sometimes there can be a number of possible functions. e.g. +7x or x 2 could both be solutions to the above function machine

Substitution into expressions

If y = 7 this means the expression is asking for 4 'lots of' 7

4x7 OR 7+7+7+7 OR 7x4 e.g.: y - 2=7-2=5



Keywords

Function: a relationship that instructs how to get from an input to an output.

Input: the number/ symbol put into a function.

Output: the number/ expression that comes out of a function.

Operation: a mathematical process **Inverse:** the operation that undoes what was done by the previous operation. (The opposite operation) Commutative: the order of the operations do not matter.

Substitute: replace one variable with a number or new variable.

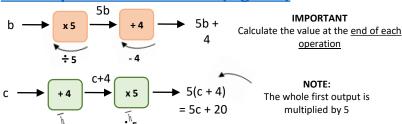
Expression: a maths sentence with a minimum of two numbers and at least one math operation (no equals sign)

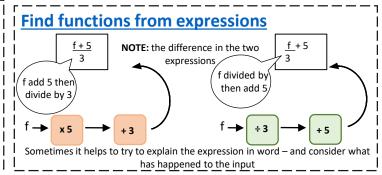
Evaluate: work out

Linear: the difference between terms increases or decreases by the same value each time

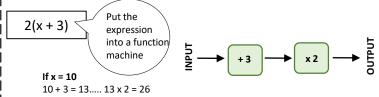
Sequence: items or numbers put in a pre-decided order

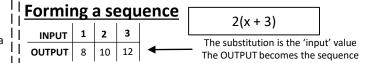
Two step function machines (algebra)



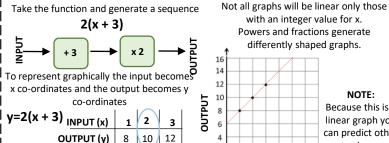






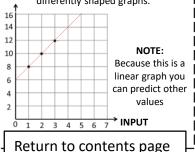


IRepresenting functions graphically



= 28

This becomes a co-ordinate pair (2, 10) to plot on a graph



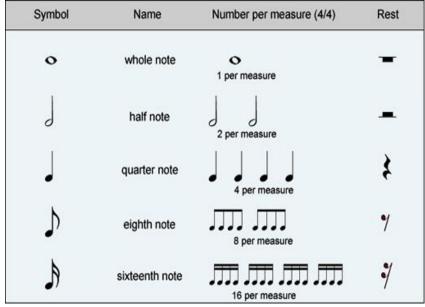
Subject: Music Year: 7

Topic: The Elements of Music

I need to be able to: Explain and demonstrate how the elements of music are used effectively within a piece of music.

Key Words	Definitions
Texture	Thickness of sound
Timbre	Tone colour of instruments
Tempo	Speed of the music
Structure	Sections within the music
Dynamics	Contrasts of Loud and quiet
Duration	Length of musical notes
Pitch	High and low
Silence	Describes the space between sounds.







Arrow Tasks: Research and explore which elements of music are used to create rhythms and harmony.

Links to further resources: https://www.educationguizzes.com/ks3/music/fundamental-elements-of-music-01/

