

Year 9 Spring 1 - Knowledge Organiser

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Just reading through your books or a knowledge organiser is not always an effective way to revise. Instead, you should do something with the information. Choose an example of the revision methods on the pages or see if you can come up with another method.

The knowledge is evolutionary not revolutionary. Approximately half the knowledge is new and half helps you revise. Many of the activities are changing. We hope you enjoy them.

In SKL you will be beginning to look at your educational future at the Academy, by starting to look at possible careers you might like. You will carry out a personality and career assessment which might help guide you into future career possibilities and from this you will begin to look at choosing your options for your GCSE subjects. Alongside this you will look at the financial side of work, calculating how much money you may receive for certain types of career and what you might spend money on/budgeting as an adult.

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Idea

lant Cell

Make some flash cards or PowerPoint slides. Make top trumps.



Make a poster.



Draw spider diagrams, or for the adventurous mind maps. Write a song or a rap.

Write a story or comic

strip.

Write a quiz.

Design a game.

Plan a lesson



Explanation

Write down key words, auotation, auestions or eauations on one side of a card. On the other side, write the definition or answer. Use them to test yourself.

Turn your notes into posters with lots of colour and illustrations. Summarising the key information in a different way is an effective way of learning and your brain will remember the colours more easily. Do the title last!

Write the topic/keyword in the centre of your page. Add everything you know in subtopics. Then explore each subtopic in turn adding more ideas. Colour/pictures help you recall.

Are there songs that stick your head. Change the lyrics to the information you want to learn. If you record and listen back it will be a more fun way of revising.

If you teach something to someone else the chance of recalling it is really high. This has been found to be the most effective way of learning something for the long term.

Take the keywords or facts that you need to learn and turn them into a story or a cartoon. The sillier the story the more likely you are to remember it.

Playing is how we learn as young children and it is a very powerful way of learning throughout life. If we enjoy the game it helps us remember.



Starter activity: What do you already know?

We will be reading an article from the BBC called "Footballers have 'worryingly poor' teeth."

Discuss the following questions.

- What things can you do to look after your teeth?
- Have you had a tooth ache before? What happened/ what did you do?
- What things can you do before performing a physical activity to help prevent injury?

PRE-READING STRATEGIES



Stand up if you agree with the statement.

Sit down if you disagree.

Footballers have 'worryingly poor' teeth

By James Gallagher Health editor, BBC News website



Professional footballers have worryingly poor teeth that could be affecting their performance on the pitch, say dentists.

- 1. On average, footballers have better teeth and dental health than the general population.
- 2. You only need to go to the dentist when you have a tooth ache. Regular check-ups aren't important.
- 3. Dental health is an important part of your overall health.
 - 4. A tooth ache can affect how well a footballer plays.
 - 5. Football teams should employ dentists as part of their medical team.
 - 6. Dental problems can make other injuries (i.e. a pulled muscle in your leg) worse.
- 7. Sports/ health drinks often contain lots of sugar and are bad for your teeth.

ACTIVE READING

Let's read

 Ask questions, make connections, discuss, re-read, decide on key ideas

<u>Click on the link!</u>

https://www.bbc.co.uk/news/health-34699583

 Bullet point key words/ideas/info that show what the paragraph is about

our bullet points to help vo



Some words change their meaning depending on the context in which we use them.

Read the sentences below and look at the blue words in bold. What do they mean in these sentences?

- 1. "Professional footballers have worryingly poor teeth that could be affecting their performance on the pitch."
- 2. "Previous research has shown "striking" levels of bad teeth in athletes.
- 3. "These are individuals who otherwise invest so much in themselves."



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Ur	loc	k 💙 👘

Read It

Cavity

F	PiX	U	n	0	C

<u>Define It</u>

A decayed part of a tooth.

Digging Deeper:

In this context we are talking about teeth cavities, however the word can be used in other contexts to mean any empty space within a solid object. For example a hole in a tree or a rock could be described as a cavity if it is a hollowed out space.



Related terms in the <u>article:</u>

Tooth decay- rot of the tooth

Dental erosion (see next slide)

Abscess- a build up of pus caused by infection

Oral health- relating to the mouth

Dental health- relating to the teeth

Deconstruct It

From the latin word 'cavus' which means hollow.

Link It

Hole, chamber, hollow, pocket, space, socket

You should go to a dentist to treat a cavity.

Use It



Jnlock	PiXL Unlock	PiXL Partners in excellence
Read It	Define It	
Erosion	→ The gradual destruction of something.	
Digging Deeper: Erosion can be used in different topics and might look at how rocks and cliffs are erosion you might talk about the erosion on an id	d subjects. For example in geography you ded by water and wind. In English or History	Draw It
but that has diminished over time.)	ea (i.e. an idea that was once widely held,	
but that has diminished over time.)	ea (i.e. an idea that was once widely held,	Use It
but that has diminished over time.)	ea (i.e. an idea that was once widely held, Link It	<u>Use It</u>



PiXL Se Unlock	PiXL Unlock	PiXL Partners in excellence
Read It	Define It	
Nutrition	The process of providing or obtaining the food health and growth.	necessary for
<u>Digging Deeper:</u> The human body converts the food consumed i stay alive. The nutrients in food each provide a body.	nto energy in order to function and different amount of energy to the	Draw It
Deconstruct It	Link It	↓ <u>Use It</u>
From the latin word 'nuteire' which means to feed or noursih	Nourishment, nutrients, sustenance, food	There is a direct link between nutrition and health.



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Sit down if you disagree.

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Professional footballers have worryingly poor teeth that could be affecting their performance on the pitch, say dentists.

- 1. On average, footballers have better teeth and dental health than the general population.
- 2. You only need to go to the dentist when you have a tooth ache. Regular check-ups aren't important.
- 3. Dental health is an important part of your overall health.
 - 4. A tooth ache can affect how well a footballer plays.
 - 5. Football teams should employ dentists as part of their medical team.
 - 6. Dental problems can make other injuries (i.e. a pulled muscle in your leg) worse.
- 7. Sports/ health drinks often contain lots of sugar and are bad for your teeth.

AFTER READING- APPLYING AND SUMMARISING KNOWLEDGE

• Write down 5 key things you have learnt from this article.



QUIZ- Answer the following questions. Write your answers in full sentences.

- 1. How do the teeth of footballers compare to the general population?
- 2. Why were the researchers surprised by what they found?
- 3. What severe affect can poor dental health have on players?
- 4. Name two other ways players might be affected by their dental health?
- 5. Why are footballers and athletes more at risk of poor dental health? Name two factors the article suggests.
- 6. What are football clubs doing to improve the dental health of players?
- 7. How do footballers teeth compare to other athletes?

						\sim			
-	1	MediaThe subst to make aMaterialsThe same refer to the		The subst to make a	tance that an artist use art	2	Pencil		The worl
				ne as media but can also		Biro		Drav usin	
				eg, canva	s, paper, clay		Pastel (chalk/oil)		Oil a smo
		Techniqu	ues	The meth art work,	od used to complete the can be generic such as		Coloured pencil	a Ol	Colo som
				blending	or more focus such as		Acrylic paint		A thi crea
		Processe	25	The meth artwork t	nod used to create hat usually follows a		Watercolour		A so dow
				range of s one skill	steps rather than just		Gouache		A pu wate
3	Color	ur Theory			vertiary lentery		Pressprint		A po whit
	Prima RED, `	ary= YELLOW,	Complimen Colours oppo	itary; osite on the	Legender primary second	12	Monoprint		Whe over
	BLUE Secoi Brima	ndary=	colour whee Harmoniou	s; Colours	citization of the second secon	tertiary	Collograph		A pri
-	Tertia	ary=	wheel Monochror	natic;	secondary		Card construction		Scul _l fittir
	Secor ry	idary+Prima	shades, ton of one colo	ies & tints ur	secondary tertials		Wire		Thicl form
	Shad black	es – add	Hue – the p	opanos			Clay		A so be g
	white	- add	YELLOW. Cold: BLUE	, GREEN.			Batik		A fal inks
			PURPLE				Silk painting		Fabr an o

	The basic tool for drawing, can be used for linear work or for shading
	Drawings can be completed in biro and shaded using hatching or cross hatching
	Oil and chalk pastels can be used to blend colours smoothly, chalk pastels give a lighter effect
	Coloured pencil can be layered to blend colours, some are water soluble
	A thick heavy paint that can be used smoothly or to create texture
	A solid or liquid paint that is to be used watered down and layered
	A pure pigment paint that can be used like watercolours or more thickly for an opaque effect
	A polystyrene sheet that can be drawn into to print white lines – can be used as more than 1 layer
	Where ink is transferred onto paper by drawing over a prepared surface
	A printing plate constructed of collaged materials
	Sculptures created by building up layers of card or fitting together
	Thick or thin wire manipulated to create 2d or 3d forms
	A soft substance used for sculpting, when fired can be glazed to create shiny colourful surfaces
	A fabric technique using hot wax to resist coloured inks
	Fabric inks painted onto silk, Gutta can be used as an outliner to prevent colours mixing

Σ

	Observational drawing	Drawing from looking at images or objects
	First hand observation	Drawing directly from looking at objects in front of you
	Second hand observation	Drawing from looking at images of objects
	Photographs	Using a camera or smartphone to record images will class as first hand observation
	Sketches	Basic sketches and doodles can act as a starting point for development
1		



Annotation

Describes writing notes, using images and explaining your thoughts to show the development of your work.

