Thomas Estley Community College Year 7 Spring Term Knowledge Organiser







What are Knowledge Organisers?

A knowledge organiser is an easy way that each subject can summarise the most important information. Each subject section will include key terms, short explanations, glossary words, diagrams etc making it clear to the student as to what is essential to learn. Each grid has an overall theme and these vary according to the subject being taught.

It will be the students responsibility to keep the knowledge organisers safe and refer to them over the whole academic year.

How will these be used at Thomas Estley?

At Key stage 3, you will be given a knowledge organiser each term. You need to keep these safe in your learning packs that you were provided with at the start of the academic year.

Your subject teachers will use these in a variety of ways, for both class work, remote learning opportunities and homework. They will be used to help with revision for class quizzes and retrieval practice activities. They will also be used for flip learning activities, where subject teachers will ask you to learn some information and then go in to it in more detail in class.







Revision Tips and Tricks!

Teach it!

Teach someone your key facts and the get them to test you, or even test them!



Flash Cards

Write the key word or date on one side and the explanation on the other. Test your memory by asking someone to quiz you on either side.

Hide and Seek

Read through your knowledge organiser, put it down and try and write out as much as you can remember. Then keep adding to it until its full!

N.

Sketch it

Draw pictures to represent each of the facts or dates. It could be a simple drawing or something that reminds you of the answer.



Record yourself on your phone or tablet reading out the information. These can be listened to as many times as you want!



FRUN

Post its

Using a pack of postit notes, write out as many of the keywords or dates as you can remember in only 1 minute!



Back to front

Write down the answers

and then write out what

teacher may ask to get

the questions the

those answers.

Practice!

Some find they remember by simply writing the facts over and over again. Simply speak the facts and dates out loud as you're reading the Knowledge Organiser. Even try to act out some of the facts – it really helps you remember!

Read Aloud



Year 7 Spring		Key dates		Key people					
Term	24 June	Battle of Bannockburn	Richard II	King of England	d from 1377 until he was	deposed in 1399.			
Britain	1314		John Ball	an English prie	an English priest who took a prominent part in the Peasants' Revolt of 1381.				
	April 1337	The Hundred Years War begins	Wat Tyler	a leader of the	a leader of the 1381 Peasants' Revolt in England.				
C1348 – 1500S			Llewellyn	was Prince of	Wales from 1258 until his	death in 1282.			
Lessen Content	June 1348	Black Death arrives in England	Owain Glyndwr	a Welsh leader aim of ending	a Welsh leader who instigated a fierce and long-running yet ultimately unsuccessful war of independence with the aim of ending English rule				
	1356	Battle of Poitiers	Edward I	also known as	Edward Longshanks and	the Hammer of the Scots , was King of England from 1272 to 1307			
Medieval Towns and	15 June	The Peasants Revolt begins	Robert the Bruce	was King of Sc	ots from 1306 to his deat	h in 1329.			
Cities	1381		William Wallace	a Scottish knig	ht who became one of th	e main leaders during the First War of Scottish Independence.			
The Black Death	25 October 1415	Battle of Agincourt	Joan of Arc	a heroine of Fi	rance for her role during	the Lancastrian phase of the Hundred Years' War			
The Descentia Develt			Richard III	was King of En	was King of England from 1483 until his death in 1485. He was the last king of the House of York.				
	22 May 1455	The Wars of the Roses begins at	Henry VII	King of England from his seizure of the crown on 22 August 1485 to his death in April 1509. He was the first monarch of the House of Tudor.					
Controlling other		St Albans	Martin Luther	Religious reformer who criticised the Catholic Church, and helped to start the Reformation in Europe.					
countries - wales	22 August	Battle of Bosworth Field:	Henry VIII	King of England from 1509 until his death in 1547. Henry is best known for his six marriages.					
Controlling other countries - Scotland	1465			The of Alagon Outer of Fingland from June 1509 until May 1533 as the first wife of King Henry VIII.					
Controlling other		Key Words - Glossary							
countries -	urban	means "related to a city"			chivalry	the medieval knightly system with its religious, moral, and social code			
Ireland+France	rural	countryside rather than the t	town		Civil War	a war between organized groups within the same state or country.			
The Wars of the Roses	disease	any harmful deviation from t of an organism	he normal structural or fur	nctional state	archeologist	a person who studies human history and prehistory through the excavation of sites and the analysis of artefacts and other physical remains.			
The King in the Cor	plague	an epidemic disease that cau	ises high mortality		dynasty	a line of hereditary rulers of a country.			
park	symptoms	a physical or mental feature condition of disease	which is regarded as indica	ting a	divorce	the legal dissolution of a marriage by a court			
Henry VII	insurrection	a violent uprising against an	authority or government.		catholicism	the faith, practice, and church order of the Roman Catholic Church			
	Cymru	the Welsh name for Wales			protestantism	the faith, practice, and Church order of the Protestant Churches			
Henry VIII	heir	a person legally entitled to th person's death	ne property or rank of anot	.y or rank of another on that r		a 16th-century movement for the reform of abuses in the Roman Church ending in the establishment of the Reformed and Protestant Churches			
Religious Changes	disembowelle	d cut open and remove the inte	ernal organs of		heresy	belief or opinion contrary to orthodox religious (especially Christian) doctrine.			
					-				

Key resources: www.tecchistoryks3.blogspot.com **Key Assessment:** 50 minute assessment based on skills from Paper 1 GCSE History Questions 6a – 8 or 9

Oliver Twist

Key Vocabulary	Definition
Morality	-a code of wrong or right. Good = moral, bad = immoral
Vulnerable	- In a situation in which you could be easily harmed (on the streets)
Naive	- To have no experiences of the complications of life
Workhouse	- Place where people who couldn't support themselves worked
Poverty	- State of being very poor
Malicious	- Meant to harm or upset someone

Character							
Oliver	 'pale, thin' orphan who is treated badly by almost everyone he meets. He tries his best to be a good person and experiences 'horror and alarm' whenever he sees crimes being committed. 						
Fagin	An old man who runs the gang of pickpockets. He seems kind but his 'villainous-looking and repulsive face' reflects his selfish nature as he gets young boys to do his dirty work for him.						
Jack Dawkins (The Artful Dodger)	A young boy who introduces Oliver to Fagin's gang who has 'all the airs and manners of a man'. He's confident and cunning.						
Bill Sikes	A 'rough man' who has been a criminal for many years. He beats his dog viciously and brutally kills his girlfriend, Nancy.						
Nancy	Bill's girlfriend who risks her life to help Oliver escape from the gang. She loves Bill even though he treats her abusively and she feels guilty about the life of crime she has led.						

Context						
Charles Diskons	Charles Dickens was born 7th February 1812 in Portsmouth. His novels are set in Victorian times (1830- 1900). Dickens had to work in harsh conditions as a child when his father was sent to prison. Victorian					
	where crime developed and in the early 1800s the first police force was created expected to know their place in society and the church taught people to be cor	d. Victorian people	were were on'.			

Writing and Reading around the world

Language Devices

Alliteration	Repetition of the same letter at the start of two or more words
Connotation	Associated meaning of the word
Extended Metaphor	When an author uses a metaphor throughout a long passage or even an entire poem
Imagery	Visually descriptive language
Metaphor	Saying something <u>is</u> some- thing else, for effect
Onomatopoeia	Where words are used to imitate sounds
Personification	Making objects have hu- man characteristics
Simile	Comparing using "like" or "as"
Sibilance	The repetition of an "s" sound in one or more words
Theme	The central idea of a piece of literature

Key Vocabulary							
Haiku	A Japanese poem of seventeen syllables, in three lines of five, sev- en, and five						
Myths	A myth is a traditional story that explains the beliefs of a people about the natural and human world. The main characters in myths are usually gods or super- natural heroes.						
Legends	A legend is a traditional story about the past. The main charac- ters are usually kings or heroes. Some examples of well-known legends include the tales of Odys- seus from Ancient Greece, Beowulf from the Norse lands and King Arthur from Old England. Like myths, legends were thought to be true						
Colonisation	The action or process of settling among and establishing control over the indigenous people of an area.						

More Vocabulary to Learn

Articulate	To express things clearly.
Create	To make something new, or invent something.
Epic	Used to describe events that happen over a long period and usually involve a lot of action and difficul- ty.
Hero	A person who is admired for having done something very brave or having achieved something great.
Intent	To have as your plan or purpose.
Narrative	A story or description of a series of events.
Structure	The way something is ar- ranged or organised.

Y7 Spring Maths Knowledge Organiser

Торіс	Key fact							Hegarty maths clip number	
Read, write and compare positive integers and decimals		Hundreds Tens	Ones	Decimal point	Tenths	Hundredths	One-Thousandths		13, 14 45 & 46
Multiply and divide by powers of 10		Multip Divid	olying: Mov ing: Move t	e the d he digi [.]	igits to t ts to the	he left right			15 & 16
Calculations with integers	Di	Addition and Subtraction: put in columns Multiplication: Remember place holder Division: Remember bus stop and remember to carry						1 to 12 & 18 to 23	
Rounding	5 or more: round up 4 or less: keep the same Look to the right							17, 56 & 130	
Fatimation		Significant f	igures: star	t count	ing at fir	st non-z	ero		121
Estimation		Round each value to 1 significant figure							131
expressions	Collect a e.g.	Collect all the flike terms (numbers, x, x ² , x ³ are all separate terms) e.g. $12 + 3x + 6x^2 - 2x^3 - 5 - 3x + 5x^2 + 7x^3 = 7 + 11x^2 + 5x^3$ 3y means 3 x y <u>7</u> X means 7 ÷ x					rms)	156 and 157	
Simplifying ratio	Divide all parts by the highest common factor. Always include the colon (:).						de	329	
Perimeter	Perimeter is the distance all the way round a shape. All sides added together.						548-552		
Area	rectangle b A = bh	e h	parallelog h A = bh	ram	tria	ngle $\frac{1}{2}bh$			553-559

Pictograms	Use the key to work out the numbe	r of cupcakes sold each	426
		day.	
	Monday 🧉 🚽 🖕 🧉	5 x 6 = 30	
	Tuesday	2.5 x 6 = 15 4 x 6 = 24	
	Wednesday = 6 cupcakes	3.5 x 6 = 21	
	Thursday	7 x 6 = 42	
	Friday	10 x 6 = 60	
	Saturday	9.5 x 6 = 57	
	Sunday		
Bar charts	Which type of movie was most popula How many people said comedy was th	ar? Romance nis favourite? 4 How many people were asked in total? 4 + 5 + 6 + 1 + 4 = 20	425
	0 Comedy Action Romance Drama SciFi		

Key Vocabulary

 \circ Integer – a whole number \circ Product – the result of a multiplication. \circ Divisor – the number that you are dividing by. Eg. 16 divided by 2. 2 is the divisor. \circ Quotient - the answer after you divide one number by another.