Subject: Physical Education

Concept: Personal Development Unit1: The Value of PE

Year: 7

Key Word	Definition	Key Word	Definition
Health	A state of complete physical, mental and social well-being.	Physical Activity	A broad term referring to all bodily movement that uses energy. It includes all forms of physical education, sports and dance activities.
Attitude.	How someone thinks or feels towards someone or something.	Cognitive skills	Mental abilities , including learning, thinking, reasoning, remembering, problem solving, decision making, and attention'.
Effort	A vigorous or determined attempt.	Mood	A temporary state of mind or feeling'
Work Ethic	A set of values centred on the importance of work and the determination to work hard.	Endorphins	A chemical that acts in our brains, reducing pain and boosting pleasure, resulting in a feeling of wellbeing. Endorphins are released during activities, like exercise.
Leadership	Leading a group of people or an organisation, such as a team.	Sport	Structured activity involving physical exertion and skill in which an individual or team competes against another (after school clubs/fixtures/community clubs)
Physical Literacy	The motivation, confidence, physical competence, knowledge and understanding that provides the foundation for lifelong participation in physical activity.	Physical Education	Planned, progressive learning about the body and movement that takes place in school time and which is delivered to all pupils.
Physical Competence	An individual's ability to develop movement skills and patterns, and the capacity to experience a variety of movement intensities and durations.	Health Related Fitness	Relates to our overall health and ability to carry out everyday tasks. It includes the following areas of fitness; Flexibility, Balance, Strength, Body Composition, Cardiovascular Endurance, Muscular Endurance, Speed.
Motivation	Reasons for acting or behaving in a particular way.	Flexibility	The range of motion in a joint or group of joints allowing you to stretch and reach for things
Confidence	The feeling or belief that one can have faith in or rely on someone or something.	Balance	An even distribution of weight enabling someone to remain upright and steady.
Fitness	The ability to carry out Everyday tasks with ease and without fatigue	Strength	The ability to do things that demand physical effort
Tactics	An action or strategy carefully planned to achieve a specific end.	Body Composition	The percentage of fat, bone, and muscle in your body
Skill	The ability to do something well. Skills can be taught and learnt.	Cardiovascular endurance	How well you can do exercises that involve your whole body at moderate to high intensity for an extended time.
Ability	Possession of the means or skill to do something or talent in a particular area.	Muscular endurance	The ability of a given muscle to exert force, consistently and repetitively, over a period of time
Technique	A way of carrying out a particular task.	Speed	
Competitiveness	A strong desire to be more successful than others.		



LSCC PE CLUBS Autumn Term

3.15pm – 4.15pm meet outside the changing rooms

Monday – Football Club

Tuesday - Hockey Club + Fitness Club

Wednesday - Netball Club + Fitness Club

Thursday – Rugby Club

Open to all students, all years.

Arrow Tasks:

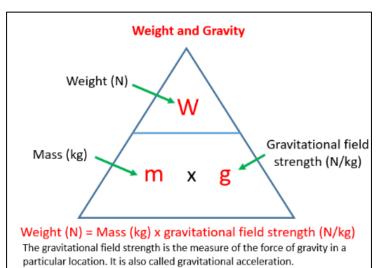
Have a go Hero – try something new this term and join a PE club.

Active for life – can you complete 20 minutes of Physical Activity every day?

Topic: Gravity

I need to be able to: Explain the way in which an astronaut's weight varies on a journey to the moon

Key Words	Definitions
Weight	The force of gravity on an object (N).
Non-Contact Force	One that acts without direct contact.
Mass	The amount of stuff in an object (kg).
Gravitational Field	The force from gravity on 1 kg
Strength, g	(N/kg).
Field	The area where other objects feel a
	gravitational force.



Arrow Tasks: Research and describe the implications of how gravity varies for a space mission



My WEIGHT on Earth is around 560N



My WEIGHT on the moon is around 90N



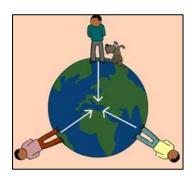
My MASS is always 56kg!!

Why does it matter?

Find out how GRAVITY makes a roller coaster work

https://www.bbc.com/bitesize/articles/zm4cqp3

https://science.howstuffworks.com/ engineering/structural/rollercoaster3.htm



The force of gravity

Gravity is a force that attracts objects towards each other.
Gravity only becomes noticeable when there is a really massive object like a moon, planet or star. We are pulled down towards the ground because of gravity. The gravitational force pulls in the direction towards the centre of any object. So we are pulled towards the centre of the Earth.

Gravity is one of the most important forces in the universe. An object with mass in a gravitational field experiences a force known as weight.

All objects with <u>mass</u> produce a gravitational field. The more mass an object has, the greater its gravitational field will be.

Planet size and gravitational field strength

Weight is the force acting on an object due to gravity - it has the unit newtons (N) and acts towards the centre of a gravitational field. The weight of an object can be measured using a calibrated spring-balance, often called a Newton meter.