Step 1 - Describe

What is this an image of? What have you done here? What was this stage of the project for?

Step 2 - Explain

How was this work made? How did you produce particular effects? How did you decide on the composition?

Step 3 - Reflect

Why did you use these specific methods? Why do particular parts work better than others? Why might you do things differently next time?



¹ Formal Elements of Art

LINE	the path left by a moving point, e.g. a pencil or a brush dipped in paint. It can take many forms. e.g. horizontal, diagonal or curved.
TONE	means the lightness or darkness of something. This could be a <u>shade</u> or how <u>dark</u> or <u>light a colour</u> appears
TEXTURE	the surface quality of something, the way something feels or looks like it feels. There are two types : <u>Actual</u> and <u>Visual</u>
SHAPE	an area enclosed by a <u>line</u> . It could be just an outline or it could be <u>shaded</u> in.
PATTERN	a design that is created by repeating <u>lines</u> , <u>shapes</u> , <u>tones</u> or <u>colours</u> . can be <u>manmade</u> , like a <u>design</u> on fabric, or <u>natural</u> , such as the markings on animal fur.
COLOUR	There are 2 types including Primary and Secondary . By mixing any two <u>Primary</u> together we get a <u>Secondary</u>

Composition Layouts

Rule of thirds – Place focal objects at 1/3 or 2/3 of the image horizontally or vertically. Not in the middle



Simplify and fill. Enlarge or crop the image to fill the space



	1	~		0
T	Ħ	1	P	R
E	P	-		
H	1			

Use lines. Lines will draw the viewer in, they don't have to be straight, consider S or C



Balance elements. If there is an emphasis on one side balance it out with smaller objects on the other



(3)

A Rough	A Visual/ Maquette	Final Piece
A basic sketch of a final idea	A small image or model created in selected materials	An image or sculpture pulling all preparatory work together

Art Key Stage

0

Pop Art and Food Year 9

- After Christmas Year 9 begin to study the movement "Pop Art" which is Art that uses items from popular culture as it's subject...e.g. Fast food, celebrities, video game characters.
- They find out about it's origins and eventually produce a piece of pop art using an item of modern day food.









Year 9 Percentages and Interest

What do I need to be able to do?

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

- Convert and compare FDP
- Work out percentages of amounts
- Increase/ decrease by a given percentage
- Express one number as a percentage
- Calculate simple and compound interest
- Calculate repeated percentage change
- Find the original value
- Solve problems with growth and decay

<u>Keywords</u>

Exponent: how many times we use a number in multiplication It is written as a power Compound interest: calculating interest on both the amount plus previous interest. Depreciation: a decrease in the value of something over time. Growth: where a value increases in proportion to its current value such as doubling Decay: the process of reducing an amount by a consistent percentage rate over time. Multiplier: the number you are multiplying by Equivalent: of equal value.

Year 9 Drama: Shakespeare – The Tempest

Drama/ Rehearsal Techniques

- Choral Voice
- Choral Movement
- Emotional Memory
- Freeze Frame/ Still Image
- Guided fantasy
- Hot Seating
- Moral Dilemma
- Slow Motion
- Soundscape
- Swing Debate
- Tableaux
- Thought Tracking

Shakespeare: Information

Skills

- Body Language
- Characterisation
- Facial Expression
- Gestures
- Mannerisms
- Movement
- Posture
- Stance
- Vocal Skills (articulation, volume, tone, pitch, pace)

Key Features

Clearly defined genres

- Comedv
- Tragedy
- History
- Problem Plays

Character Types

- Tragic Hero: flawed
- Strong female
- Comedy relief
- Nobles
- Servants

Features of Writing

- 5 act structure
- Use of blank verse
- Rhyming couplets
- · Extensive use of symbolism and imagery

Key Terms Used in this Unit

Accent Articulation **Blank Verse** Characterisation Choral Comedy **Emotional Memory** Imagery Mannerisms **Rhyming Couplets** Symbolism Tableaux Tragedy Tragic Hero

William Shakespeare (baptised 2th April 1564 – 23rd April 1616) was an English poet, playwright and actor, widely regarded as the greatest writer in the English language and the world's greatest dramatist. He is often called England's national poet. Shakespeare was born and raised in Stratford – Upon – Avon, Warwickshire. At the age of 18, he married Anne Hathaway, with whom he had three children: Susanna and twins Hamnet and Judith. Some time between 1585 and 1592, he began a successful career in London as an actor, writer and part-owner of a Company of Players called the Lord Chamberlain's men.

learn

Acts

Scenes

Verse

Prose

revenge.

9.

Vocabulary to Structure analysis checklist: Language analysis checklist: Evaluate The impressions you have of the text in relation to a Zoom in/out statement Link to task Tempest Repetition of an The methods the writer has used to create these image/idea Relevant quote Cornedy Links and connections Playwright Meaning of quote impressions between paragraphs Betrayal Method named How the particular methods create these impressions Shifts: . - inside to outside (and Effects explained vice versa) Word zoomed in on Rhyming couplets Methods focus Meaning of word - time Linguistic devices – simile, metaphor, personification, Revenge Implied meanings topic repetition, rhetorical question etc. setting/place Aim higher: layers of - mood/atmosphere Word choices – nouns, adjectives, verbs, adverbs etc. meaning WORDSWORTH CLASSICS - description to dialogue The Tempest (and vice Sentence forms – fragment, simple, compound, complex WILLIAM SHAKESPEARE versa) Checklist: Literary devices and word class Descriptor from GCSE assessment criteria Capitals 1. Metaphor - a literal comparison - she was a monster Full stop. 2. Personification - human gualities - the grass danced in the wind Level 4: simple vocabulary Simile - as/like/as if - he was like a man possessed Exclamation ! 3. Bad Good Light Happy WE ARE SUCH STUFF AS DREAMS ARE MADE ON Onomatopoeia - the sound words - bang, pop, sizzle Question ? 4. Level 5: effective vocabulary Alliteration - same starting sounds - really rather raucous Negative Positive Bright Jolly Lists - to emphasise many reasons 5. Comma, Shakespeare's comedy Verbs - doing words about a major act of Apostrophe ' 6. Level 6: sophisticated vocabulary Adjectives - describing words betrayal, ill treatment, Nouns - objects or abstract things e.g. love Awful Fantastic Brilliant Ecstatic Ellipsis ... the development of Adverbs - describe doing words e.g. wrote neatly Semi colon ; 8. magic arts and a plot of connotations of words - associations - night-time = mystery Levels 7-9: ambitious vocabulary Colon:

Immoral Virtuous Dazzling Elated

19

Year 9 - Rise of the Nazis, life in Nazi Germany and the Holocaust

Key words	
National	A political system in which a strong government rules a country
Socialism	and protects the interest of one racial group.
Adolf Hitler	An Austrian politician who became leader of the Nazi Party in 1921 and led them to power by 1933. Hitler shot himself in 1945.
The SA	Abbreviation of 'Sturmabteilung' or 'Storm Division'. Known as the brown shirts, they were an armed wing of the Nazi Party in its early years
The SS	Abbreviation of 'Schutzstaffel' or 'Protection Sauadron'. Known as the black shirts, they took over from the SA as the Nazis' most loyal and committed soldiers. Oversaw much of the Holocaust.
Hitler Youth	A series of youth organisations in Nazi Germany, where young boys would learn practical and military skills and girls would learn how to be 'good' mothers and wives
Anti-Semitism	Hatred of discrimination of Jews. This had existed for centuries but was particularly important in Nazi Germany.
The Holocaust	General term given to the treatment of Jews and other 'undesirables' by the Nazis between about 1938 and 1945.
Eugenics	The belief that it is possible and desirable to improve the human race by selective breeding and by eradicating undesirable elements or 'genetic' traits.