Power/Indices - The index of a number says how many times to use the number in a multiplication. It is written as a small number to the right and above the base number.
 Root – The inverse operation of a power.
 Significant figures - Leading zeros are not significant. For example, 0.00052 has two significant figures: 5 and 2. Trailing zeros in a number containing a decimal point are significant.

• Remainder - A remainder in mathematics is what's left over in a division problem.

 $\circ\quad$ Round - Rounding means making a number simpler but keeping its value close to what it was.

○ Truncate – A method of approximating a decimal number by dropping all decimal places past a certain point without rounding. ○ Estimate - To estimate means to find something close to the correct answer. ○ Approximate – an alternative word for estimate. ○ Area: The space inside a 2D shape ○ Perimeter: Distance all around a shape ○ Term- each part of an expression. A single number or variable within an expression. ○ Expression- a mathematical sentence containing numbers and variables. ○ Simplify: Write in shorter form.

MES PASSE-TEMPS Image: Scan the QR code with your phone camera to practise on Quizlet	Qu'est ce que tu aimes faire ? • What do you like doing ? Le soir/ le weekend in the evenings/ at the weekends	mer
Les ordinateurs et les portables	Le samedi matin/ on Saturday mornings en hiver in the winter après-midi/soir afternoons/evenings guand il fait beau when it's nic	er e weather
Qu'est ce que tu fais ? avec ton ordinateur ? avec ton portable?What do you do/ are you doing ? with your computer? with your mobile? I play I surf /i'm surfing the net I chat/ I'm chatting on MSN.Je regarde des clips vidéos Je télécharge de la musique J'envoie des SMSI watch / I'm watching video clips I download/I'm downloading music I send/ I'm sending SMS	J'aime I like J'aime I like retrouver mes amis en ville. meeting my friends in town. regarder la télé watching TV jouer sur ma PlayStation. playing on my PlayStation. faire les magasins. going shopping. jouer au football. playing football. trainer avec mes copains phoning my mates.	s d
Je texte I text/ I'm texting Je parle avec mes copains/ I talk/ I'm talking to my friends/mates mes copines/ mes ami(e)s J'envoie des e-mails I send/I'm sending e-mails	Le futur Je vais I'm going Ce sera = It will be quelque fois sometimes Je vais I'm going Ce sera = It will be tous les jours often II / elle va He/ she is going often tous les jours everyday On va We are going tous les soirs every even aller on ville tous inféree all the times	ìing
Le sport • Sport Je joue I play au basket basketball	faire du sport / de la natation to do sport / go swimming manger au restaurant to go shopping de temps an the time faire les magasins to go shopping deux fois par semaine twice a	, me to time a week a week
au billiard billiard/snooker/pool au foot(ball) football au hockey hockey au tennis tennis au volleyball volleyball sur la Wii on the Wii à la pétanque/ aux boules boules au tennis de table /au ping-pong table tennis	Qu'est ce qu'ils font? • What do they do? Il fait de la lutte he does wrestling Elle fait du jogging she goes jogging Elle fait du jogging she goes jogging Elle a gagné le match she won the match Il est champion régional he's the regional champion Elle s'entraine (trois) fois she trains (3) times	2 g ng
Tu es sportif(ve)? Are you sporty? Je suis (assez) sportif(ve) I'm quite sporty Je ne suis pas très sportif(ve) I'm not very sporty Mon sportif/ ma sportive préférée My favourite sportsman/ sportswoman is	par semainea weekJe fais du véloI go cyclingIls font de la musculationthey do weight trainingJe fais de la danseI do danceElles écoutent de la musiquethey listen to musicJe fais de la gymnastiqueI do gymnasticsIls jouent au footthey play footballJe fais de la natationI go swimmingElles regardent la téléthey watch TVJe fais de l'équitationI go horse-ridingJe fais de s promenadesthey like R&BJe fais des promenadesI go for walks	

Employment Keywords:

Full time Freelance Part Time Venue Manager Session musician Studio manager Mastering Engineer Live sound technician Sound engineer Roadie Artist Manager Record Producer



The role of the recording studio:

A recording studio is a facility where sound recording and mixing takes place. A number of job roles work with the studio to ensure the studio runs efficiently and produces a professional sound. In this section you will learn about these different recording roles and the process of making a sound recording. A recording studio works with other organisations in the industry: - a record label might book the studio to record a song for one of their artists for which they will then own. - An artist/band might book a studio to record their own songs to create a demo - A composer might book the studio themselves (as well as the musicians) to record a version of their song so they can pitch their music to publishers

Venues:

Sports arena Theatre Park band-stand Restaurant Dance festival Pub Outdoor festival Concert hall

Revision Video <u>https://www.youtube.com</u> <u>/watch?v=QtJR-</u> <u>OEMU7Y&feature=youtu.b</u> <u>e</u>

The music industry

Year 8 Music

Extravaganzas

Melodramas

Minstrelsy

Dissonance

Blue notes

Syncopation

Push rhythms

Interval

Tritone

Riff

Cross rhythms

Texture

Tonic

Dominant

Word painting

Neapolitan chord

duet

The background.....

West Side Story is an American musical and was completed in 1957. The music is by **Leonard Bernstein** and the words are by **Stephen Sondheim**. It is a jazzy musical based on Shakespeare's story of Romeo and Juliet but set in 20th-century New York against a background of racial gang warfare.

There are two rival gangs - the Sharks who are originally from Puerto Rico and the Jets who were born in New York. **Tony** (tenor) and **Maria** (soprano) meet at a dance and fall in love but have allegiances with opposing gangs. Both acts end with a murder.

The musical was groundbreaking because of its tragic tone, sophisticated musical style and innovative extended dance sequences which are integral to the show. The music has elements of opera, musical, jazz and Latin-American dance music. 'Something's Coming' is one of the well-known songs from West Side Story. Others include 'Somewhere', 'Maria' and 'Tonight'.

The first production was on Broadway. In 1961 it was made into a successful film and since then has been performed many times by theatre, opera companies and schools.

'Something's Coming' is taken from Act I and is Tony's first solo. At this point he has not met Maria. He has become disillusioned with gang warfare and looks forward to a better future. He wants to leave the Jets but agrees to join them to go to a dance later that evening. **ARIA**

Somethings coming: <u>https://www.youtube.com</u> /watch?v=FOQPMjKLQQU



Year 8 Music



What is a force?

- A force can be a push or a pull
- A force is measured in Newtons (N)
- We measure forces with a newton meter
- Forces explain why objects will move, change direction and change speed
- Forces always act in pairs, we call these interaction pairs

e.g. the tennis ball exerts a downward force of weight onto the table, the table exerts an equal and opposite reaction force onto the ball



Balanced and unbalanced forces

- When forces acting on an object are the same size, but acting in different directions, we say that they are balanced
- When forces are balanced, the object is either not moving (stationary) or moving at a constant speed
- When the two forces acting on an object are not the same size, we say that the forces are **unbalanced**
- When forces are **unbalanced**, the object will either be in

acceleration or deceleration

The **resultant force** is the difference between the two unbalanced forces



(\mathcal{P}) **Key terms**

Make sure you can write definitions for these key terms.

Types of forces

- Contact forces act when two objects are physically touching
- Air resistance and friction are examples of contact forces
- Non-contact forces act when two objects are physically separated (not touching)
- Examples of non-contact forces include gravitational force and magnetic forces
- We call the region where an object experiences a noncontact field. force а examples of these include gravitational fields and magnetic fields

Gravity

- **Gravity** is a non-contact force that acts between two objects
- Gravitational force pulls you back to Earth when you jump
- The size of the gravitational force depends on the mass of the two objects and how far apart they are
- Weight is the downward force caused by gravity acting upon the mass of an object, it is measured in Newtons (N)
- **Mass** is the amount of matter within an object, whereas weight is the downward force of the object, we measure mass in kilograms
- We calculate weight with the equation:

```
weight (N) = mass (kg) × gravitational (N/kg) field strength
```

• The value of the gravitational field strength can vary, so although a person's mass would be the same on different planets, their weight would not be

Friction and drag

- Friction is a force which will slow down a moving object due to two surfaces rubbing on one another
- The greater the friction, the faster an object will slow down, or the greater the force it will need to overcome the force of friction. For example, it is easier to push a block on ice than on concrete, as the ice is smoother and causes less friction
- When an object is moving through a fluid, either liquid or gas, the force which slows it down is known as drag
- The fluid particles will collide with the moving object and slow it down, meaning that more force is needed to overcome this
- Both drag and friction are contact forces as the two surfaces in friction, and the object and fluid particles in drag, come into contact with one another
- Both drag and friction are forces so they are measured in Newtons (N)



air resistance, atmospheric pressure, contact force, drag, equilibrium, extension, friction, linear relationship, moment, newton, incompressible, stress, resultant force





- placed near a magnet, this is a type of non-contact force as the materials do not have to touch for the force to be apparent
- The three magnetic metals are iron, nickel and cobalt

Electromagnets

- Electromagnets are made by wrapping a coil of wire around a magnetic **core**
- Electromagnets only work when electricity is flowing through the coil, which means that they can be turned on and off
- Electromagnets are also stronger than **permanent** magnets
- The electromagnet will produce the same magnetic field shape as a bar magnet

iron core with current on



- You can increase the strength of an electromagnet by:
 - Increasing the number of turns on the coil around the core of the electromagnet
 - Increasing the current which is flowing through the coil of wire
 - Using a more magnetic material for the core, e.g. iron rather than aluminium