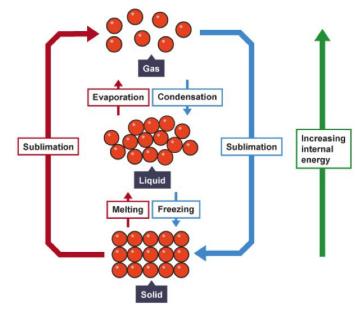
Weight is a **non-contact force** because gravity exerts its force through a field. An object does not need to be touching the Earth to have a weight.

Links to further resources: https://www.bbc.com/bitesize/guides/z8wx6sg/revision/3 https://www.gcse.com/space.htm

Topic: Particle Model (Solids, Liquids and Gases)

I need to be able to: Relate the features of the particle model to the properties of material in different states

Key Words	Definitions
Particle	A very tiny object such as an atom or molecule, too small to be seen with a microscope
Particle Model	A way to think about how substances behave in terms of small, moving particles.
Diffusion	The process by which particles in liquids or gases spread out through random movement from a region where there are many particles to one where there are fewer
Gas Pressure	Caused by collisions of particles with the walls of a container
Density	How much matter there is in a particular volume, or how close the particles are
Evaporate	Change from liquid to gas at the surface of a liquid, at any temperature
Boil	Change from liquid to a gas of all the liquid when the temperature reaches boiling point.
Condense	Change of state from gas to liquid when the temperature drops to the boiling point.
Melt	Change from solid to liquid when the temperature rises to the melting point.
Freeze	Change from liquid to a solid when the temperature drops to the melting point.
Sublime	Change from a solid directly into a gas.



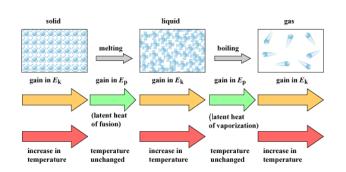
Why does it matter?

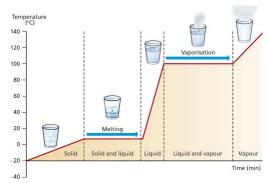
Find out why SCUBA divers need to have a good understanding of particles to keep safe when diving.

https://www.liveabout.com/depth-and-pressure-scuba-diving-2963200

https://www.sciencenewsforstudents.org/article/pressure-scuba-diving







Arrow Tasks: Research and describe the properties of plasma

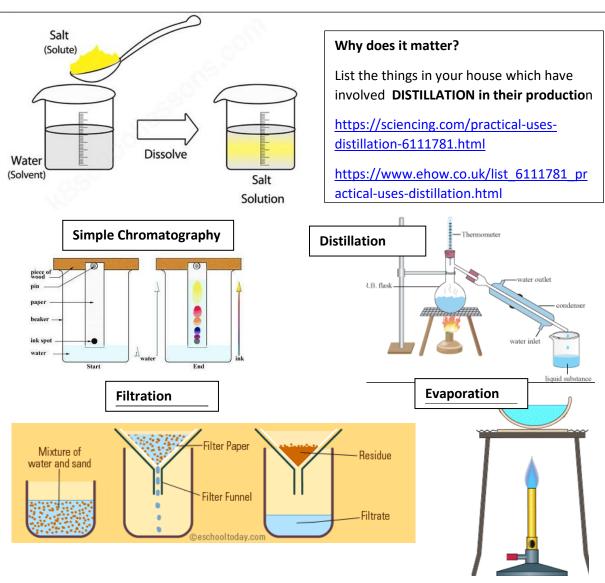
Explain changes of state in terms of intermolecular forces

Topic: Separating Mixtures

I need to be able to: Devise ways of separating mixtures, based on their properties (use techniques to separate mixtures)

Key Words	Definitions
,	
Solvent	A substance, normally a liquid, that dissolves
	another substance.
Solute	A substance that can dissolve in a liquid
Dissolve	When a solute mixes completely with a solvent.
Solution	Mixture formed when a solvent dissolves a solute.
Soluble	Property of a substance that will (will not) dissolve
(insoluble)	in a liquid.
Solubility	Maximum mass of solute that dissolves in a certain volume of solvent.
Pure Substance	Single type of material with nothing mixed in.
Mixture	Two or more pure substances mixed together,
	whose properties are different to the individual substances.
Filtration	Separating substances using a filter to produce a filtrate (solution) and residue.
Distillation	Separating substances by boiling and condensing liquids
Evaporation	A way to separate a solid dissolved in a liquid by the liquid turning into a gas.
Chromatography	Used to separate different coloured substances