The Carrot:

For those who did as they were told and matched the Nazi ideal, there were many benefits for living in Nazi Germany. Propaganda also promised people happiness if they supported the Nazi regime.

The stick:

The Nazis made it very clear that anyone who disobeyed their rules would be punished. This meant prison and execution for many. They also set up 'work and education' camps in Germany.

Why did people support the Nazis?

Although the Nazi Party never won an election in Germany, they did have a lot of support in some sections of society. Some historians say that the Nazis won support through 'negative cohesion', which means that their supporters did not always agree with each other, but supported the Nazis because shared a fear of hatred of something/someone else. Some reasons for supporting the Nazis are as follows:

- The Great Depression of 1929 led to a lot of unemployment and poverty in Germany. The Nazis promised to end unemployment and also provided aid to many who could not afford food.
- Fear/hatred of Communism Many middle and upper class people saw that if the communists took power they would lose their wealth. The Nazis were one of the most active and vocal groups against communism.
- Appeal to traditional values The Nazis promised a return to 'traditional' German values which many people thought had been forgotten in the 1920s.
- Propaganda and anti-Semitism The Nazis put the blame for many of Germany's problems on the Jews. For desperate people looking for someone to blame this idea could easily become attractive.

The Nazis controlled society through the 'carrot and stick method' The Nazis promised the German people that they would create a 'Third Reich' and bring all true Germans to glory. Although there were some advantages for certain people, they ultimately failed \a/\a/ii to meet mo: they ended German peo people did

to meet most of their promises and when WWII began they ended many of their policies aimed at helping the German people. On the right are some examples of people did and did not benefit from Nazi rule.		Workers	were also praised in Nazi propaganda. Unemployment dropped dramatically under the Nazis and workers were usually able to find work. They were also given			s and o find	housewives and mothers, and many lost their jobs under the Nazis. Wages did not rise as much as much as promised, and the employment figures covered up the fact that many were working in conscripted				
The Holocaust				benefits such as cheaper holidays, cars and activities.		i	(compulsory) work for very little money. As the war began many of the				
Although there is his	torical	debate around when th	19	Vaura angla	LCH and Y	V	L		previous benefits for workers ended.		orkers ended.
Holocaust started, th	he word	is usually used to		Young people	Hitler	fout	n organisations v	vere	Young people w	ere targ tiaularlu	eted for
describe the mistreat	ment ar	nd murder of over 6 mi	llion		were m	nostly	v fun and offered	ł	school where they learnt national		national
Jews and millions of	others I	by the Nazis, either			opportu	unitie	, for adventure.		socialist ideas. Any young people who		ing people who
because of their race	, religio	n, sexuality, ability or							had fun in the 'wrong' way were		
lifestyle.							punished, often being put in camps.		ut in camps.		
The Holocaust did not begin suddenly but was a											
process that arguably begun in 1933 and continued			'Undesirables'	"Undesirables" There were virtually no			Referred to as	the 'unt	ermenschen',		
until the Nazis were defeated in 1945.				advantages to fitting into this category.		Jews, eastern E	uropean bilitios	s, nomosexuals, Roma/Sinti			
The most well-known feature of the Holocaust is the		the		category.		people, criminals and Jehovah's					
concentration and death camp, where prisoners were		re					Witnesses were put in camps and		camps and		
systematically murder	red, ove	rseen by the SS.						often killed or worked to death.		to death.	
1933 — The Nazis		1935 —	ſ	1938 — İn an eve	ant		1940 —		1941 —		1942-45 -
call for Jewish		Homosexuals can		known as			Auschwitz,		Mass killing		Jews from all
businesses to be		now be arrested,		'Kristallnacht'			the largest		of Jewish		over Europe
boycotted, Jewish		and the		thousands of Jew	/ish		concentration		and Eastern		are taken to
books are banned		Nuremburg Laws		businesses, home	es		camp, is built	· ·	European		death camps
and Jews are make Jewish			and synagogues a	are		in Poland.		people		and	
banned from some people non-		looted. 91 Jews a	are				begins		systematically		
jobs		citizens.		killed.							murdered
			· L								

Advantages

Women were rewarded for

marrying and having children

through loans and medals. They

Disadvantages

Women lost many of the freedoms

were now pressured into becoming

they had enjoyed in the 1920s. They

Social group

Women

21

negro, negra

De moda (2.5)

Clothes La ropa rojo, roja red ¿Qué llevas? What do you wear? azul blue Llevo... l wear... gris grey un jersey a jumper marrón brown un vestido a dress naranja orange una camisa a shirt pink rosa una camiseta a T-shirt verde green a skirt una falda una gorra a cap El uniforme escolar School uniform a sweatshirt una sudadera este jersey this jumper unos pantalones trousers este vestido this dress unos vaqueros ieans esta camiseta this T-shirt unos zapatos shoes esta chaqueta this jacket unas botas boots this tie esta corbata unas zapatillas de deporte trainers estos pantalones these trousers estos zapatos these shoes nunca never estas botas these boots from time to time de vez en cuando anticuado, anticuada old-fashioned, or out of sometimes a veces date a menudo often barato, barata cheap normalmente normally bonito, bonita nice, or pretty siempre always caro, cara expensive cómodo, cómoda comfortable Los colores Colours feo, fea ugly amarillo, amarilla vellow great, cool guay blanco, blanca white

black

incómodo, incómoda

uncomfortable

	De moda	(2.	.5)	
Esta chaqueta es cómoda.	This jacket is		¿Qué botas son las menos?	Which boots are the
	comfortable.		least?	
Estos zapatos son incómodos.	These shoes are		Este vestido es el más bonito.	This dress is the nicest.
	uncomfortable.		Esta camiseta es la meno cómod	a. This T-shirt is the least
Tengo que llevar uniforme.	I have to wear a			comfortable.
	uniform.		Estos zapatos son los más barato	os. These shoes are the
No llevo uniforme.	l don't wear a uniform.			cheapest.
Para ir al colegio, normalmente	For school, I normally		Estas botas son las menos	These boots are the
	wear			least practical.
llevo			prácticas.	
También Ilevo	l also wear		de cuadros	checked
No me gusta llevar uniforme.	l don't like wearing		de lunares	spotted
	uniform.		de rayas	striped
Me gusta porque es práctico.	I like it because it's		estampado, estampada	patterned
	practical.		de manga corta	short-sleeved
No me gusta porque es incómodo	o. I don't like it because		de manga larga	long-sleeved
	it's uncomfortable.		sin mangas	sleeveless
Es más elegante que llevar	It's more elegant or		corto, corta	short
	stylish than vaqueros.		largo, larga	long
	wearing jeans.		de cuero	leather
		-	de tacón	high-heeled
¿Qué prefieres?	What do you prefer?]	¿Cuál prefieres?	Which one do you
¿Qué vestido es el más?	Which dress is the			prefer?
-	most?		¿Cuáles prefieres?	Which ones do you
¿Qué camiseta es la menos?	Which T-shirt is the			prefer?
	least?			
¿Qué zapatos son los más?	Which shoes are the			

most...?

 D_{0} mode (2 E)

Year 9 Spring Term Spanish Knowledge Organiser

De moda (2.5)

Cuando estoy de vacaciones	When I'm on holiday
Normalmente llevo	Normally I wear
ropa de deporte	sports clothes
ropa cómoda	comfortable clothes
Mañana voy a llevar	Tomorrow I'm going to
	wear
un bañador	a swimsuit
esquís	skis
mis gafas de sol	my sunglasses

Un baile de disfraces	A fancy dress ball
Ayer	Yesterday
salí con mis amigos	I went out with friends
fuimos a un baile de disfraces	we went to a fancy
	dress ball
Llevé	I wore
Bebí limonada.	I drank lemonade.
Bailé.	I danced.
Comí ensalada y tortilla.	I ate salad and Spanish
	omelette.
Llevé un vestido de princesa.	I wore a princess dress.
Fui de bruja.	I went as a witch.
Mi amigo/Mi amiga fui de vampiro.	. My friend went as a
	vampire.
Llevó	He/She wore
Fue muy divertido.	It was very
_	amusing/entertaining.