¿Qué estudiasr? What do you study?		El uniforme uniform		Opiniones Opinion	ns		h a si sa	¿Cómo es tu ins	¿Cómo es tu insti? What's your school like		ike?		
Estudio	Letudy	informática		Llevo I wea	r	dibujo?	DO YOU IIKE art?	e Aburrido/d	boring	Es	It is	pequeño/a	small
		í		Una camiseta	a T- shirt	Sí, me gusta el	Yes, I like c	urt Difícil	difficult	antiguo/a	old	mixto	mixed
ciencias	science	inglés	English	Una camisa	a shirt	dibujo		Divortido/a	fup	bonito/a	pretty	masculino	boys
dibujo	art	matemáticas	maths	Una chaqueta	a blazer			Divernao/a	1011				school
educación física	PE	música	music	Una corbata	a tie	No, no me gusta el dibujo	No, I don'i like art.	Fácil	easy	bueno/a	good	femenino	girls school
español	Spanish	religión	RE	Un jersey Una falda	a jumper a skirt			Importante	important	feo/a	ualv	publico	public
francés	French	teatro	drama	Un vestido	a dress	Te gustan las ciencias?	Do you like science?	e Interesante	interesting	neo, a			
				Unos pantalone	s trousres			Práctico/a	practical	granae	big	privado	private
geografia	geograpny	fechologia	technology	Unos zapatos	shoes	Sí, me encantan las ciencias	Yes, I love	Útil	useful	horrible	horrible		
historia	history						Science			moderno/a	Modern		
¿Cuál es tu día fa	avorito? What i	s vour favourite	dav?	¿Qué hay en t	u insti? What is	s there in your school	?	¿Qué haces du	rante el recreo? \	Vhat do you do du	ring break?		
		- ,				·		Como	Leat	Bebo	•	l drink	
Mi día favorito es	s el lunes M	y favourite day i	s Monday	En mi insti nay	·	In my school there is	s		A senduris	h A <i>a</i> u <i>a</i>		Watar	
Los martes estud	io 0	n Tuesdays I stuc	ly	Un campo de	fútbol	A football pitch		Un bocadilio	A sandwic	n Agua		water	
¿Por qué?	W	hy?		Un comedor		A dining room		Unos caramelo	s Sweets	Un refreso	:0	A fizzy drin	k
Porque	Be	ecause		Un gimnasio		A gym		Chicle	Chewing	gum Un zumo		A juice	
Por la mañana	In	the morning		Un patio		A playground		Una chocolatii	A chocolo	te bar Leo mis S	MS	I read my t	exts
Por la tarde	In	the afternoon		Una biblioteco	a	A library		Fruta	Fruit	Escribo S/	٨S	I write my t	exts
Estudiamos	W	e study		Una clase de	informática	An ICT classroom		Unas patatas fi	itas Some crisp	Nunca ha	igo mis	l never do	my
No estudio	lo	, don't study		Una piscina		A swimming pool				Gebeles		Homework	
		,		Unos laborato	rios	Some laboratories			Expresiones de	tionen o Tineo	Palab		uantas
Los profesores Te	achers			lings clases		Some classrooms			expressions	nempo nme	High fr	equency wo	ords
El profesore es	The (m	ale) teacher is							normalmente	normally	algo	some	ething
La profesora es	The (fe	male) teacher is .		No nay piscin	a		Los días de of the week	la semana- days	siempre	always	donde	wher	e
paciente	patien	t		To revise th	his topic		lunes martes	Monday Tuesdays	a veces	sometimes	tambie	én also	
raro/a	odd						miércoles	Wednesday Thursday	nunca	never	tampo	nor/r	neither
severo/a	strict			Miln	isti		viernes sábado	Friday Saturday	primero	first	hay	there	e is
simpático/a	kind,ni	се		Vocabu	Ilario	SCAN ME	domingo	Sunday	luego	then	pero	but	

Gramática

Me gusta / me gustan

- You use **me gusta / me gustan** to say whether you like something.
- You must put the correct definite article (el,la,los or las) in front of the noun.
- Me encanta/me encantan (I live) works in the same way.

Singular Me gusta el/la ... No me gusta el/la ... Me encanta el/la...

Plural Me gustan los/las... No me gustan los/las... Me encantan los/las...

Adjectives

Adjectives describe nouns. Their endings change to agree with the noun they describe. Adjectives fall into three main groups. The endings for each group work like this:

Singular		Plural			
Masculine	Feminine	Masculine	Feminine		
Seri o	Seri a	Seri os	Seri as		
Verde	Verde	Verd es	Verd es		
Azul	Azul	Azul es	Azul es		

The definite & indefinite articles

The plural form of un/una (a) is unos/unas (meaning some)

	Singu	ular	Pl	ural
Masculine	Un laboratorio A laboratory		Unos laboratorios Some laborator	
Feminine	Una clase	A classroom	Unas clases	Some classrooms

Remember, there are also four words for 'the' in Spanish.

	Sing	jular	Р	lural
Masculine	el laboratorio the laboratory		los laboratorios the laboratori	
Feminine	la clase	the classroom	las clases	the classrooms

Present Tense Verbs

There are 3 groups of verbs in Spanish:

-ar verbs	-er verbs	-ir verbs
Estudiar to study	Comer to eat	Vivir to live
Estudi o I study	Com o l eat	Viv o I live
Estudi a You sg study	Com es You sg eat	Viv es You sg live
Estudi a He/she/it studies	Com e He/she/it eats	Viv e He/she/it lives
Estudi amos We study	Com emos We eat	Viv imos We live
Estudi áis You all study	Com éis You all eat	Viv ís You all live
Estudi an They study	Com en They eat	Viv en They live



Year 7 PSHE – Health, Wellbeing and Relationships

	-	
<u>Key Words</u>	Thi	ngs to think about:
Friends	1.	Who is important to me?
Kindness	2.	Why are those people important?
Equality	3.	Do I like change?
Health	4.	How to I react to change?
Change	5.	How do I make friends?
Bullying	6.	Why am I friends with my friends?
Media	7.	What influences me?
Influence	8.	How do I make decisions?
Stability	9.	What is a healthy lifestyle?
Negativity	10.	Do I have a healthy lifestyle?
	11.	What is positive in my life?
	12.	What is negative in my life?
	13.	What type of person do I want to be?

Examples of what could be considered as negative influences

- The media tv/news or adverts
- Friends
- Social media

<u>Key Words</u>

Prejudice - preconceived opinion that is not based on reason or actual experience.

Discrimination – the unjust treatment of different categories of people, especially on the grounds of race, age, sex, or disability.

Hate Crime - acts of violence or hostility directed at people because of who they are or who someone thinks they are.

Resilience - the capacity to recover quickly from difficulties.

Influence - the capacity to have an effect on the character, development, or behaviour of someone or something

Year 7 Resistant Materials Knowledge Organiser

Single-point perspective - This shows an object from the front in a realistic way as it gets smaller going into the distance. The front view goes back towards a vanishing point, which is a point on the horizon line that all lines meet at.





top view

front view

2-dimensional orthographic projection

Orthographic and isometric projections of an object

Two-point

perspective - This

from the side with

shows an object

two vanishing

Orthographic Projection

They are used to show an object from every angle to help manufacturers plan production. Starting with a front view of a product, construction lines show where areas join and are used to draw a side and plan (top) view, ensuring that the drawing is accurate from all angles. These drawings are to scale and must show dimensions.

Freehand sketching is the quickest way of getting your initial designs on paper before an idea is forgotten. Freehand sketches are often done without a ruler or template and instead are produced quickly and freely.

Isometric

Isometric drawings, sometimes called isometric projections, are a good way of showing measurements and how components fit together. Unlike perspective drawings, they don't get smaller as the lines go into the distance.

There are three main rules to isometric drawing: •horizontal edges are drawn at 30 degrees •vertical edges are drawn as vertical lines • parallel edges appear as parallel lines

Rendering

Creating the illusion of light, tone and texture using graphic materials. Creating the illusion that an object is made from a particular material.



3 Tone shading



3-dimensional isometric projectio

Personal protective equipment (PPE)

- Apron
- Leather gloves
- Goggles
- Sturdy shoes

Surface treatments and finishes

Used to improve the appearance and protect the material. Polish, varnish, paint, wax and stain are examples.

Metals and alloys

Metals are found naturally and are mined from the earth. Metals used in products are extracted from the natural ore using large heat furnaces.

Wasting tools

small spaces

Steel rule

Centre punch

Marking knife

Try square

Bradawl

Coping saw – used to cut curved lines

Hand file – used to shape materials

Disc sander : used to waste material

Rasp – used to shape wood

Pillar drill – used to drill holes

Marking and measuring tools

Junior hacksaw - used for sawing plastic and metal

Needle file – used to shape materials, remove material is

Ferrous metals

Ferrous metals contain iron and are magnetic. They are prone to rust.



Non-ferrous metals do not contain iron and are not magnetic. They do not rust.

Alloys are mixtures of metal with an element to improve its properties or **aesthetic**. For example brass is a mixture of copper and zinc. Alloys can also be classified as ferrous or non-ferrous.

Timbers Wood comes from trees that are felled. There a are three main groups of wood:

Hardwoods - take longer to grow, are not easily sourced and are expensive to buy. Oak, beech and mahogany are hardwoods.

Softwoods - They are faster growing than hardwoods, making them cheaper to buy, and are considered a sustainable material. Pine is a softwood

Manufactured board - Manufactured boards are usually made from timber waste and adhesive. To make them more aesthetically pleasing they are often veneered. They are cheap to buy.



Moulds and casting – used to make complex shapes

Computer aided design (CAD) now has the capability to design new products in 3D, visualise them in a variety of materials and send images around the world for collaboration and consultation.



side viev



By using **computer aided manufacture (CAM)**, designs can be sent to CAM machines such as laser cutters, 3D printers and milling machines.