Arrow Tasks: Research and describe factors which affect solubility. Design an experiment to investigate how these factors affect solubility

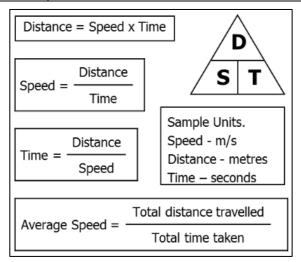


Links to further resources: https://www.bbc.com/bitesize/guides/zgvc4wx/revision/1
http://www.eschooltoday.com/science/elements-mixtures-compounds/separation-of-mixtures.html

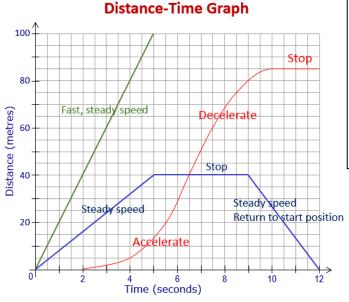
Topic: Speed

I need to be able to: Investigate variables which affect the speed of a toy car rolling down a slope

Key Words	Definitions
Speed	How much distance is covered in how much time
Average Speed	The overall distance travelled divided by overall time for a journey.
Relative Motion	Different observers judge speeds differently if they are in motion too, so an object's speed is relative to the observer's speed.
Acceleration	How quickly speed increases or decreases



Arrow Tasks: Draw a tangent on a distance time graph to calculate the speed of an accelerating object at any given point



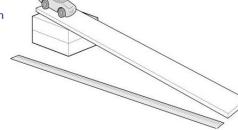
Time (seconds) The green line shows a fast, steady speed, moving from 0 to 100 m in 5 seconds. The blue line shows a journey with a stop and a return to the starting position.

The **red line** shows a journey starting 2 seconds later than the other two, with an initial acceleration, then a deceleration and then a stop.

Why does it matter?

How can a speed camera work out how fast your car is travelling?

https://www.theguardian.com/science/2004/jan/15/thisweekssciencequestions1



Relative motion

If you have travelled in a car on the motorway, you may have noticed that other cars passing by appear to move slowly past you, even though you know the actual speeds of the two cars are very high. This is because of their relative motion to each other.

The table summarises the different situations and how you can calculate the relative speed of two objects:

Situation	Relative speed
Objects moving in the same direction towards, or away from, each other	Fastest speed – slowest speed
Objects moving in opposite directions towards, or away from, each other	Add the two speeds together



Links to further resources: https://www.khanacademy.org/science/physics
https://educ8all.com/courses/ks3-science-course/sections/section-1-forces/

Subject: Spanish Year: 7 Autumn Term 1

Topic: Mi Mundo

I need to be able to: recognise and use a range of verbs, nouns and adjectives. I need to be able to describe myself and aspects of family life

Key Words	Definitions
Verb	Words which tell you the action
Subject pronouns	Words that tell you who is doing the action.
Noun	A place, person or a thing.
Gender	In Spanish, nouns and adjectives can be either masculine or feminine.
Adjective	Words which describe nouns. In Spanish adjectives are the same gender as the noun which they describe.
Definite article	'the'
Indefinite article	'a' 'some'
Singular (s)	One
Plural (pl)	More than one
Positive phrase	ʻis', ʻdo' ʻdoes
Negative phrase	'is not',' does not', 'don't', 'never'
Possessive adjectives	My (in Spanish, there are 2 forms; singular and plural)

Tener = to have

Tengo = I have

Tienes = You have (s, friendly)

Tiene= He has

Tiene = She has

Tiene usted = you have (s, polite)

Tenemos = We have

Tenéis = You have (friendly, pl)

Tienen = they have (m)

Tienen = they have (f)

Tienen ustedes = You have (pl, polite)

Ser = to be

Soy= I am

Eres = You are (s, friendly)

Es = He is

Es= she is

Es usted= you are (s, polite)

Somos= We are

Sois= You are (pl)

Son= they are (m)

Son= They are (f)

Son ustedes = You are (pl, polite)

There will be more specific vocabulary.