Normalmente llevo	Normally I wear
La próxima vez voy a llevar	Next time I'm going to wear
Palabras muy útiles	Very useful words
de vez en cuando	from time to time
a veces	sometimes
a menudo	often
normalmente	normally
siempre	always
este, esta	this
estos, estas	these

World Map Mapa del mundo 22 Spanish speaking countries (shown in red)

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Knowledge Organiser: Year 9 Spring Term 1 Part 1 Computational Thinking and Algorithms

Summary

An <u>algorithm</u> is a plan, a logical step-by-step process for solving a problem. Algorithms are normally written as a <u>flowchart</u> or in <u>pseudocode</u>. The key to any problem-solving task is to guide your thought process. The most useful thing to do is keep asking 'What if we did it this way?' Exploring **different** ways of solving a problem can help to find the best way to solve it. When designing an algorithm, consider if there is more than one way of solving the problem.

When designing an algorithm there are two main areas to look at:

The **big picture** - What is the final goal? The **individual stages** – What hurdles need to be overcome on the way to the goal?

Before an algorithm can be designed, it is important to check that the problem is completely understood. There are a number of basic things to know in order to really understand the problem:

What are the *inputs* into the problem? What will be the *outputs* of the problem?

In what order do <u>instructions</u> need to be carried out? What decisions need to be made in the problem? Are any areas of the problem repeated?

Flowchart—and subroutines

Algorithm

Key Vocabulary

Abstraction

The process of separating and filtering out ideas and specific details that are not needed in order to concentrate on those that are needed.

Algorithm

A diagram that shows a process, made up of boxes representing steps, decision, inputs and outputs.

Decomposition

The breaking down of a system into smaller parts that are easier to understand, program and maintain

Pattern recognition

Finding similarities and patterns in order to solve complex problems more efficiently.

Program Sequences of instructions for a computer

Programming

The process of writing computer software.

Subroutine

A set of instructions designed to perform a frequently used

operation within a program PseudoCode—uses structured English

INPUT – indicates a user will be inputting something
 OUTPUT – indicates that an output will appear on the screen
 WHILE – a loop (iteration that has a condition at the beginning)

FOR – a counting loop (iteration)

REPEAT – UNTIL – a loop (iteration) that has a condition at the end#

 $\ensuremath{\text{IF}}$ – $\ensuremath{\text{THEN}}$ – $\ensuremath{\text{ELSE}}$ – a decision ($\underline{\ensuremath{\text{selection}}}$) in which a choice is made

Any instructions that occur inside a selection or iteration are usually indented

http://bit.ly/33QDxv3

Year 9 RS: Is it reasonable to believe in Life after Death?

Key words				
Afterlife	fterlife The belief in heaven and hell.			
Resurrection	Rising from the dead or returning to life.			
Heaven	The state of eternal happiness with God. Also known as paradise.			
Hell	The state of separation from God. Also known as Hell.			
Judgement Day	When the world ends people will be judged on their lives.			
	The belief that God is all loving and kind.			
Purgetory	Where Christians go to be cleansed of their sin.			
Soul	A part of a person that lives on after death.			
Selvetion	To be saved from something.			

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Christians believe that God gave a special kind of life to humans, which is what makes humans different from other animals. In the Bible this is called the breath of life (Genesis 2:7)

Christians believe that humans have a 'soul', because they are made 'in the image of God'. The soul is a spiritual element to human existence.

Christians believe that the soul does not die, but lives on after the death of the physical body. Christians DO NOT believe in **REINCARNATION**. They believe in **RESURRECTION**. This means that they think that their souls will be raised back to life, just like Jesus, to live in Heaven with God for all eternity.

Christians beliefs in life after death

For many Christians, heaven is the idea that after death, <u>the soul lives on</u> <u>forever with God</u>

Some Christians believe in the traditional idea of heaven as a <u>paradise</u> where they will live forever

Even if Christians do not understand heaven, they find it comforting to think that death is not the end.

The early Christian church believed that hell was <u>a place of fire and</u> <u>torture</u> where people would go if they did not believe in Christ This idea has been replaced by the idea that hell is <u>an eternity without</u>

God - a state of mind rather than a place

Roman Catholics believe that <u>purgatory</u> is a state after death, for people whose souls are not ready for heaven

Catholics pray for the souls of people who have died, so that they will not stay in purgatory.

From purgatory, the soul can only go to heaven, not to hell.

In addition to teaching about life after death, Jesus rose from the dead. This leads Catholics to believe that death is not the end and that Jesus' sacrifice enabled us to go to heaven after we die. Whilst he was dying on the cross, Jesus told the thief crucified alongside him that he too would go straight to paradise. This also leads Catholics to believe that there is life after death for ordinary mortals. The Creed also reminds Catholics of this belief when they recite.. "I believe in the resurrection of the body and the everlasting" All Christians believe in life after death because: Jesus rose from the dead; Bible talks about it; Churches teach it; evidence from NDE and paranormal; it gives life meaning and purpose. Evangelical Protestants and some other Christians believe: People stay in the grave. At the end of the world everyone will be raised and judged Humanist beliefs in Life after Death Humanists reject the idea or belief in a supernatural being such as God. This means that humanists class themselves as agnostic or atheist.

Humanists have no belief in an afterlife, and so they focus on seeking happiness in this life. They rely on science for the answers to questions such as creation, and base their moral and ethical decisionmaking on reason, empathy and compassion for others.

Humanists are concerned with human welfare and happiness and believe that this is the one and only life and world they have.

As a result, they believe that people should make the most of their lives while on Earth. However, they also believe that they have a duty to support others to live fulfilling lives too - this includes people who are alive today as well as future generations. Because humanists do not believe in any kind of god or supernatural force that will solve their problems, they believe that human beings must take sole responsibility for solving the world's environmental problems. Only humans are capable of finding the solutions that can lead to a sustainable existence. Humanists believe that human beings were not created, but instead evolved naturally. They believe that humans go on evolving, along with the rest of the species on our planet today. Evidence shows how human welfare is heavily dependent on the natural world and on the continued existence of many other species.

Muslim beliefs in life after death

Muslims believe that this world will come to an end on a day Allah has appointed. "Every soul shall have a taste of death; and only on the Day of Judgment shall you be paid your full recompense..." (Qur'an 3:185). Everything will be annihilated, and all of the human beings who had lived in this world will then be restored to life and will be presented before Allah.

The entire record of every man and woman - of all their deeds and misdeeds - will be presented before Allah for final judgment. "We shall set up scales of justice for the Day of Judgment, so that not a soul will be dealt with unjustly in the least..." (Qur'an 21:47). One who excels in goodness will, by the Mercy of Allah, receive a goodly reward; one whose wrongs overweigh his good deeds will be punished.

It is neither faith nor just to treat everyone equally. "Is then the man who believes no better than the man who is rebellious and wicked? Not equal are they" (Qur'an 32:18). Allah on that day will judge with Justice, and every soul will receive what it has earned. While unsure of their fate in the Hereafter, Muslims are confident of the Mercy and Justice of Allah. "Say: 'Oh My servants who have transgressed against their own souls! Despair not of the Mercy of Allah, for Allah forgives all sins, for He is Oft-Forgiving, Most Merciful.'" (Qur'an 39:53). Those who emerge successfully from Judgment will go to eternal Paradise; those who are condemned and deserve punishment will be sent to Hell. Allah is the perfect and fair Judge. Many Muslims believe that after death the person still has a conscious existence in the grave. This is where they will enter a state of waiting called 'barzakh'. This term means 'a barrier'. No one can cross this barrier to amend

the things they have done wrong or warn the living. They are waiting for the Day of Judgement.

Knowledge Organiser: Year 9 January – June Design and make a clock

Art Deco

Art Deco is a movement in the decorative arts and architecture that originated in the 1920s and developed into a major style in western Europe and the United States during the 1930s. Its name was derived from the Exposition Internationale des Arts Décoratifs et Industriels Modernes, held in Paris in 1925, where the style was first exhibited. Art Deco design represented modernism turned into fashion. Its products included both individually crafted luxury items and mass-produced wares, but, in either case, the intention was to create a sleek and anti-traditional elegance that symbolised wealth and sophistication.

The art deco style, which above all reflected modern technology, was characterized by smooth lines, geometric shapes, streamlined forms and bright, sometimes garish colours

Designers and makers are often influenced by past or current designers and art movements They can start with a design context which leads to a design brief. The context is explored and a design brief is written. The designer needs to carry out research to help them to design and make a successful product.

The Iterative Design Process

This is the process of prototyping, testing and refining your product, acting on feedback from your primary users and stakeholders.

used?

Questions to think about when designing and making?