Material	Example	Properties	Year 7 Texti	les - Des	ign and T	Technolog	У 📃
Thermo	010	Changes		Equipr	nent		bre from a ant
chromic	JE.	colour with heat		R	1 0	X	Natural fi pl
Photo chromic	PHOTOCHROMIC LENS	Changes colour with	Sewing machine	Thread	Needle	Scissors	0m a
		light	One person at a time. Keep fingers away from moving parts	Whele		Carry with blade together. Always cut on the table	ral fibre fro plant
/lemory hape lloy		Metal that returns to original shape	Use slowly and steadily.	Pins	Button	away from fingers. Return to scissor rack when finished.	Natu
Hydro- chromic		with heat Changes colour in water	1º	Pins and needles are kept in containers. Use carefully pointing away from fingers and	F	Iron	atural fibre from a plant
	Ory = white		Such upper	body.	Pattern nieces are	Extremely hot.	2
Material	Example	Properties			used to make paper templates before cutting fabric out.	Always ask before using. Turn off after use. Store bot plate down	
Kevlar	POLICE	Very strong and resists cuts, tears.	Tape measure	Zipper Hand S	ewing	on rack.	hetic Fibre
Nomex		Heat and fire resistant		32			C Fibre Synt
Micro- encapsulatior	Encapulation Technology	Tiny beads encapsulated with liquid e.g.	Running S Running stitch is qui and easy	titch Back Stitch ck Back Stitches and look nea	s are strong Whi at finis	nip Stitch p stitches are used to h and neaten edges.	Syntheti
	Antibacterial to stop feet smelling	antibacterial	More Key words:	senarate nieces of fa	bric together		Fibre
Phosphorescen	t	Glows in the dark	Hem - fold on the ed Fray - the yarn comi	dge of fabric which is ing away at the edge	s sewn down makin of curt fabric.	g the edge look neat.	Synthetic

Dying - when the fabric colour is changed by soaking in water and fabric dye.

Very durable
Crease resistant
Can be recycled

Geography Knowledge Organiser Year 7: People and Place

Key Word	Definition
Population	The number of people in a given area.
Pull Factors	Reasons a person might be attracted to an area.
Push Factors	Reasons a person might leave an area.
Settlement	A place where people live.
Site	The land the settlement is built on.
Function	The reason it is there and the things it provides.
Dispersed	A settlement that is spread out allowing more space for farms.
Nucleated	A settlement that is centred on a focus point e.g. cross-roads, shops etc.
Linear	A settlement that is long and thin (like a line) along a narrow valley or a main road.
Urban Regeneration	Taking an old run-down area and turning it into something different and new.
Burgess Model	Theoretical model for the layout of cities.

Useful websites... https://www.bbc.co.uk/bitesize/topics/zg7nvcw



PUS

Geography Knowledge Organiser Year 7: British Geography

Key Word	Definition
Weather	The day to day condition of the atmosphere.
Climate	The average weather conditions of a place taken over many years.
Climate Graph	A graph which shows the climate of a place including temperature and precipitation.
Prevailing Wind	The most common wind direction, in the British Isles this is from the south-west.
National Parks	Large areas of public land chosen by the government for its scenic, recreational, scientific, or historical importance given special protection.
Microclimate	A small area with a distinctive climate which is different to that of the surrounding area e.g. temperature.
Fieldwork	Undertaking tasks outside of the classroom, this may be local or in another country!
Data	Information collected together to look into what is happening.
Method	What you did for your fieldwork to collect your data.
Analysis	Applying your understanding to your data.
Evaluation	What could improve your fieldwork if you were to do it again?



process &

present data

Northumberland

3 6

Peak District

New Forest

Yorkshire

Dales

Lake Dist

Dartmoor

Pembrokeshire Coast

North York Moors

South Downs

Broads

process

draw

apply wider

understanding

Useful websites...

https://www.geographyinthenews.org.uk/issues/issue-25/theunited-kingdom/ks3/



Spreadsheets are used to model data.

That means that they can be used to perform calculations on data and make predicts.

SPREGUSILEEDS			Column— runs down a sheet	7
Spreadsheets use data which is held in cells.	Cell reference	Formula bar	assigned a letter	
 Data and information are not the same. Data: facts and figures in their raw form Information: data that has been given structure or meaning 	File Home Insert Page Layout Formulas Data ieview View Help Image: A structure of the struct	p General ∽ 6 9 €0 9 Fs umber Fs	al Format as Cell Table ~ Styles ~ tyles Cells Cells Editing	☆ Share □ Comments ↓ ↓ Ideas Sensitivity ↓ ↓
For example: Data—10, 2107, 18 Information—Time 10am, date 21st July, temperature 18°	A B C D E F I I 1 -	J K L I	M N O P Q R	S T U
 Data can be gathered from different sources Primary source: collecting data yourself Secondary source: someone else collects the data 	5 6 7 8 9 10 11 12 13 Associated a number			
Each box on a spreadsheet is called a cell and they hold data. Each cell has a unique cell reference to identify its location.	14 assigned a number 14 assigned a number 15 assigned a number 16 assigned a number 17 assigned a number 18 assigned a number 19 assigned a number			
Example G7	Sheets Sheet1 (+) Sheet1 (+)	<sbook< td=""><td>: (t)</td><td></td></sbook<>	: (t)	
In order to complete calculations spreadsheets make use of formula. A formula uses the following basic symbols The = symbol is always at the start of a formula The + symbol is used for addition The - symbol is used for subtraction The * symbol is used for multiply The / symbol is used for divide Functions are also used which are predefined formula.	Common functions are SUM—adds a range of cells MAX—returns the largest value from selected cells MIN—returns the smallest value from selected cells AVERAGE—provides the arithmetic mean (average) of selected cells COUNTIF—counts the number of cells in a range that meet the given criteria IF— allows logical comparisons COUNTA—counts cells that are not empty	The tool bar at Changing colou There is a sort a ranged in ways cal, highest first at Conditional for to automatical a cell might tur	the top allows for formatting o ur, size, style etc and filter tool that allows for da that is most useful for the user at etc. rmatting can be set to allow the lly change if certain criteria is mo rn red if there was a negative nu	^t the data. ta to be ar- e.g. alphabeti- cell formatting et. For example mber



Wired and Wireless data transmission

A computer network can be either wired or wireless.

- Wired networks send data along cables.
- Wireless networks send data through the air using radio waves.

Bandwidth—Bandwidth is the amount of data that can be moved from one point to another in a given time. Higher bandwidth = more data per second



Bandwidth is measured in bits per second

A bit is the smallest unit of data Data transfer rates are now so good that bandwidth is usually measured in

Megabits per second (Mbps)

1Mb-1 million bits

A network is where devices are connected together usually by cable or WiFi. This could be a few computers in a room, many computers in a building or lots of computers across the world.



Internet services

There are a range of services provided by the internet. These include:

- World Wide Web •
- Email
- Online gaming
- Instant messaging •
- Voice over IP (VoIP) audio calls
- Internet of Things (IoT) •

•Media streaming (e.g. watching Netflix online) The rules for each service are different. As a result, a different protocol is used.

HTTP—HyperText Transfer Protocol—used so that data can be understood when sent between web browsers and servers.

HTTPS—is the secure version of HTTP where data sent is encrypted.

	Key Words
bandwidth	Amount of data that can be moved from one point to another in a given time.
buffering	Data arriving slower that it is being processed
internet	A worldwide network of computers
Internet of Things (IoT)	Takes everyday 'things' and connects them to the Internet eg smart light bulb, fridge, heating etc
IP address	A unique address for every device on the internet
packet	Networks send/receive messages in units called packets
protocol	All methods of communication need rules in place in order to pass on the message successfully. These sets of rules are called 'protocols'
Search engine	A website that allows user to look up information on WWW e.g. Bing, Google etc
Web browser	Piece of software(code) used to view information on the Inter- net
WWW	Part of the Internet that contains websites and webpages. NOT the same as the Internet.

Network Hardware—physical equipment required to set up a network

Hub—Connects a number of computers together. Ports allow cables to be plugged in from each connected computer.

Router—Used to connect two separate networks together across the internet

Sever—A powerful computer which provides services to a network

Cable—Used to connect different devices together. They are often made up of a number of wires.





Variation

- · The differences in characteristics of living things is known as variation
- · There is a large amount of variation between different species, but within species many more characteristics are shared
- · Even though two organisms may look the same, they will always have variation between them

Inherited variation

•	Is anything that comes directly from your	•	Is any type of variation that is caused by your	Ī
	parents, anything that you inherit		surroundings	L
•	Examples can include lobe less or lobed	ŀ	Factors that can cause environmental variation	L
	ear lobes and eye colour		include diet, education and lifestyle	

Environmental variation

- Environmental factors can also impact inherited factors, for example a poor diet can affect height or your exposure to the sun can affect skin tone
- · Characteristics which are inherited and not affected by environmental variation include natural eye colour, blood group and genetic diseases



Reproductive systems

Adolescence

- Adolescence is the process in which a child changes into an adult, it involves both physical and emotional changes
- The physical changes alone in this time are known as puberty, these are caused by sex hormones

The menstrual cycle

- The menstrual cycle is the process in which an egg is released from an ovary and leaves through the vagina
- Day 1: blood from the uterus lining leaves through the vagina, which is known as a period
- Day 5: the bleeding stops and the uterus lining starts to re-grow
- Day 14: an egg is released from one of the ovaries during ovulation
- If the egg is fertilised than the menstrualcycle stops until the baby is born



Fertilisation, implantation and gestation





Knowledge organiser

page 1

Pollination and fertilisation

Pollination is the fertilisation of the ovule, the point at which the pollen is transferred to the ovule from the anther to the stigma, there are two types of pollination

- · Cross pollination is between two different types of plant
- Self pollination happens within the same plant



Germination is the process in which the seed begins to grow, for this to occur the seed needs:

- · Water to allow the seed to swell and grow and for the embryo tostart growing
- · Oxygen for that the cell can start respiring to release energy forgermination
- · Warmth to allow the chemical reactions to start to occur within the seed

Parts of a flower Stamen Carpel Male part of the flower ,stigma∖ Female part of the flower anther carpel filament The anther produces The stigma is sticky to pollen catch grains of pollen The filament holds up The style holds up the the anther stigma The ovary contains ovules

Adaptations

- Adaptations are characteristics which organisms have developed to best survive in their surroundings
- Organisms with the best suited adaptations can breed and pass these on
- Those who are not best adapted will die out and not be able to pass on their genes



Key terms Make sure you can write definitions for these key terms.