This will be given to you by your class teacher.

Arrow Tasks: Research and present an account of daily life in Spain; find out about Surnames in Spain (Family names)

	Español	inglés
1	iBuenos días! iHola!	Hello!
2	¿Cómo te llamas?	What is your name? / What are you called?
3	Me llamo Enrico, se escribe E-N-R-I-C-O	I am called Enrico, that is spelt 'E-N-R-I-C-O
4	¿Qué tal?	How are you?
5	Muy bien gracias ¿Y tu?	I am very good thank you. And you?
6	Fenomenal ¿Cuándo es tu cumpleaños?	Great! When is your birthday?
7	Mi cumpleaños es el veinte de agosto.	My birthday is the 20 th of August, and yours?
8	¿Cuántos años tienes? Tengo trece años.	How old are you? I am 13 years old.
9	Mi familia es bastante pequeño, ¿tienes hermanos?	My family is quite small. Do you have brothers or sisters?
10	Sí, tengo un hermano. Su cumpleaños es el primer de	I have a/one brother. His birthday is the 1st of January. He is very
	enero. Es muy simpático, me llevo bien con él.	nice, I get on very well with him.
11	No tengo hermanas. Me gustaría tener hermanas.	I don't have sisters. I would like to have sisters
12	¿Qué tipo de persona eres?	What sort of person are you?
13	Soy bastante tranquilo y también un poco serio pero no soy tímido. ¿Cómo eres?	I am quite quiet and also a little serious but I am not shy. What are you like
14	Mis padres son generosos, mi padre es divertido	My parents are generous, my dad is funny
15	Me gusta el tenis, soy muy deportista	I like tennis, I am very sporty
16	Mi hermano es un poco tímido pero es sincero.	My brother is a little shy but he is sincere
17	Me gusta salir con mi hermano porque es guay.	I like to go out with my nrother because he is cool.
18	Mi madre es tranquila, me llevo bien con ella.	My mum is calm, I get on well with her.
19	Mi pasión es el deporte y mi héroe es Geraint Thomas,	My passion is sport and my hero is Geraint Thomas, but I don't have
	pero no tengo bici.	a bike.
20	iHasta luego!	See you later!

El alfabeto (y la pronuciación)

A	B	C	D	W)	F	G	H	I	J
aah	beh	theh	deh	eh	efeh	heh	acheh	ee	hota
							_		
K	L	LL	M	N	Ñ	0	P	Q	R
kah	eleh	eyeh	emeh	eneh	enyeh	oh	peh	koo	ereh
RR	5	T	U	V	W	×	У	Z	
erreh	eseh	teh	00	oobeh	Oobeh dobleh	ekis	Ee gri-egga	theta	

Year: 7



I need to be able to: understand and apply key cooking skills to produce good quality recipes. To ensure all food is made safely by applying hygiene, health and safety procedures and improve product outcomes by using evaluation techniques and targets.

Key word	Definition
Quality control	The description to achieve to know when a skill has been performed correctly.
Weighing	To measure the weight using scales of an ingredients to ensure the recipe ratio is correct.
Sensory	To te.st the aesthetics (appearance, texture, aroma, flavour if a product
Risk	To identify all the hazards in a method to ensure measures are taken to reduce the risk.
Hygiene	Steps to take to reduce the risk of pathogenic bacteria multiply or contaminating a product.
Pathogenic bacteria	Bacteria that can grow and contaminate food causing food poisoning.
Nutritional function	The 5 nutrients (protein, carbohydrate, fat, vitamins, minerals) their function in the body and best foods

Arrow Tasks—Explain how you could change the recipe to make it healthier - reduce fat, sugar, fat. Increase the fibre, include 5 portions of fruits and vegetable.



Rubbing in—Using your finger tips and thumbs to rub the fat and the flour together.

Quality control – breadcrumb texture



Kneading— Using your hands to stretch the dough to develop long stretchy elastic strands of gluten in bread dough. Quality control—gluten window





Creaming - To combine the butter and sugar together . It incorporates air to make cakes rise. Quality control – pale fluffy light texture.