Who is going to use it? When and where will it be

What material(s) could I use to make it? How can I

possible? What impact will it have on the users life?

make it so that it is as environmentally friendly as

Pine and MDF Wood comes in 3 categories: soft wood, hard wood and manufactured wood. They have different properties and are used for many things.

Manufactured boards Making boards and sheets from vood or wood products Veneers Sawdust Wood fibres Wood strips Wood flakes

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COSHH

Measuring, marking out and cutting wood and plastic

- Use a ruler to measure accurately, use a set square to mark accurate angles, a ruler to draw a straight line and use a tenon saw, coping saw or fret saw to cut wood. Use a junior hacksaw to cut acrylic.
- MEASURE TWICE CUT ONCE! Why do we say this in D&T?

Forest

Use wood PVA glue to join wood. Use epoxy resin to join wood to plastic.

This is the clock mechanism you will be using. What information do you need from this

to enable you to design and make a successful clock?

Workshop Rules

You are responsible for your own safety and the safety of other

- ENSURE bags and coats are stored in a locker not around the benc

- When using machinery ALWAYS wear EYE PROTECTION & MACHINE GUARDS.
- 6) Do not TOUCH machines or equipment unless you have permission
- 7) NEVER blow dust or touch swar
- 8) NEVER run in the workshor
- achines, hearth or forge, hair MUST be tied up and loose clothes removed
- 10) When finished with a machine make sure tools are returned to the correct place and the machine is cleaned down

When you are in the Academy workshop it is so important you are safe. We will show you what tools to use and how to use them safely. You must listen to and respond first time to all instructions. Can you think of any more workshop rules? Why is it so important to follow these? What does COSHH stand for and why is it important in D&T?

What PPE did you wear in the Academy workshop and why? Can you name and explain the logos on the left?

<u>Health and Safety</u>

<u>Micro-organisms</u>

Micro-organisms are tiny forms of life. They can only be seen under a microscope and are sometimes called microbes.

They spoil food and make it unsafe to eat because they contaminate it with their waste products, their physical presence and the toxins they produce.

<u>What micro-organisms can spoil food and make it unsafe to</u> eat?

There are three groups of micro-organisms that you need to know about that spoil food and cause food poisoning. These are..

- Bacteria
- Moulds
- Yeasts

Micro organisms need 5 conditions to grow and multiply:

- 1. A warm temperature
- 2. Plenty of moisture (water)
- 3. Plenty of food
- 4. The right PH level (not too acidic or alkaline
- 5. Enough time (bacteria split every 10-20 minutes)

High risk foods

- High risk food have ideal conditions for bacteria
- High risk foods are ready to eat foods that could grow harmful bacteria
- They are moist and high in protein which is food for bacteria.
- High risk foods have a short shelf life you can't keep them for long or the bacteria might multiply to dangerous levels.

Examples of high risk foods:

Cooked meat, fish and poultry, dairy products (eggs, cheese etc.), gravies, stocks and sauces, shellfish, cooked rice

Example exam questions:

What five conditions to bacteria need to grow and multiply? (5 marks) What is a high risk food? (5 marks)

Storing food safely

Cooking (75°C)	The danger zone (5°C-63°C)		
 Cooking food above 75°C kills bacteria Re-heat food properly, only once. Reheat food so 75°C for at least 3 minutes Check the food is 75°C with a temperature probe 	 Bacteria can grow and multiply quickly between 5°C to 63°C. This is called the danger zone The optimum temperature for bacterial growth is 37°C 		
Chilling (0°C - 5°C)	Freezing (-18°C)		
 Keeping food between 0°C and 5°C slows down the growth of bacteria This extends the shelf life of food Chilling food doesn't change the properties much - food looks and tastes the same 	 Freezing food below -18°C stops bacteria growing - they become dormant Freezing generally extends shelf life and the nutrients aren't lost It doesn't kill the bacteria though. They become active again once the food defrosts. 		
 Preparing self for cooking Tie hair back to prevent hair and dandre Take off coats and blazers Wear an apron to prevent bacteria tran clothes to our food Wash hands with hot soapy water to kill Preparing the room for cooking Sanitise all work surfaces Check equipment is clean and dry 	uff falling in food sferring from our bacteria		
 Tuck all stools in as they can be a trip h Put all high risk foods in the fridge to s 	azard low bacteria growth		

<u>Nutrients</u>

Macro nutrients - needed in <u>large</u> quantities in the diet. The three macro nutrients are: PROTEIN, CARHOHYDRATES, FAT Micro nutrients - needed in <u>small</u> quantities in the diet. The two micro nutrients are: VITAMINS, MINERALS

<u>Protein</u>

Proteins are made up of amino acids, often referred to as the 'building blocks' of the body. Non-essential amino acids can be made by the body, how ever, essential amino acids cant be made by the body and we must get from the food we eat.

High biological Value (HBV) proteins contain all the essential amino acids we need and generally come from animal sources. Low biological value (LBV) proteins are missing one of more essential amino acids and generally come from plant sources.

Food sources

<u>HBV</u> - beef, pork, lamb, poultry (chicken, turkey, duck), fish, cheese, butter milk <u>LBV</u> - beans, chickpeas, lentils, peas, nuts, seeds, found in smaller amounts in some vegetables such as spinach and broccoli.

Function

Needed for growth from childhood to adulthood and the growth of nails, hair and muscle mass, repair of muscles, tissues and organs after illness or injury and to make enzymes for digestion and antibodies to stop us getting ill.

<u>Types:</u> High biological Value (HBV) and Low biological Value (LBV)

Carbohydrates

There are two types of carbohydrates, complex and simple. They are also known as starchy (complex) and sugary (simple).

Food sources

<u>Starchy</u> - bread, rice, pasta, potatoes, bagels, oats, flour, cereal and some vegetables. <u>Simple</u> - fruit, some vegetables, chocolate, sweets, biscuits, cakes

Function

Starchy/complex carbohydrates are digested slowly meaning blood sugar levels gradually increase providing a slow, steady release of energy. (long term energy). Sugary/simple carbohydrates are digested sloand provide short term energy **Types:** Starchy, sugary and fibrous

Example exam questions:

What are the two types of fat? (2 marks) Explain the difference between a HBV and LBV protein (6 marks) What percentage of our daily energy should come from fats? (1 mark) What are the main differences between

saturated and unsaturated fats? (6 marks) How can one make healthy choices when choosing complex carbohydrates? (2 marks)

<u>Fat</u>

There are two types of fat, saturated and non saturated. Saturated fats are classed as 'unhealthy fats', they are solid at room temperature and are generally animal based. Unsaturated fats are classed as 'healthier fats' and are liquid or soft at room temperature and come from plant based sources.

Food sources

<u>Animal</u> -beef, chicken skin, processed meat (sausages, salami, pepperoni), bacon, butter, cheese, full fat milk <u>Plant</u> - vegetable oils (sunflower, olive, rapeseed), avocado, nuts, seeds

Function

Keeps us warm (provides insulation), secondary source of energy, protects vital organs and bones.

Dietary related health problems

<u>Diabetes</u>	Obesity		
<u>What is it?</u> Diabetes lets your blood glucose levels run out of control. Insulin is a hormone that allows glucose to be absorbed by the body. If there is too much glucose in the blood, the pancreas produces insulin to reduce the blood glucose level. Type	What is it?It is very common, it affects roughly 1 in 4 adults in the UK. Body Mass Index(BMI) is often used to check if someone is overweight or obese.		
2 diabetes is a disorder where blood glucose levels stay too high - the pancreas either can't produce enough insulin or the body resists it.	<u>Causes</u> • An incorrect balance of energy - a person consumes more calories than they		
<u>Causes</u> Being over weight or obese Excessive sugar in the diet can leave to obesity increasing the risk of type 2 	 burn off. Eating lots of foods high in fat and sugar Having a sedentary lifestyle (little or no physical activity) 		
diabetes - this is affecting more young people.	Health problems		
 <u>Health problems</u> Poor eye sight, limb numbness, kidney failure and CHD. Tired and thirsty The body passes out glucose by passing urine more often 	 Increases your blood pressure and raises cholesterol levels - this puts you at higher risk of coronary heart disease Greater risk of developing type 2 diabetes Breathing difficulties, tiredness and low self-esteem are all common 		