Adaptation Adolescence Amniotic sac Anther Carpel Cervix Cilia Egg cell Embryo Environmental variation Fertilisation Fetus Gamete Germination Gestation Implantation Inherited variation Menstrual cycle Ovary Ovule Oviduct Ovulation Penis Petal Period Placenta Pollen Pollination Puberty Reproductive system Scrotum Semen Seed Sepal Sex hormones Species Sperm cell Sperm duct Stamen Style Testicles Umbilical cord Urethra Uterus Vagina Variation

Acids and alkalis **Knowledge organiser**

• The more concentrated the acid, the lower the pH

Chemical reactions

- A chemical reaction is a change in which atoms are rearranged to make new substances
- A reversible reaction is one where the products can react to get back the substances which you started with, most chemical reactions are not reversible
- You can look for signs that a chemical reaction has taken place such as flames, smells, heat change, a loud bang or gentle fizz

Acids and alkalis



Nitric acids form nitrates

that you see is the hydrogen gas being given off

As most gases are colourless and odourless, it is sometimes necessary to test a gas to see what it is. This helps you to understand what has happened during a reaction.

- To test to see if the gas is hydrogen: put a lit spill in the end of the test tube containing the gas. If there is a squeaky pop sound then the gas is hydrogen.
- The sound is caused by the hydrogen igniting and creating a miniature explosion.
- To test to see if the gas is oxygen: Blow out a lit spill so that the end glows. Put the glowing spill into the test tube containing the gas. If the spill reignites then the gas is oxygen
- To test to see if the gas is carbon dioxide: Put a lit spill into the test tube containing the gas. If the spill is extinguished then the gas could be carbon dioxide.
- To confirm the gas should be mixed with lime water (not from the fruit!). If the lime water turns a cloudy white then the gas is carbon dioxide



Key terms	Make sure ye	ou can wri	te definition	is for thes	e key terms.							
acid	acidic	alkali	alkaline	base	chemical	chemical	reaction	concentration	corrosive	displacement	hydroxide	indica
		neutral	isation	oxide	oxidation	pH scale	reversible	reactivity	salt	strong acid	universal indicator	w

oxide

۲

۲



Metal reactions and gas tests

- When a metal reacts with an acid it will produce a salt and hydrogen gas, the fizzing
 - metal + acid \rightarrow salt + hydrogen magnesium + hydrochloric acid → magnesium chloride + hydrogen

Combustion

- When substances burn in oxygen a chemical reaction called combustion takes place.
 - Combustion can only take place when there is a fuel to burn, heat to start the reaction and plenty of oxygen. The product of the reaction is an oxide.
 - carbon + oxygen \rightarrow carbon dioxide
 - copper + oxygen \rightarrow copper oxide
 - iron + oxygen \rightarrow iron oxide
 - magnesium + oxygen \rightarrow magnesium oxide

irritant neutral concentrated tor eak acid combustion lime water

۲

Year 7 - How does a river change from source to mouth?

What should I already know?

- A river is a moving channel of water from its **source** (start point) on high ground flowing to its **mouth** (end point) on lowland flowing into another body of water (lake or ocean).
- Rivers usually begin in **upland** areas, when rain falls on high ground and begins to flow **downhill**. They always flow downhill because of **gravity**.



Flooding:

- A river floods when the water normally flowing in the channel overflows its banks and spreads out onto the surrounding land.
- Physical Factors affecting flooding: Steep Slopes, Very wet soil, Very dry soil, Rock type
- Human Factors affecting flooding: Deforestation, Urbanisation & Over Farming

English	The breaking down or wearing
Crosion	away of rock in the river channel.
Hydroulic	Water enters cracks and
Action	compresses the air, crack then
ACTION	expands.
Abrasian	Stones rub/bang against river
ADPusion	bed/banks, breaking it down.
Attrition	Stones in the river bash together
	to become smoother/round.
Conscien	Chemicals in the water react with
Corosion	the stone and dissolve it.
	A natural process where
Transportation	material/sediment is carried or
·	moved.
Treation	Large stones and pebbles pushed
Iraction	along the river bed.
Coltotion	Small pebbles and stones
Saltation	bouncing along the river bed.
Evenencier	Sediment floating in the water of
Suspension	the river.
Colution	Sediment dissolved in the water
Solution	of the river.
Denecitier	When sediment is dropped due to
Deposition	a lack of energy.

UK Flood - 2019	Bangladesh Flood - 2019
 500 homes flooded and buildings evacuated 	800,000 people displaced from their homes
 Over £120m worth of damage caused 	 27,000 homes were destroyed
 100 soldiers sent to help with rescue and recovery 	• Food aid (rice and wheat) from other countries to help feed people

Causes

- God (punishment for sins)
- Miasma (bad air)
- Astrology
- Four Humours





Treatments

- Rubbing onions on the buboes
- Praying to God
- Drinking vinegar
- Eating crushed emeralds
- Balancing the Four Humours by bleeding or purging (being sick)

Preventions

- Filling the house with strong smelling herbs to stop the miasma
- Boiling vinegar or onions ٠
- Flagellation (whipping yourself)





Symptoms



Day 1 Painful swellings called buboes appeared in the victim's armpits and groin. These were usually about the size of an egg, but could sometimes be as big as an apple.



Day 4 The disease attacked the nervous system. This caused the victim to suffer spasms The victim was in errible pain.

Day 2 The victim vomited and developed a fever.



Day 5 Sometimes the buboes burst and a foul smelling black liquid pozed from the open boils. When this happened the victim usually lived. However, in most cases the victim suffered a painful death



- **Political** Peasants for the first time had some power, as most of the workforce died. They were able to demand higher wages.
- **Social** Art and architecture changes to reflect the Black Death, and art has more solemn themes. Latin because less widely spoken, and most texts are now written in English.
- **Economic** Countries are afraid to trade with each other for fear of spreading the Black Death, so the economy is affected.
- **Religious** Most of the priests and monks die of the Black Death as they would visit and comfort the dying. They were replaced with rubbish priests who could not even read or write!





King John and the Magna Carta

<u> King John (1199-1216)</u>

Brother of the popular King Richard I, who died shortly after his return from the 3rd Crusade. John was suspicious and had rebelled against both his father and brother. John inherited the cost of his brother's costly wars, but was a cruel and incompetent king.



Why were the barons angry at King John?

- Raised taxes for wars John lost!
- Took away barons power
- Tried to control the church
- Exerted power in Ireland, Wales and Scotland
- France rebelled against him

Medieval monks portrayed King John as an evil monster. This is because he tried to control the church and fell out with the Pope! Modern historians portray him as an energetic king who tried to increase his power in difficult circumstances.

The Road to the Magna Carta

The barons were angry with John and no compromise could be agreed. The barons issued a royal charter of demands which John was forced to accept on the field of Runnymede on **15th June 1215**. This became known as the **MAGNA CARTA**.

Some of the key terms of this were:

- It promised the protection of church rights
- Protection from illegal imprisonments
- All people were to be tried by jury.
- New taxation only with the consent of the barons The charter defined that a formal relationship should exist between the monarch and barons. The king was now subject to the law. These were radical ideas!

Consequences of the Magna

<u>Carta</u>

The power of the king was permanently damaged, and no king of England ever had 'unrestricted' power again. It was the beginning of democracy and formed the basis of the Universal Declaration of Human Rights (1948).





<u>UNIT 6 (Part 2)</u> <u>Describing my family and saying why</u> <u>I like/dislike them</u>

En mi familia tengo [In my family I have] Hay <u>cuatro</u> personas en mi familia [There are four people in my family]	<pre>mi abuelo, Jaime [my grandfather James] mi padre, Juan [my father John] mi tío, Iván [my uncle Ivan] mi hermano mayor /menor, Darren [my big/little brother Darren] mi primo, Ian [my cousin, Ian]</pre>	Me gusta "mi" porque es [I like my because he is] "Mi padre" es muy/bastante [My dad is very/quite] "Mi padre" también es un poco [My dad is also a bit]	alto [tall] bajo [short] bueno [good] delgado [slim] fuerte [strong] gordo [fat] guapo [handsome] antipático [mean] divertido [fun] generoso [generous] inteligente [clever] simpático [nice/kind] terco [stubborn]
Me llevo bien con [<i>I get</i> along well with] Me llevo mal con [I get along badly with]	<pre>mi abuela, Adela [my grandmother Adela] mi madre, Angela [my mother Angela] mi tía, Gina [my aunt Gina] mi hermana mayor /menor, Wendy [my big/little sister Wendy] mi prima, Clara [my cousin Clara]</pre>	Me gusta "mi" porque es [I like my because she is] "Mi madre" es muy/bastante [My mum is very/quite] "Mi madre" también es un poco [My mum is also a bit]	alta [tall] baja [short] buena [good] delgada [slim] fuerte [strong] gorda [fat] guapa [pretty] antipática [mean] divertida [fun] generosa [generous] inteligente [clever] simpática [nice/kind] terca [stubborn]



UNIT 6 - Part 1 (Intro)

Talking about my family members, saying their age and how well I get along with them. Counting to 100.