Cutting—To use a sharp piece of equipment such as a knife, grater, cutter to make a product smaller or a specific shape. Quality control – brunoises, julienne, paysanne, macedoine, jardinière



Subject: Design Technology: Product Design

Topic: Ball Hurler

I need to be able to:

- understand the design process and the working properties of plywood and softwood.
- gain practical skills in using the hand tools, machines and equipment needed to work with wood.
- learn about basic wood joints, triangulation and potential energy.
- be aware of health and safety in the workshop and understand the importance of risk assessment.

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Stages of the Design Process:

Context Design Brief Task Analysis Research
Investigation Specification Design & Development
Making Testing Evaluation

Key Words

* Design process



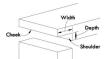
* Prototype



* Butt joint



* Rabbet joint



* Housing joint



*Dowel

Definitions

The steps a designer/maker goes through from identifying a problem and need for a product to its final making, testing and evaluating and improving.

A first version, / test model to trial a product before making a final version which could be made in larger quantities.

The simplest joint to make - in which two pieces of material are joined by simply placing them together without overlapping or interlocking.

A joint formed by fitting two pieces of material together where one or both pieces have a cut recess / groove to increase the strength of the joint.

Similar to the Rabbet, but where one or both pieces of material have a slot cut in, across the Grain ,to a width normally equal to the thickness of the shelf or partition it is to hold.

A cylindrical rod of material, used to connect two pieces of material or to strengthen a joint.

Materials, tools and equipment used in the ball hurler project



Pillar drill / drill press



Linisher (belt sander)



Softwood

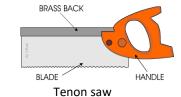
Year: 7

Softwoods come from **coniferous** trees which are evergreen, needle-leaved, cone-bearing trees.



Plywood

Plywood is a strong wooden board consisting of two or more layers of hardwood or softwood laminated (pressed together and glued) with the direction of the grain alternating to give strength.



The deep straight blade makes the tenon saw ideal for cutting wood joints



Chisel and mallet

Used for making the housing joint

Arrow Task:

What is triangulation and why is it useful when making a ball hurler?

What is potential energy and how is it used in the ball hurler?

Link to further resources:

http://www.technologystudent.com http://www.mr-dt.com/ http://wiki.dtonline.org/index.php/Main_Page

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Topic: Cushion Cover

I need to be able to:

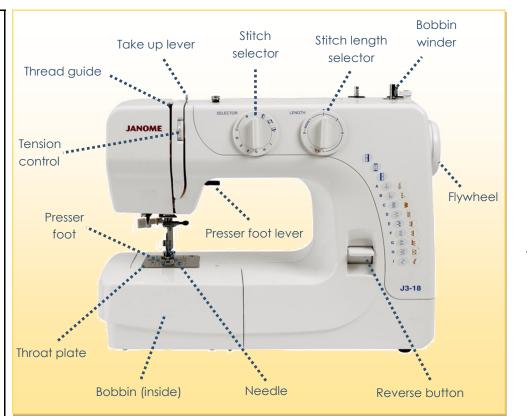
- understand the key parts of a swing machine and the threading path.
- apply hand and machine sewing techniques.
- understand the function of seams & hems and be able to apply to your product.
- gain an awareness of the work of famous artists and be able to consider the need for aesthetics within a textile product.
- be aware of health and safety when using textile materials and equipment.

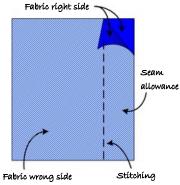


What is a hem?

A finishing method where the edge of a piece of fabric is folded narrowly and sewn to prevent unravelling or fraying.

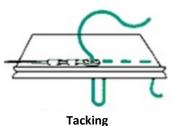
Key Words	Definitions
* Thread	A large number of very thin fibres spun together and usually wound on spools, used in sewing.
* Sewing Machine	A machine used to sew fabric and other materials together with thread.
* Tacking	A temporary stich used to told fabric together.
* Pins	Designed to hold fabric in place, prior to sewing.
* Needle	A very thin piece of polished metal used for sewing. It has a sharp point at one end and a hole (eye) in the other for thread to go through.
* Surface Design	A technique that changes the surface of fabric. This would include: painting, dyeing, printing/stamping, stencilling.
* Poly-cotton	A fabric that is made up of cotton and polyester fibres.