<u> Anaemia - can be caused by an Iron Deficiency</u>	<u>Coronary Heart Disease (CHD)</u>
<u>What is it?</u> Iron is needed to make red blood cells - these cells carry oxygen from the lungs and travel in your blood around your body. People with anaemia have a reduced amount of blood cells.	<u>What is it?</u> Your cardiovascular system consists of your heart and blood vessels. CHD is when coronary arteries (which supply the heart with blood fill of oxygen) are narrowed because they are filled with fatty deposits.
Causes Not eating enough iron-rich foods Women lose iron during their periods Pregnant women lose iron to their baby during pregnancy 	<u>Causes</u> Eating lots of saturated fats Being physically inactive - exercise keeps the heart and cardiovascular system healthy Smoking - this damages the lining of arteries High blood pressure
Health problems Tiredness, pale complexion, heart palpitations, headaches, abnormal fingernails	 <u>Health problems</u> Chest pains (angina) Blood clots can form which suddenly block flow to the heart, the heart doesn't get enough oxygen which can cause a heart attacked (which can be fatal) ³⁴

Dietary related health problems

Food Science

Too much <u>sugar</u> can cause:

- Weight gain (which can lead to obesity)
- 2. Tooth decay
- Diabetes (your body cannot produce enough/any insulin to regulate your blood sugar levels)

Too much <u>salt</u> can cause:

1. High blood pressure (this can increase your risk of heart disease and a stroke).

Too much <u>saturated fat</u> can cause:

- 1. Weight gain (which can lead to obesity)
- 2. Raise cholesterol (this narrows arteries making it harder for the blood to travel around, putting you at risk of heart disease).

<u>Skeletal issues</u>

<u>**Rickets</u>** -Soft and weak bones, this occurs in children with a calcium or vitamin D deficiency. Can cause pain in the bones.</u>

<u>Osteoporosis</u> - It is a bone disease that weakens bones and makes them brittle, increasing the chance of them breaking from simply falls.

<u>Tooth decay</u> - Plaque is a sticky substance that contains lots of bacteria. It builds up on your teeth over time. Bacteria feeds on sugars and create acids that can destroy tooth enamel and cause tooth decay.

Example exam questions:

Explain three causes of obesity (6 marks) What is the function of sugary and starchy carbohydrates (2 marks) Why is protein especially important for children? (2 marks) What are the functions of fat? (3 marks) List 5 food sources of plant based protein (5 marks)

How does starch thicken a sauce (2 marks)

Give an example of fruit that turns brown due to enzyme browning (1 mark)

Which is the best type of flour to use when bread making and why. (3 marks)

Starch gelatinisation

The starch particles absorb the liquid and swell when heated. The starch granules burst open and release their starch into the liquid. This causes the liquid to thicken. The more starch, the thicker the liquid.

Enzyme Browning

Enzymes in fruit cause then to ripen. When you slice fruits, the oxygen in the air turns the fruit brown. Enzymes in the fruit speed up this process. E.g. apples and pears.

<u>Shortening</u>

Shortening gives foods a crumbly texture. When you rub butter into flour you cover the flour particles with fat, this gives the flour a waterproof coating. This prevents the long gluten molecules from forming when the liquid is added to the flour. This means the dough cannot become stretchy and baked goods like shortbread keep a 'short' (firm and crumbly) hence the name shortening.

Bread making

<u>Ingredient</u>	Function
Strong white bread flour	High in gluten to give the bread structure. Bulking ingredient of the dough.
Salt	Gives flavour.
Sugar	Food for the yeast so it can multiply quickly.
Yeast	When given food (sugar) and warmth and moisture (water) it ferments producing co2 and alcohol which helps the dough rise and become light and fluffy.
Warm water	This activates the yeast so it can start to ferment. 35

The Eatwell guide

The Eatwell guide

The Eatwell guide is a government guide designed to show you the proportions of different foods groups you should eat over a day or more.

Tips on making healthy choices from the eatwell guide:

<u>Fruit and vegetables</u>: eat 5 portions of fruit and vegetables a day, this should make up 1/3 of your plate a day, fresh, frozen, canned, dried and fruit juice/smoothies all count, don't exceed 150ml of fruit juice/smoothie a day as it can cause tooth decay, try snacking on fruit over high sugar and fat foods,

<u>Potatoes, bread, rice, pasta and other starchy carbohydrates</u>: choose non-sugary cereals, leave the skin on potatoes, choose wholemeal options of foods such as bread, rice and pasta.

<u>Oils and spreads</u>: choose unsaturated fats such as vegetable oils and margarine over butter, use in small amounts. <u>Dairy and alternatives</u>: choose lower fat options such as skimmed milk and low fat and salt cheese, choose low sugar yogurts and add fruit as a natural sweetener.

<u>Beans, pulses, fish, eggs, meat and other proteins</u>: eat more beans and pulses as they are high in fibre and fill you up for longer, cut the visible fat off meat, choose lower fat meat options, eat 2 portions of fish a week. Water: drink 2-3 litres of water a day, choose lower sugar option drinks.

8 Guidelines for Healthy Eating

1. Base your meals on starchy carbohydrates	 This should make up 1/3 of your diet Chose high fibre, whole grain options e.g. pasta, rice Try to include one starchy food with each meal 	5. Eat less salt - no more than 6g a day for adults	 Eating too much salt can raise blood pressure, this puts you at high risk of heart disease or a stroke Most of the salt you eat is already in food, check the labels to help you choose low salt options
2. Eat lots of fruit and vegetables	 Try adding a banana to cereal or swap crisps for fruit Always serve main meals with two vegetables Beans and pulses can count as 1 of your 5 portions 	6. Get active and be a healthy weight	 Regular exercise can reduce your risk of getting serious health conditions Aim for 150 minutes of exercise a week
3. Eat more fish - including one portion of oily fish	 Fish is a source of protein and vitamins and minerals It contains omega 3 (good for eyes, skin, brain heart) Oily fish includes: salmon, herring, mackerel, sardines 	7. Don't get thirsty	 6-8 cups a day, 2-3 litres Avoid sugary and fizzy drinks as they're bad for teeth Remember fruit juice and smoothies is also high in sugar
4. Cut down on saturated fat and sugar	 All types of fat are high in energy and should be eaten in small amounts Excess sugar can cause weight gain and tooth decay 	8. Don't skip breakfast	 Kick starts you for the day choose healthy low fat, sugar and salt and high fibre Choose low sugar cereals and granola

<u>Food packaging</u> Food is packaged to protect the product during transport and whilst sitting on shelves.

Why is food labelling important? Symbols on packaging show important information to customers.

Example exam questions: Seasonal produce and air miles

What are the advantage of buying locally produced, seasonal produce? (6 marks)

Explain the disadvantages of buying imported foods. (10 marks)

Explain the term 'air miles' (3 marks) Explain the term 'seasonal produce' (3 marks)

How might a restaurant use the fact they only use

Food packaging

Compare the two dishes and explain which dish is a healthier choice. Use the traffic light system to help you with your answer (6 marks). Why is it important to include a vegetarian symbol on food packaging of vegetarian products? (2 marks)

Food	Pac	kag	ing
		_	_

FAIRTRADE	FSC		British Fion Quality	
Giving farmers a fair price for their products.	Forest Stewardship Council – helping effectively manage forests.	Suitable for home freezing.	Eggs have been produced to the highest standards of food safety.	Vegetarian approved – free from animal products.
	ROOM FOOD		HALAL	RSPCA ASSURED
This product can be recycled.	A British organisation that promotes and regulates food quality.	Tidy man – do not litter.	Food which abides by the Islamic law. The Islamic way of slaughtering is cutting the throat and draining the blood.	An ethical food label - helping farm animals have a good life.

<u>Reference intake</u>

You'll see reference intakes referred to on food labels. They show you the maximum amount of calories and nutrients you should eat in a day. Most packaging has a colour coded label on the front to help you make healthy choices.

Reference in take amounts: Kcal (calories) - 2000 Total Fat -70g Saturated fat - 20g Sugar - 90g Salt - less that 6g

Red means HIGH in that nutrient Amber means MEDIUM in that nutrient Green means LOW in that nutrient

Reference intakes are not meant to be targets. They just give you a rough idea of how much energy you should be eating each day, and how much fat, sugar, salt and so on.

The percentages represent how much of your reference intake is in the product, e.g. the product has 3.0g of FAT in it, that is 4% of 70g of fat.