		MACCHUNE	FFRANKING
		MASCULINE	FEMININE
		alto [tall]	alta [tall]
		bajo [short]	baja [short]
Yo	soy	bueno [good]	buena [good]
		delgado [slim]	delgada [slim]
		feo [ugly]	fea [ugly]
		fuerte [strong]	fuerte [strong]
		gordo [fat]	gorda [fat]
		guapo [handsome]	guapa [pretty]
		musculoso [muscular]	musculosa [muscular]
Mi hermana menor			
[my younger sister]		aburrido [boring]	aburrida [boring]
Mi hermano mayor	es	antipático [mean]	antipática [mean]
[my older brother]		divertido [fun]	divertida [fun]
Mi madre [my mother]		generoso [generous]	generosa [generous]
Minadre [my father]		malo [bad]	mala [bad]
		simpático [nice/friendly]	simpática [nice/friendly]
		terco [stubborn]	terca [stubborn]



Year 7 Social Studies – Diversity and Respect

Key Words	Things to think about:
Key WordsDiversityImportanceDifferenceInfluenceCommunityBeliefMoralsReligion	 Things to think about: 1. Why is the UK so diverse? 2. What is diversity? 3. Why is respect important? 4. How should I react to difference? 5. What influences me? 6. What type of person would I like to be? 7. What do Christians believe? 8. What do Muslims believe? 9. How does religion impact us? 10. How can I make a difference? 11. How should I treat others?
Identity	12. How is Leicester diverse?13. How does diversity impact me?
кеѕрест	

Examples of how Leicester is diverse:

- 59.1 per cent of people living in Leicester are from ethnic minority groups.
- 41.1% of individuals living in Leicester were born outside of the UK.
- Leicester is home to 240 faith groups across 14 different faiths and beliefs.

Protected Characteristics

- Race
- Religion
- Disability
- Gender
- Sexuality
- Age
- Marriage
- Transgender
- Pregnancy



What is a force?

- A force can be a push or a pull
- A force is measured in Newtons (N)
- We measure forces with a newton meter
- Forces explain why objects will move, change direction and change speed
- Forces always act in pairs, we call these interaction pairs

e.g. the tennis ball exerts a downward force of weight onto the table, the table exerts an equal and opposite reaction force onto the ball



Balanced and unbalanced forces

- When forces acting on an object are the same size, but acting in different directions, we say that they are balanced
- When forces are balanced, the object is either not moving (stationary) or moving at a constant speed
- When the two forces acting on an object are not the same size, we say that the forces are **unbalanced**
- When forces are **unbalanced**, the object will either be in

acceleration or deceleration

The **resultant force** is the difference between the two unbalanced forces



(\mathcal{P}) **Key terms**

Make sure you can write definitions for these key terms.

Types of forces

- Contact forces act when two objects are physically touching
- Air resistance and friction are examples of contact forces
- Non-contact forces act when two objects are physically separated (not touching)
- Examples of non-contact forces include gravitational force and magnetic forces
- We call the region where an object experiences a noncontact field. force а examples of these include gravitational fields and magnetic fields

Gravity

- **Gravity** is a non-contact force that acts between two objects
- Gravitational force pulls you back to Earth when you jump
- The size of the gravitational force depends on the mass of the two objects and how far apart they are
- Weight is the downward force caused by gravity acting upon the mass of an object, it is measured in Newtons (N)
- **Mass** is the amount of matter within an object, whereas weight is the downward force of the object, we measure mass in kilograms
- We calculate weight with the equation:

```
weight (N) = mass (kg) × gravitational (N/kg) field strength
```

• The value of the gravitational field strength can vary, so although a person's mass would be the same on different planets, their weight would not be

Friction and drag

- Friction is a force which will slow down a moving object due to two surfaces rubbing on one another
- The greater the friction, the faster an object will slow down, or the greater the force it will need to overcome the force of friction. For example, it is easier to push a block on ice than on concrete, as the ice is smoother and causes less friction
- When an object is moving through a fluid, either liquid or gas, the force which slows it down is known as drag
- The fluid particles will collide with the moving object and slow it down, meaning that more force is needed to overcome this
- Both drag and friction are contact forces as the two surfaces in friction, and the object and fluid particles in drag, come into contact with one another
- Both drag and friction are forces so they are measured in Newtons (N)



air resistance, atmospheric pressure, contact force, drag, equilibrium, extension, friction, linear relationship, moment, newton, incompressible, stress, resultant force





- placed near a magnet, this is a type of non-contact force as the materials do not have to touch for the force to be apparent
- The three magnetic metals are iron, nickel and cobalt

Electromagnets

- Electromagnets are made by wrapping a coil of wire around a magnetic **core**
- Electromagnets only work when electricity is flowing through the coil, which means that they can be turned on and off
- Electromagnets are also stronger than **permanent** magnets
- The electromagnet will produce the same magnetic field shape as a bar magnet

iron core with current on



- You can increase the strength of an electromagnet by:
 - Increasing the number of turns on the coil around the core of the electromagnet
 - Increasing the current which is flowing through the coil of wire
 - Using a more magnetic material for the core, e.g. iron rather than aluminium

Acids and alkalis **Knowledge organiser**

• The more concentrated the acid, the lower the pH

Chemical reactions

- A chemical reaction is a change in which atoms are rearranged to make new substances
- A reversible reaction is one where the products can react to get back the substances which you started with, most chemical reactions are not reversible
- You can look for signs that a chemical reaction has taken place such as flames, smells, heat change, a loud bang or gentle fizz

Acids and alkalis



Nitric acids form nitrates

that you see is the hydrogen gas being given off

As most gases are colourless and odourless, it is sometimes necessary to test a gas to see what it is. This helps you to understand what has happened during a reaction.

- To test to see if the gas is hydrogen: put a lit spill in the end of the test tube containing the gas. If there is a squeaky pop sound then the gas is hydrogen.
- The sound is caused by the hydrogen igniting and creating a miniature explosion.
- To test to see if the gas is oxygen: Blow out a lit spill so that the end glows. Put the glowing spill into the test tube containing the gas. If the spill reignites then the gas is oxygen
- To test to see if the gas is carbon dioxide: Put a lit spill into the test tube containing the gas. If the spill is extinguished then the gas could be carbon dioxide.
- To confirm the gas should be mixed with lime water (not from the fruit!). If the lime water turns a cloudy white then the gas is carbon dioxide



Key terms	Make sure ye	ou can wri	te definition	is for thes	e key terms.							
acid	acidic	alkali	alkaline	base	chemical	chemical	reaction	concentration	corrosive	displacement	hydroxide	indica
		neutral	isation	oxide	oxidation	pH scale	reversible	reactivity	salt	strong acid	universal indicator	w

oxide

۲

۲



Metal reactions and gas tests

- When a metal reacts with an acid it will produce a salt and hydrogen gas, the fizzing
 - metal + acid \rightarrow salt + hydrogen magnesium + hydrochloric acid → magnesium chloride + hydrogen

Combustion

- When substances burn in oxygen a chemical reaction called combustion takes place.
 - Combustion can only take place when there is a fuel to burn, heat to start the reaction and plenty of oxygen. The product of the reaction is an oxide.
 - carbon + oxygen \rightarrow carbon dioxide
 - copper + oxygen \rightarrow copper oxide
 - iron + oxygen \rightarrow iron oxide
 - magnesium + oxygen \rightarrow magnesium oxide

irritant neutral concentrated tor eak acid combustion lime water

۲

Levels of organisation



Plant and animal cells

- To be able to observe a cell we need to use a microscope, this magnifies the cell to a point to which we can see it
- Plant and animal cells have small structures inside known as organelles, each of these performs a certain role which allows the cell to survive



Specialised cells

- Specialised cells are designed to carry out a particular function, because of this they have specific features and adaptations to allow them to carry this out
- Both plant and animal cells can be specialised, with these specialised cells working together to help the organism to survive

🕗 Key terms Make sure you can write definitions for these key terms.

Bioaccumulation Cell Community Competition Concentration Consumer Diffusion Ecosystem Food web Habitat Interdependence Microscope Niche Nucleus Organ Organisms Organ system Predator Prey Producer Population Specialised cells Tissue

Organs

- · An organ is a group of tissues that have the same function
- They can work with other organs in an organ system, such as the respiratory system which uses organs like the heart and lungs to transfer oxygen around the body
- Vital organs are the organs that need to keep functioning for an organism to stay alive, e.g. the heart

Movement into and out of cells

- The process in which substances move into and out of cells is known as diffusion
- This occurs across the cell membrane
- During diffusion particles move from an area of high concentration, to an area of low concentration



before diffusion after diffusior

Oxygen and nutrients enter the cell by diffusion, carbon dioxide and waste products leave

Disruption to food

chains

- Interdependence is the way in which living organisms rely on each other to survive
- A food chain will be disrupted if one of the organisms die out
 - If the producer dies out the rest of the food chain will also die out unless they have a different food source
 - If the consumer population die out the number of organisms which they eat will increase unless they are eaten by another organism
 - Bioaccumulation is the process by which chemicals such as pesticides and insecticides build up along a food chain

Food chains and webs

- Food chains show the direction in which energy flows when one organism eats another
- The direction of the arrows represent the direction in which the energy flows
- Food webs show how a number of different food chains are connected



- Producers are the organisms which start the food chain, they convert energy from the Sun, making their own food, these are often plants
- Prey are organisms which are eaten by other organisms
- Predators are the organisms which eat the prey

Competition

- · Competition is the process in which organisms compete with one another for resources
- Animals compete for food, water, space and mates
- Plants compete for light, water, space and minerals
- The best competitors are those who have adapted in order to best gain these resources
- As the number of a predator in a population increases the number of the prey will decrease as more are being eaten
- As the number of the predator decreases the number of the prey will increase as less are being eaten
- The relationship between the predator and the prey is known as a predatorprey relationship





m

ctivate on. Prodress - Succeed









Ecosystems

· All of the organisms which live

A community are all of the areas

in an ecosystem, the area in which

the organisms live in is known as

which an organism has within an

diet consists of 99 % bamboo

ecosystem, for example a panda's

· A niche is the specific role in

the habitat

Year 7 Resistant Materials Knowledge Organiser

Single-point perspective - This shows an object from the front in a realistic way as it gets smaller going into the distance. The front view goes back towards a vanishing point, which is a point on the horizon line that all lines meet at.

Two-point perspective - This shows an object from the side with two vanishing

points.

Rendering

Creating the illusion of light, tone and texture using graphic materials. Creating the illusion that an object is made from a particular material.



3 Tone shading



Orthographic Projection

They are used to show an object from every angle to help manufacturers plan production. Starting with a front view of a product, construction lines show where areas join and are used to draw a side and plan (top) view, ensuring that the drawing is accurate from all angles. These drawings are to scale and must show dimensions.

Freehand sketching is the quickest way of getting your initial designs on paper before an idea is forgotten. Freehand sketches are often done without a ruler or template and instead are produced quickly and freely.