What is a seam?

A line of stitching that joins two or more layers of fabric.



Arrow Task: Can you think of alternative methods you could use to join your pieces of fabric together, when constructing the cushion cover? What would be their strengths and do those methods have limitations?

Link to further resources: www.instructables.com/lesson/Hemming-and-Seam-Finishing/

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A Guide to Revision

We hope you find these pages about revision useful. You will need to use these skills throughout your time at school, from Year 7 all the way through to Year 13. Developing these skills early means they will become second nature and revision will become easy!

We want you to achieve the best possible results throughout your time at school and achieve results that will not only increase your life chances but also take you to the next step on your chosen career pathway. Speak to any one of your teachers for more advice on revision.

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(STOP

Points to remember

- Revision is re-looking at information you have learnt previously.
- The idea is that you know the information that will be tested and can remember it for the exam.
- Your attitude is important.
- You only fail if you give up.
- If you fail to plan, you plan to fail.

Believe in yourself, be positive.

If you think you can succeed you will.

Attendance

- Every lesson counts and your attendance is vital.
- Try you best in all lessons and make them work for you.
- It is what you are getting out of it that matters.
- This is YOUR result, so make it count.
- You will get out of it what you put in

(B)

- so do your best.



These are to help you organise your revision and keep everything in one place.

Top Tip: Revision materials are available from the school shop in the library.

You can also buy these items very cheaply from a local pound shop!

Revision Strategies



- Plan your time create a revision timetable
- Break revision into chunks
- Find a quiet space to revise



- Revise in 20 minute blocks
 - This is the optimum concentration time
 - Have a short break between blocks



- Avoid distractions!
 - Turn off your phone
 - Turn off the TV



Brain Dump

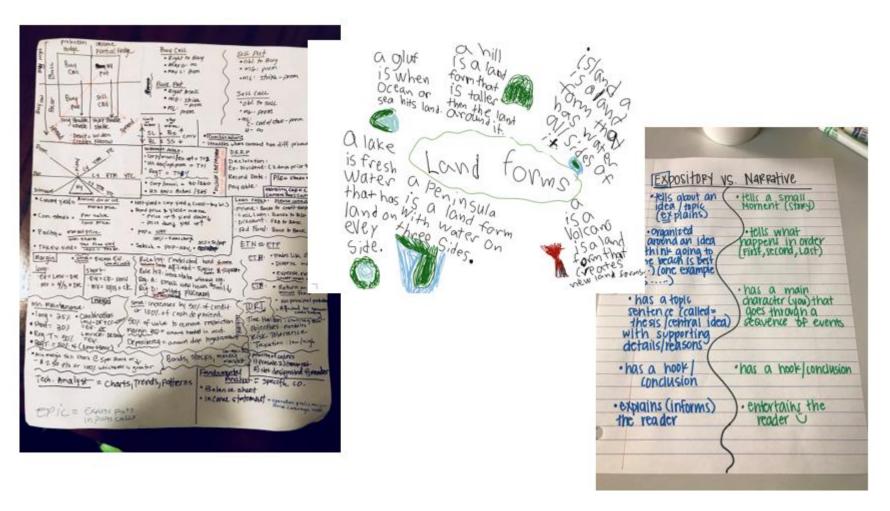
WHEN: beginning of 20 minute revision block

HOW:

- Take a blank piece of paper
- Write down (DUMP!) everything you know about the topic
 - No books
 - No notes
 - · Be as messy as you like
- Time limit of 60 seconds
- Now revise the topic (15 minutes)
- Finally, go back to your DUMP and add everything you have learnt
 - Use a different colour pen

IMPACT: you should be able to add 7-15 new things to your DUMP

Examples of Brain Dumps



Top Tip: Repeat a brain dump regularly.

This will help identify which aspects of a topic you have **forgotten** to include. These are the areas you need to **focus on** when revising!