Ingredients

1/2 onion
1/2 onion
red pepper
1 tomato
2 tbsp. oil
150g long grain rice
2 chicken breasts
Handful of peas
550ml water
1 vegetable stock cube
1/2 tsp chilli flakes
1/2 tsp turmeric
1 tsp curry powder

Equipment

Chopping board Knife Measuring jug Saucepan Wooden spoon Scales Table spoon

<u>Skills</u>

Simmering Seasoning Chopping Frying

Savoury Rice

<u>Method</u>

- 1. Wash all vegetables
- 2. Chop the onion, dice the pepper and chop the tomato
- 3. Chop the chicken into large chunks
- 4. Add 1 tbsp. of oil to the saucepan, add the onions and fry for 5 minutes until softened.
- 5. Add the chicken and the turmeric and cook for another 5 minutes,
- 6. Add the pepper
- 7. Add the rice and fry for 2min
- 8. Add the water and when boiling add the stock cube, chilli flakes and curry powder and lower the heat
- 9. Season with salt, pepper and some more chilli if needed
- 10. Simmer for 15min until the rice is cooked, stirring frequently. Stir the tomato's through in the last few minutes.

<u>Mini bake well tarts</u>

Ingredients

<u>Pastry;</u> 50g margarine 85g almond flour or self raising flour 20ml cold water

<u>Filling;</u> 50g margarine 50g caster sugar 50g self raising flour 1 egg

6 tsp. jam

Equipment

Wooden spoon Knife Small bowl Jug Tablespoon Table spoon Rolling pin Pastry tin

<u>Method</u>

For the pastry

- 1. Weigh out the butter and plain flour. Rub together until it looks like breadcrumbs.
- 2. Add the water little by little until it combine to a stiff dough
- 3. Roll out thinly and place it in the round pastry tin and cut off excess edges

For the sponge:

- 1. Filling; Cream butter and sugar together and then add the egg and beat together
- 2. Add flour and mix well

To construct

- 1. Add a layer of jam
- 2. Spoon the filling on top of the jam
- 3. Bake in the oven 15-20min
- 4. Pack away

Puff pastry samosas

Ingredients

- Chop the onion, peel the potato and carrot and slice into small cubes. Cut 1. chicken in small pieces.
- 2. Add the oil to a frying pan and start frying the chicken and onions for 5 minutes.
- 3. Add the mixed vegetables and then the potato, stir well so it is all evenly mixed for another 2min.
- Add your spices, salt and pepper and mix well. Add water so the potato's 4. are just covered and leave to simmer until the water has gone and the potato's are soft.
- 5. When the potatoes are soft, lightly mash with the back of the spoon.
- 6. Roll out your pastry into a rectangle cut and divide into 6. Brush the edges with some water.
- 7. Place 1/6 of filling in the middle and fold the pastry over (one edge towards the opposite edge and gently seal
- 8. Continue all squares and then place on a baking tray. Brush with egg wash and bake until golden.

Next week you will use your own recipe to make a filling of your choice to go inside puff pastry.

- 1 chicken breast
- 1 small potato
- Small carrot
- Handful peas
- 1 garlic
- ¹/₂ onion
- $\frac{1}{4}$ tsp. chilli powder
- 🗄 tsp. Paprika
- 🗄 tsp. Garam Masala
- 1 tbsp. oil
- 1 ready rolled puff pastry
- Equipment
- Knife
- Chopping board
- Frying pan
- Spoon
- Jug
- Pastry brush

Topics covered

- ✓ India facts/what we know
- India physical geography
- ✓ India human geography
- \checkmark Climate and Monsoon
- ✓ Tourism in India
- \checkmark India's changing population
- ✓ Development within India
- ✓ Welcome to Dharavi
- ✓ India and its environment
- ✓ Future India
- ✓ India Report

Year 9 Knowledge organiser: Explore India

Key Ideas:

- 1. I can describe the location of India and its unique character.
- 2. I can describe the physical landscape variety of India
- 3. I describe how cities of India have grown and their impacts
- I can explain how development is changing India and its environment

Skills

 \square To research amazing facts using ICT

- □ To use mapping to investigate features
- To understand different cultures and ways of living
- □ To draw/label line graphs
- To write an extended written account
- □ To use ICT to research information

Places and Environments

♦ Ganges River
 ♦ Kashmir

- ♦ New Delhi
- ♦ Mumbai
- Goa
- Ghats
- ♦ Brahmaputra
- ♦ Kerala
- Thar Desert

Key Terms Used in this Unit

- States
- Colonialism
- Monsoon
- Hinduism
- Independence
- Bollywood
- Population
- Investment
- Aid
- Slums
- Disputes
- Resources
- Poverty
- Pollution
- Economic growth
- Standard of Living
- Exports
- Technology
- Space Race 41

Year 9 Spring Term Knowledge Organiser

Chord – 2 or more notes played at the same time Semitone – the shortest distance between 2 notes Tone – equal to 2 semitones Major tonality – happy, brighter sounding music based on a specific set of notes in a scale Minor tonality – sad, darker sounding music based on a specific set of notes in a a scale

Components of Physical Fitness

Aerobic Endurance - The ability of the cardiorespiratory system to work efficiently, supplying nutrients and oxygen to working muscles during sustained physical activity.

Muscular Endurance – The ability of the muscular system to work efficiently, where a muscle can continue contracting continuously against a light to moderate fixed resistance load.

Speed - The ability to cover a distance quickly. There are 3 types of speed (Accelerative speed, Pure speed and Speed Endurance. This is calculated by Distance travelled divided by the time taken.

Muscular Strength - The maximum force, measured in kilograms (Kg) or Newtons (N) that can be generated by a muscle or group of muscles.

Flexibility - The adequate range of motion in all joints of the body and the ability to move a joint fluidly through its complete range of movement.

letacarpals

Body Composition - The ratio of fat to fat-free muscle mass. Sporting success is a combination of body composition and athletic ability.

https://www.youtube.com/watch?v=KycE8YJeaEI

Components of Skill-related Fitness

Agility - The ability of a sports performer to quickly and precisely move or change direction without losing balance or time

Balance - The ability to maintain your centre of mass over a base of support. There are two forms of balance (static which is maintaining balance in a stationary position and Dynamic which is maintaining balance while in motion)

Co-ordination - The ability of the body to work together to move smoothly and accurately

Power - The ability to use strength and speed. It is the work done in a unit of time and is calculated in the following way Power-= Force (Kg) x Distance (m) / time (mins or seconds)

Reaction time - The time taken for a sports performer to respond to a stimulus, for example, the time taken for a sprinter to react to the starter gun.

https://www.youtube.com/watch?y=nJleyUBesi8

DID YOU KNOW ...?

The recommended safe heart rate for an individual during exercise is called your Maximum Heart Rate (HR max). To estimate your HR max you need the following formula: MAXIMUM HEART RATE = 220 - Your AGE. For example, if you are 20 Years old your HR max would be 220 - 20 = 200 beats per minute (bpm)

Dina Asher-Smith is a British and World Champion sprinter. She needs to have speed, power and reaction time to cover as much distance as possible, respond to the starter's pistol and move powerfully out of the blocks to get a good start. It is also important for sprinters to have excellent muscular strength and

muscular endurance

Harry Kane will require similar components of fitness in order to be successful. Speed and agility will be essential to move quickly into position avoid defenders when he has possession of the ball. He will also need a very high-level of aerobic endurance and muscular endurance.

Warming up and cooling down

Components of a warm up:

- Pulse raiser
- Stretches

2.)

4.)

5.)

2.)

3.)

Skill related

5 reasons why we must warm-up

- 1.) Increases the temperature of the muscles, tendons and ligaments, which reduces the chances of injury.
- Increases heart rate and body temperature safely, which reduces chances of injury. 3.)
 - Increases flexibility, which aids flexibility.
 - Mentally prepares you for exercise, which can help improve performance.
 - Increases oxygen delivery to the working muscles, which supports performance

6 reasons why we must cool down

- Gradually returns body temperature, breathing and heart rate back to their resting rate. 1.)
 - To mentally unwind.
 - To remove lactic acid, helping to prevent DOMS (Delayed Onset Muscle Soreness)
- 4.) To remove carbon dioxide and waste products.
- 5.) Improves flexibility. 6.)
 - Avoids blood from gathering in muscles (pooling), which can cause dizziness

https://www.nhs.uk/live-well/exercise/how-to-warm-up-before-exercising/ https://www.nhs.uk/live-well/exercise/how-to-stretch-after-exercising/

Aerobic Endurance	Muscular Endurance	Muscular Strength	Speed	Flexibility	Body Composition		
Pulse Raiser	Stretches	Skill related	Gastrocnemius	Hamstring	Quadriceps		
Gluteus Maximus	Pectorals	Biceps	Triceps	Pectorals	Oblique		
Tibia	Fibula	Humerus	Femur	Radius	Ulna		
Scapula	Clavicle	Vertebral Column	Cranium	Ribs	Sternum		
Agility	Power	Balance	Co-ordination	Reaction Time	Maximum Heart Rate		

Can you think of other sports performers who would require different components of fitness?