Isometric

Isometric drawings, sometimes called isometric projections, are a good way of showing measurements and how components fit together. Unlike perspective drawings, they don't get smaller as the lines go into the distance.

There are three main rules to isometric drawing: horizontal edges are drawn at 30 degrees •vertical edges are drawn as vertical lines

parallel edges appear as parallel lines



Orthographic and isometric projections of an object









Personal protective equipment (PPE)

- Apron
- Leather gloves
- Goggles
- Sturdy shoes

Surface treatments and finishes

Used to improve the appearance and protect the material. Polish, varnish, paint, wax and stain are examples.

Metals and allovs

Metals are found naturally and are mined from the earth. Metals used in products are extracted from the natural ore using large heat furnaces.

Wasting tools

small spaces

Steel rule

Bradawl

Centre punch

Marking knife

Try square

Coping saw - used to cut curved lines

Hand file - used to shape materials

Disc sander : used to waste material

Rasp – used to shape wood

Pillar drill - used to drill holes

Marking and measuring tools

Junior hacksaw - used for sawing plastic and metal

Needle file - used to shape materials, remove material is

Ferrous metals

Ferrous metals contain iron and are magnetic. They are prone to rust.



Non-ferrous metals do not contain iron and are not magnetic. They do not rust.

Alloys are mixtures of metal with an element to improve its properties or aesthetic. For example brass is a mixture of copper and zinc. Alloys can also be classified as ferrous or non-ferrous.

Timbers Wood comes from trees that are felled. There a are three main groups of wood:

Hardwoods - take longer to grow, are not easily sourced and are expensive to buy. Oak, beech and mahogany are hardwoods.

Softwoods - They are faster growing than hardwoods, making them cheaper to buy, and are considered a sustainable material. Pine is a softwood

Manufactured board - Manufactured boards are usually made from timber waste and adhesive. To make them more aesthetically pleasing they are often **veneered**. They are cheap to buy.



Moulds and casting – used to make complex shapes

Computer aided design (CAD) now has the capability to design new products in 3D, visualise them in a variety of materials and send images around the world for collaboration and consultation.

By using **computer aided manufacture (CAM)**, designs can be sent to CAM machines such as laser cutters, 3D printers and milling machines.





Y7 Spring Maths Knowledge Organiser

Topic	Key fact	Hegarty
		maths clip
Read, write and compare positive integers and decimals	Hundreds Tens Ones Decimal point —— Tenths Tenths Hundredths One-Thousandths	13, 14 45 & 46
Multiply and divide by powers of 10	Multiplying: Move the digits to the left Dividing: Move the digits to the right	15 & 16
Calculations	Addition and Subtraction: put in columns	1 to 12 &
with integers	Multiplication: Remember place holder	18 to 23
	Division: Remember bus stop and remember to carry	
Rounding	5 or more: round up	17, 56 &
	4 of less: keep the same	130
	Significant figures: start counting at first non-zero	
Estimation	Round each value to 1 significant figure	131
Simplify	Collect all the 'like' terms (numbers, x, x ² , x ³ are all separate terms)	156 and
expressions	e.g. $12 + 3x + 6x^2 - 2x^3 - 5 - 3x + 5x^2 + 7x^3 = 7 + 11x^2 + 5x^3$	157
	3y means 3 x y	
	<u>7</u> X means	
	7 ÷ x	
Simplifying	Divide all parts by the highest common factor. Always	329
ratio	include the colon (:).	
Perimeter	Perimeter is the distance all the way round a shape. All sides added together.	548-552
Area	rectangle parallelogram triangle	553-559
	$\begin{array}{c c} h & h \\ \hline b \\ A = bh \\ A = bh \\ \end{array}$	

Pictograms	Use the key to work out the number of cupcakes sold		
		each day.	
	Monday	5 x 6 = 30	
	Tuesday	2.5 x 6 = 15 4 x 6 = 24	
	Wednesday = 6 cupcakes	3.5 x 6 = 21	
	Thursday	7 x 6 = 42	
	Friday	10 x 6 = 60	
	Saturday	9.5 x 6 = 57	
	Sunday		
Bar charts	Which type of movie was most popu	lar? Romance	425
	How many people said comedy was	this favourite? 4	
		How many people were asked in total? 4	
	10 Favorite Type of Movie	+ 5 + 6 + 1 + 4 = 20	
	8		
	6		
	Be a second s		
	2		
	O Comedy Action Romance Drama SciFi		

Key Vocabulary

 \circ Integer – a whole number \circ Product – the result of a multiplication. \circ Divisor – the number that you are dividing by. Eg. 16 divided by 2. 2 is the divisor. \circ Quotient - the answer after you divide one number by another.

Power/Indices - The index of a number says how many times to use the number in a multiplication. It is written as a small number to the right and above the base number.
 Root – The inverse operation of a power.

• Significant figures - Leading zeros are not significant. For example, 0.00052 has two significant figures: 5 and 2. Trailing zeros in a number containing a decimal point are significant.

• Remainder - A remainder in mathematics is what's left over in a division problem.

 \circ $\;$ Round - Rounding means making a number simpler but keeping its value close to what it was.

Truncate – A method of approximating a decimal number by dropping all decimal places past a certain point without rounding. ○ Estimate - To estimate means to find something close to the correct answer. ○ Approximate – an alternative word for estimate.
 Area: The space inside a 2D shape ○ Perimeter: Distance all around a shape ○ Term- each part of an expression. A single number or variable within an expression.

 $\circ~$ Expression- a mathematical sentence containing numbers and variables. $\circ~$ Simplify: Write in shorter form.

UNIT 6 (Part 1/2) Intro to describing myself and another family member

		MASCULINE	FEMININE
	suis	beau [handsome]	belle [pretty]
		fort [strong]	forte [strong]
Je		grand [tall]	grande [tall]
		gros [fat]	grosse [fat]
		mince [slim]	mince [slim]
		moche [ugly]	moche [ugly]
		musclé [muscular]	musclée [muscular]
		<pre>petit [short]</pre>	<pre>petite [short]</pre>
Ma petite sœur		méchant [mean]	méchante [mean]
[my little sister]	est	ennuyeux [boring]	ennuyeuse [boring]
Mon grand frère		généreux [generous]	généreuse [generous]
[my big brother]		marrant [fun]	marrante [fun]
Ma mère [my mother]		sympathique [nice/friendly]	sympathique [nice/friendly]
Mon père [my father]		têtu [stubborn]	têtue [stubborn]
		timide [shy]	timide [shy]

UNIT 5

Talking about my family members, saying their age and how well I get along with them. Counting to 100.

Dans ma famille, j'ai	mon grand-père, Léon [my grandfather Léon]		un [1]	an
[in my family, I have] Il y a <u>quatre</u> personnes dans ma famille [there are <u>four</u> people in my family]	mon père, Jean [my father Jean] mon oncle, Yvan [my uncle Yvan] mon petit/grand frère, David [my little/big brother David] mon cousin, Tanguy [my cousin, Tanguy]	II a	deux trois quatre cinq six sept huit neuf dix onze [11] douze [12] treize [13] quatorze [14]	ans
Je m'entends bien avec [I get on well with] Je ne m'entends pas bien [I don't get on well with]	ma grand-mère, Adeline [my grandmother Adeline]ma mère, Anne [my mother Anne]ma tante, Gisèle [my aunt Gisèle]ma petite/grande sœur, Léa [my little/big sister Léa]ma cousine, Claire [my (girl) cousin Claire]	qua qui seiz seiz dix dix dix ving ving	quinze [15] seize [16] dix-sept [17] dix-huit [18] dix-neuf [19] vingt [20] vingt-et-un [21] vingt-deux [22] trente [30] trente et-un [31] trente deux [32] quarante [40] cinquante [50] soixante dix [70] quatre-vingts [80] quatre-vingt-dix [90] cent [100]	



UNIT 4

Saying where I live and am from

		une	jolie [pretty]				
Je m'appelle David et	je vis dans	[a]	belle [beautiful]	maison	dans le centre		
[my name is	,		grande [big]	[house]	[in the centre]		
David and]			<pre>petite [small]</pre>				
1		un appartement	dans un bâtiment	ancien	dans la banlieue		
	j'habite dans	[a flat]	[in an old building	[in an old building]			
			dans un bâtiment				
	[I live in]		[in a modern build	ing]	sur la côte		
			dans un bâtiment	neuf	[on the coast]		
			[in a new building]	1			
		Biarritz	dans le Pays basqu	ue [southwest regio	on of France]		
		Brest	en Bretagne (en F	rance) [northwest	of France]		
		Bruxelles	en Belgique (la capitale) [capital of Belgium]				
		Casablanca	au Maroc (sur la côte) [coast of Morocco]				
		Dakar	au Sénégal (la capitale) [capital of Senegal]				
		Fort-de-France	en Martinique (la capitale) [capital of Martinique]				
	je suis de	Libreville	au Gabon (la capitale) [capital of Gabon]				
	[I am from]	Montréal	au Québec [Queb	ec, Canadian provi	ince]		
		Nice	en Provence (en F	rance) [southeast of	of France]		
		Nouméa	en Nouvelle Caléd	onie [New Caledon	nia]		
		Paris	en France (la capi	tale) [capital of Fr	ance]		
		Saint-Denis	à la Réunion (la ca	apitale) [capital oj	f Reunion island]		
		Strasbourg	en Alsace (en Fra	nce) [northeast reg	ion of France]		



Year 7 - Cooking skills

EquipmentVegetable peelerImage: Digital scalesImage: Digital s

Skills and Processes



Used in: fruit salad, pasta salad, sausage rolls, Spanish omelette, potato wedges and salsa

Knife skills: peeling, chopping, slicing, dicing



Used in: fruit salad, pasta salad, sausage rolls, Spanish omelette, potato wedges and salsa



Used in: fruit salad, pasta salad, cheesy pinwheels, goujons, breakfast muffins, sausage rolls, scones, potato wedges

Rubbing in technique



Used in: cheesy pinwheels and scones

Key word	Meaning
Enzymic browning	Discolouration that occurs when some fruit/vegetables (eg. apples, bananas, potatoes) are cut; caused by exposure to oxygen in the air.
Boiling	Water boils at 100°C, vigorous bubbles are visible. Pasta can be cooked this way.
Rubbing in	Combining butter and flour together using your fingertips.
Enrobing	Coating an item of food (eg. fish, chicken) in flour, egg, breadcrumbs.
Glazing	Brushing with a milk or egg wash to give colour and shine to your food product (eg. sausage rolls, scones)

Independent skills I need to learn in Year 7

Use the bridge hold and claw grip to cut food safely and accurately.