MIND MAPS

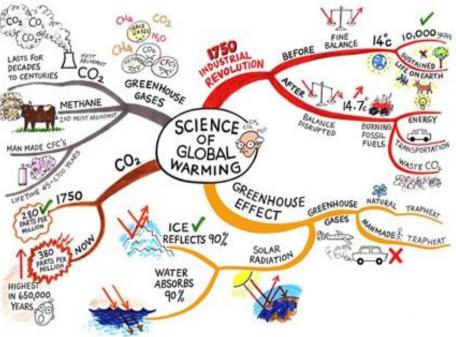
WHEN: to organise information from your exercise/text book.

HOW:

- Put the topic in the centre of a blank page
- Add big branches with the main ideas/themes of the topics
- Add small branches to these with more detail
- Try to write only 1 or 2 words per branch
 - Focus on the key points only
- Add an image to each branch (dual code)
- Revisit your mind map next time you DUMP

IMPACT: whole topic with the key ideas on a single page.

Examples of Mind Maps

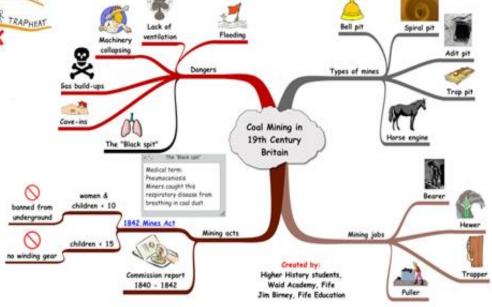


Top Tip: Use 'dual coding' in your mind maps.

Dual coding means using both words and images to record the information you need to remember.

<u>Top Tip:</u> Use different colours for each branch of your mind map.

This helps your brain distinguish between each of the different information stems.



FLASH CARDS

WHEN: to organise information from your exercise or text book.

HOW:

- Put a key question on one side
- Bullet point the key points that answer the question on the other side
- Put a formula / word on one side
- Put the definition on the other side
- You might be able to group key formulae/words together
- Bullet point the key points of a topic on one card (use both sides)

IMPACT: great for targeting key questions/formulae/words that you are finding hard to remember. Easy to carry around.

Examples of Flash Cards







Top Tip: Once you have created your flash cards, take a photo with your phone.

Create revision folders in your gallery so that you can revise in the car, on the bus... in fact anywhere when you've got a few spare minutes!

Mnemonics

WHEN: remembering a list of things or items in a particular order

HOW:

Create a song, rhyme or poem using the first letter of each word in a sequence

For example:

- Richard of York gave battle in vain (to remember the colours of the rainbow)
- Red Orange Yellow Green Blue Indigo Violet



 Write out the first letter of each word in a sequence or list then make up your own rhyme

IMPACT: great for remembering sequences and orders of words relating to a topic.

Top Tip: Be creative when using mnemonics.

The sillier the rhyme, the more likely you are to remember it! Repeat the rhyme regularly to make sure it goes into your long term memory

Liskeard's Six Effective Learning Strategies

Check out the link on our school website for more information:

http://www.liskeard.cornwall.sch.uk/students/six-strategies-for-effective-learning

1. SPACE IT OUT



Don't just revise what you've just learnt. Study older information to keep it fresh.

2. RETRIEVE



Without using your books, write or sketch everything you know. Then check it!

3. ELABORATE



Think about the detail.

Describe, Explain, Compare, Question...

4. INTER-LEAVE



Don't study one topic for too long. Switch between topics when studying.

5. USE EXAMPLES



Collect examples you have used in class, or found yourself.
Link the examples to what you are studying.

6. DUAL CODE



Turn your words & notes into diagrams or pictures. Turn your diagrams & pictures into words or notes.

Revision Websites

In addition to the website links within the subject pages, there are as a wide range of resources available online. Below is just a small section of those available.

	https://www.educationquizzes.com/ks3/	Interactive resources for a wide range of subjects
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https://www.bbc.com/bitesize/levels/z4kw2hv Resources for a wide range of subjects

https://mathsmadeeasy.co.uk/ks3-revision/
Great for maths, also offers English and science resources

<u>https://www.senecalearning.com/</u>
Quick fire interactive questions across a range of subjects

Top Tip: Ask your teacher for a list of the topics you need to revise.

Websites contain a lot of information, some of which that will not be relevant to your course. Make sure you revise everything you need to know!