Some key terminologies to learn and remember

Principles of training	An example of the FITT principle in action	Exercise intensity: The Borg scale	
		(RPE – Rating of Perceived Exertion)	
Frequency – How often you train	Katarina Johnson-Thompson is a Team GB a	thlete and	
	competes in the Heptathlon. Katarina has b	egun RPE Intensity	
	circuit training to improve her fitness to be	able to 6 No exertion This scale	
Intensity – How hard you train	compete in her seven different events. Afte	r 2 weeks, 7 measures how	
	she feels her sessions should last longer. W	hich 8 hard performers	
	principle is this focusing on?	think they are	
Time – How long you train	After one month, Katarina increases the nu	mber of 10 working. It can	
	sessions she takes part in. The amount of se	essions 11 Light exertion also be used to	
	over a period of time is known as what?	12 measure Heart	
Type – How specific your training should be	Katarina is now benefiting from her circuit t	raining but Rate and training	
	is now looking to add more variation to her	sessions. 10 Somewhat hard zones.	
	Which principle would she be using if she v	vanted to	
Think back to a sport you have played and consider the	change the training programme?	15 Hard (Heavy) (RPE x 10 =	
training you would need to complete in order to perform	One year before the next Olympic games, K	atarina 10 Heart Rate)	
to your best. The FITT principle ensures you are working a	t needs to step up her training programme. N	ame the 17 Very Hard	
a level that will challenge you. If you are not working hard	component of the FITT principle she would	use to 18	
enough, your body will not adapt and your fitness will not	increase the difficulty of the training.	19 20 Maximal Evention	
improve.		20 Maximal Exertion	
Addisional Deinsipton attentions			
C Specificity D Progracius A Adam	tability D Reversibility V Variat	ion Individual Monder DOD Post and Postavany	
S specificity P Progressive A Adat	radility R Reversibility V variat		
Methods of training		Things to consider	
Methous of training		Things to consider	
Circuit training – This involves a number of different activ	ities that can be sport-specific or tailored to	Think about the methods of training and consider which sporting	
help improve certain levels of fitness	thes that can be sport-specific or tailored to	activities would require each method. Consider, football, badminton	
Continuous training – This is training at a steady pace mo	derate intensity to develop aerobic	rughy nethall gymnastics and athletics. When would you require	
endurance. At least 30 minutes of steady running is an ex-	ample of continuous training	each method of training?	
Fartlek training – This is a form of continuous training but	the intensity is changed by running at	cut method of duming.	
different speeds over different terrains	the intensity is changed by ranning of	Now consider the principles of training. Can you explain how one of	
Interval training – This method requires periods of every	the methods of training could use the EITT or additional principles of		
Plyometric training – This training develops sport-specific	explosive power and strength	training?	
Flexibility training – The method to develop flexibility at a	ioint This is conduction using stretching. The	i sumb	
three stretching categories are Static Ballistic and Proprio	ceptive Neuromuscular Facilitation (PNF)		
Speed training – Speed training can take many forms and	can be sport specific. The three types of		
sprints are Acceleration. Interval and Hollow sprints			
approved and the second and the second approved approve			

Your turn

Attempt to answer the following questions to help you understand.

- 1. Why is variation important in training for a sporting activity?
- Give three examples of the circuit training sessions you could include to improve your muscular endurance
- 3. Which type of Olympic athlete is most likely to use continuous training?
- 4. Why would a 100m sprinter feel like they are at maximal exertion on the RPE scale?
- 5. Can you name 2 advantages and disadvantages of interval training?
- 6. What method of training would be best suited to a footballer and why?
- Give an example of how a weight lifter could increase the intensity of their training.
- 8. How long would you need to exercise for to be taking part in continuous training?
- 9. Can you find at least one difference between hollow and acceleration sprints?
- You are planning to train for a 10k fun run. Plan a training programme which includes methods of training and the FITT principle.

Some key terminologies to learn and remember

Can you challenge yourself to complete the beginner's push-up challenge?

Simply complete the number of pushups for each day, until you complete the challenge.

What did you feel when completing the challenge?

How has your muscular strength improved?

Some key terminologies to kein und tentember								
Frequency	Intensity	Time	Туре	Continuous training	Interval training			
Speed training	Fartlek training	Weight training	Circuit training	Plyometric training	Specificity			
Progressive Overload	Adaptation	Individual needs	Rest and Recovery	Reversibility	Variation			

Extension activities

Consider joining a club or team with in the Open Academy.

Join a club or team outside of the Open Academy and tell your teacher of your experiences.

Watch online clips of sporting skills and games for the sports you take part in at the Open Academy.

Create posters or informational material to promote your favourite sport and fitness activities.

The caralovascular system	I	Functions of th	ne Cardiovascular	System					
	LMONARY VEINS	There are 4 ma	ain functions of thi	s system. Circul	ation and transpo	ort protection c	lotting and	temperature	
(inclusive and a)	1	regulation. Con	mplete the paragra	aph below and a	dd the missing te	rminology.	iotenig and	temperature	
		-			-				
NONARY ARTERY		Circulates	Transports	Oxygen	Protecting	Platelets	37°C	Infections	
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		I ne bloodand and							
	BICUSPID VALVE	constant							
		White blood ce	ells are essential in	t	he body and keep	oing it healthy. W	/hite blood	cells <u>helps</u> fight	
RIGHT			by producing ar	ntibodies that d	estroy harmful m	icroorganisms in	the body.		
LEFT	1	Finally, the car	diovascular system	n can help preve	ent the body from	n losing blood du	ring an inju	ry. Specialised blood	
VENTRICLE		cells, called	form a	clot and seal th	e damaged area.				
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	THICK WALL	The blood is in	ade up of Red bloc	or cens, white i	bioou cens, mater	iets and Flashia			
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(from lower body)	SEPTUM	how-your-hear	rt-functions						
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Going the extra mile activities. Here are some great ideas to do with family to avoid boredom that go above and beyond during the next half term.

The Arts	IT	DT	English and Drama	Humanities	PE
Create a Christmas play for you and your friends to work on over the internet. Make it hilarious.	C an you create a piece of spreadsheet art?	Research what different kinds of materials plumbers use. Why is copper used for some pipes and plastic for others? What sort of plastic is used?	Watch one of the briefings by the government. What makes a good information giving speech? How is it being delivered? Make your own.	Create a detailed plan to make the world more economically equal when we are all back to normal. Share it with anyone you can get to listen.	Create a new lockdown Olympic Sport. With the cancellation of Tokyo, your sport needs a name, at least 3 rules and a list of equipment needed.
Develop an observational humour stand up show. Watch how comedians tell a story. Think about their delivery and how they make it look like they have just had that thought. Try it.	Advise your family members on how to keep safe on line. Explain to them how scammers try to steal their money.	Design a meme. One that is informative but also can make someone laugh.	Devise a political protest speech outlining your objection to something political e.g. children's suffrage or the tyranny of schooling.	In 1917 Russia had a great revolution. What would a great revolution look like in 2027? What would be the similarities and differences if Year 9 were in charge?	Get family members to play even by TEAMs or Zoom! Send it to the organisers of the Quarantine Olympics to include it in the next games!
Watch a performance by an artist you love — many are on Instagram or YouTube. Evaluate the difference between a live performance and a studio edit.	Write out all the instructions required by a human to get up and ready for home school each day. Be as specific as you would be with a computer.	Make an interesting paper model. Do some origami research to find something fascinating to attempt.	Think about the points that agree and disagree with the following statement: There should be no democracy. We should have an overlord who makes all the decisions.	Why are we fascinated by crime? What makes Jack the Ripper such an interesting topic? Find out why if you can!	Create a diary of your physical activity each week. This could be a simple grid or list of activities.
Make a playlist that means something to you. Share it with friends and explain why it matters to you.	Think about how we can avoid mental health problems and remain connected online. Explain it to your family and make a plan.	Invent a new recipe and test it. Evaluate it compared to commercial products.	Think about a film you have watched recently. Imagine you had control of the story from half way through. How would you develop it?	How can we be greener as a society using technology? Create an infomercial advertising a product.	Think about what exercise or activity you completed, how long did you exercise for and how you felt during and after the activity.