Use a range of other preparation techniques eg. peeling, chopping, slicing, dicing, grating etc.

Weigh and measure ingredients accurately.

Organise all my ingredients and follow a recipe.

Use the cooker (eg. hob and oven) safely.

Food safety

Using colour coded chopping boards and equipment prevents bacteria spreading and causing food poisoning.

PREVENT CROSS CONTAMINATION

USE CORRECT COLOUR CODED CHOPPING BOARDS & KNIVES RAW MEAT RAW FISH COOKED MEATS SALAD & FRUITS

VEGETABLES

DAIRY PRODUCTS



<u>Year 7 – Spring term focus: Intro to SHAKESPEARE</u>



Key terminology:

Elizabethan – the period of Elizabeth's reign. Renaissance – (means rebirth) period in 15/16th centuries.

Jacobean – the period of King James' reign. The Globe – Shakespeare's theatre in London. Iambic pentameter – Shakespeare's poetic technique of writing ten syllables in a line.

Thee – old fashioned way of saying "you"

Act – a chapter of a play, containing numerous "scenes" Tragedy – a type pf play written by Shakespeare History – a type of play written by Shakespeare Comedy – a type of play written by Shakespeare When Shakespeare began writing, Queen Elizabeth I was on the throne in England.

Elizabeth I was the last Tudor monarch, the daughter of Henry VIII and his second wife, Anne Boleyn.

Her 45-year reign is generally considered one of the most glorious in English history. During this time, a secure Church of England was established and the country became renowned around the world for power and prosperity.

James I of England (he was also King James VI of Scotland) became King of England in 1603. He ordered a new translation of the Bible and although he was fairly tolerant in terms of religious faith, the Gunpowder Plot (an attempt by Guy Fawkes and other Roman Catholic conspirators to blow up the Houses of Parliament) in 1605 resulted in the reimposition of strict penalties on Roman Catholics. As an arts patron, James attended Shakespeare's plays. He was terrified by the supernatural, however, and thought witches were real evil entities. He undertook "witch trials" where he drown or set fire to women to prove if they were or weren't witches.



Some of Shakespeare's key texts: Measure for Measure Midsummer Night's Dream Much Ado about Nothing Tempest Twelfth Night Hamlet Julius Caesar

<u>King Lear</u> <u>Macbeth</u> <u>Othello</u> <u>Romeo and Juliet</u> <u>Timon of Athens</u> <u>Titus Andronicus</u> <u>Troilus and Cressida</u>





Macbeth is a play about a brave soldier who meets some wat hand from hatten who meets some the way hand from hatten who meets some

Wacdeth is a play about a brave solution who meets solution the way back from battle. They predict he will be Witches on the way back from battle. They predict the is told that, he sets off on a murder will be and the sets off on a murder will be and the sets off on a murder will be and the sets off on a murder will be and the sets of the set

paugmen wiranga. Ineir celebrations are cut short when Prospero confronts his brother and reveals his identity as the usurped Duke of Milan The femilie are reactively and all conflicts is a reactively of the femilie are reactively as the second se contronts his prother and reveals his identity as the usurped pu of Milan. The families are reunited and all conflict is resolved is and proceeding and the Arial bie freedom and processes to Low Arian bie freedom of Milan. The families are reunited and all conflict is resolved: Prospero Brants Ariel his freedom and prepares to leave the island The Tempert is a COMENY

The Tempest is a COMEDY.



MMS, and anter ne is told that, ne sets on on a murder of the throng and destroy anyone who biouv rampage to get on the throne and destroy any of threatens to remove him from it. Macbeth is a Shakespeared A Midsummer Night's Dream is a play about four people from Athens (Greece) who run away to the forest only to have Puck (the fairy) make both of the boys fall in love with the same girl. The four run through The Tempest is about a man called Prospero Who uses magic to The rempest is about a man called Prospero Who uses magic to conjure a storm and torment the survivors of a shipWreck, including the King of Nanlas and Dressenance transformer between the start of the survivors the forest pursuing each other while Puck helps his master play a trick conjure a storm and torment the survivors of a snpwreck, including the King of Naples and Prospero's treacherous brother, Antonio, and the King of Naples and Prospero's treacherous brother, and the second term of terms o on the fairy queen. In the end, Puck reverses the magic, and the two The King of Naples and Prospero's treacherous brother, Antonio. Prospero's slave, Caliban, plots to rid himself of his master, but is prospero's slave, Caliban, plots to rid himself of his master, but and the proceeding of the second of the couples reconcile and marry. It is a play about magic and love and is a Prospero's slave, Caliban, plots to rid nimsen of nis master, put is thwarted by Prospero's spirit-servant, Ariel. The King's young thwarted by Prospero's spirit-servant, and the end of the test of the second second second second second second Shakespearean COMEDY nwarred by Prospero's spirit-servant, Ariel. The King's young Ferdinand, thought to be dead, falls in love with prospero and fall where Miranda Their calebrations are one of the second statements. Ferdinand, thought to be dead, fails in love with Prospero's baughter Niranda. Their celebrations are cut short when provide the termine of the state of the stat

OTHELLO is a play about jealousy. lago is furious about being overlooked for promotion and plots to take revenge against his General; Othello, the Moor of Venice. lago manipulates Othello into believing his wife (Desdemona) is unfaithful, stirring Othello's jealousy. Othello allows jealousy to consume him, murders Desdemona, and then kills himself. Othello is a Shakespearean TRAGEDY.



Wired and Wireless data transmission

A computer network can be either wired or wireless.

- Wired networks send data along cables.
- Wireless networks send data through the air using radio waves.

Bandwidth—Bandwidth is the amount of data that can be moved from one point to another in a given time. Higher bandwidth = more data per second



Bandwidth is measured in bits per second

A bit is the smallest unit of data Data transfer rates are now so good that bandwidth is usually measured in

Megabits per second (Mbps)

1Mb-1 million bits

A network is where devices are connected together usually by cable or WiFi. This could be a few computers in a room, many computers in a building or lots of computers across the world.



Internet services

There are a range of services provided by the internet. These include:

- World Wide Web •
- Email
- Online gaming
- Instant messaging •
- Voice over IP (VoIP) audio calls
- Internet of Things (IoT) •

•Media streaming (e.g. watching Netflix online) The rules for each service are different. As a result, a different protocol is used.

HTTP—HyperText Transfer Protocol—used so that data can be understood when sent between web browsers and servers.

HTTPS—is the secure version of HTTP where data sent is encrypted.

	Key Words
bandwidth	Amount of data that can be moved from one point to another in a given time.
buffering	Data arriving slower that it is being processed
internet	A worldwide network of computers
Internet of Things (IoT)	Takes everyday 'things' and connects them to the Internet eg smart light bulb, fridge, heating etc
IP address	A unique address for every device on the internet
packet	Networks send/receive messages in units called packets
protocol	All methods of communication need rules in place in order to pass on the message successfully. These sets of rules are called 'protocols'
Search engine	A website that allows user to look up information on WWW e.g. Bing, Google etc
Web browser	Piece of software(code) used to view information on the Inter- net
www	Part of the Internet that contains websites and webpages. NOT the same as the Internet.

Network Hardware—physical equipment required to set up a network

Hub—Connects a number of computers together. Ports allow cables to be plugged in from each connected computer.

Router—Used to connect two separate networks together across the internet

Sever—A powerful computer which provides services to a network

Cable—Used to connect different devices together. They are often made up of a number of wires.



Spreadsheets are used to model data.

That means that they can be used to perform calculations on data and make predicts.

SPREGUSILEEDS			Column – runs down a sheet	7
Spreadsheets use data which is held in cells.	Cell reference	Formula bar	assigned a letter	
 Data and information are not the same. Data: facts and figures in their raw form Information: data that has been given structure or meaning 	File Home Insert Page Layout Formulas Data leview View Help Image: Calibri	ip General 	al Format as Cell Table × Styles × Lyles Cells Cells Cells Editing	☆ Share □ Comments ↓ ↓ Ideas Sensitivity ↓ ↓
For example: Data—10, 2107, 18 Information—Time 10am, date 21st July, temperature 18°	A B C D E F H I 1 -	J K L	M N O P Q R	S T U
 Data can be gathered from different sources Primary source: collecting data yourself Secondary source: someone else collects the data 	Row-runs across the sheet			
Each box on a spreadsheet is called a cell and they hold data. Each cell has a unique cell reference to identify its location.	14 assigned a number 14 assigned a number 15 assigned a number 16 assigned a number 17 assigned a number 18 assigned a number 19 assigned a number			
Example G7	Sheets Sheet1 (+) Sheet1 (+)	ksbook	: (I)	
In order to complete calculations spreadsheets make use of formula. A formula uses the following basic symbols The = symbol is always at the start of a formula The + symbol is used for addition The - symbol is used for subtraction The * symbol is used for multiply The / symbol is used for divide Functions are also used which are predefined formula.	Common functions are SUM—adds a range of cells MAX—returns the largest value from selected cells MIN—returns the smallest value from selected cells AVERAGE—provides the arithmetic mean (average) of selected cells COUNTIF—counts the number of cells in a range that meet the given criteria IF— allows logical comparisons COUNTA—counts cells that are not empty	The tool bar at Changing colou There is a sort ranged in ways cal, highest firs at Conditional for to automatical a cell might tur	the top allows for formatting o ur, size, style etc and filter tool that allows for da s that is most useful for the user st etc. rmatting can be set to allow the lly change if certain criteria is m rn red if there was a negative nu	[:] the data. ta to be ar- e.g. alphabeti- cell formatting et. For example mber

