Name:	 	 	

Form Group:



Year 8 Knowledge Organiser Term 4





(1) Inference

Inference: The ideas you infer/work out from reading something; what the text makes you think of; the connotations of a text.

Examples:

The man was crying therefore he must be upset about something. The **black** sky **hung** overhead: 'Black' and 'hung' have connotations of death.

Connotations: What a word makes you think of.

Examples: The colour red has connotations of anger, danger, love, passion...

(2) Common Methods 2

Hypophora: When you ask a question and then immediately answer it yourself.

Example: Do you want to succeed? Of course you do!

Personification: A type of metaphor which gives human actions to non-human things.

Example: The tree waved its arms in the wind.

Anaphora: Repeating the same word or phrase at the start of consecutive sentences.

Example: Imagine a world where... Imagine if you... Imagine...

Example: A thunder storm might reflect a character's anger.

Pathetic fallacy: The use of the weather or nature to indicate a mood or to foreshadow a future event.

Sibilance: The repetition of the 'S' sound in consecutive words. A type of alliteration. *Example: The snake silently slithered towards its prey.*

(3) Tense

Verbs come in three tenses: past, present and future.

Past tense: Writing as though something has already happened. *Example: I handed my homework in <u>yesterday</u>.*

Present tense: Writing as though it is happening now. *Example: I am doing my English homework.*

Future tense: Writing as though it is about to happen. Example: I will do my homework as soon as I get home.

(4) Direct Speech

Direct speech: The words said out loud by a character in a book, clearly punctuated using speech marks ""

Example: "You'll never guess what I've just seen!"

Rules to remember:

- · Each new character's speech starts on a new line.
- · Speech is opened and closed with speech marks.
- · Each line of speech starts with a capital letter.
- The line of speech ends with a comma, full stop, exclamation mark or question mark inside the speech marks.

A **reporting clause** can be used to say who speaks and when. It can appear before or after the speech.

Examples: "You'll never guess what I've just seen!" exclaimed Jane. Jane said "You'll never guess what I've just seen!"

Be clear about the difference between speech "" and quotation '' marks (for showing evidence from a text you have read).



Revise the content in each box every week. Then, complete your homework on Educake. www.educake.co.uk

(5) Structure Vocabulary

Writers think carefully about the **structure** of their writing in order to engage the reader or audience or to express certain ideas.

Opening: The first part of a text, used to spark the interest of the reader, usually with dramatic events or an exciting setting.

Shift: A change in the **time**, **setting**, **mood or character**.

Ending: The final part of a text, often a resolution of events, sometimes with surprising or unexpected outcomes.

Cyclical: A text which ends where it started (goes round in a cycle).

Parallels: Two parts of a text which are very similar in structure to create a link.

Cliff-hanger: A dramatic ending where the story is left incomplete and the reader is left wondering.

Flashback/Flashforward: The events of a text move backwards or forwards in time.

(6) Compound Sentences

Compound sentence: A sentence with two main clauses (simple sentences) joined together by a conjunction (connective).

You can use the acronym FANBOYS (for, and, nor, but, or, yet, so) to remember the conjunctions.

Examples:

I finished reading my book <u>and</u> I decided to write a review for it. I wanted to go to the theme park <u>but</u> the weather was dreadful.

Sequences, Fractions and Percentages, Laws of Indices





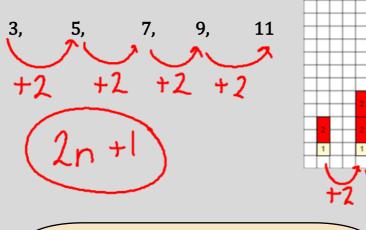




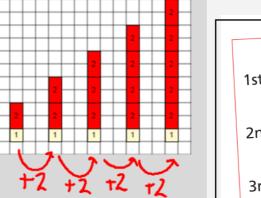
(1) Key Terms A list of numbers or items in a given order Sequence that follow a rule. **Decimal** Calculates a percentage of an amount or percentage change with one single Multiplier multiplication. nth term A sequence written as an algebraic rule, e.g 2n +1. Linear A sequence whose terms are changing by a Sequence constant difference, e.g 3, 7, 10 . . . A sequence whose terms are not changing **Non-Linear**

(2) nth Term

Find the nth term of the sequence



In the sequence 2n+1, the number in front of the variable is the constant difference.



(3) Generate Terms in a Sequence

4n - 111st term: n = 1 $4 \times 1 - 11 = 4 - 11 = -7$ 2nd term: n = 2 $4 \times 2 - 11 = 8 - 11 = -3$ 3rd term: n = 3 $4 \times 3 - 11 = 12 - 11 = 1$

Each **term** of any sequence can be generated by substituting **1,2,3...** in place of 'n'.

(4) Laws of Indices

Sequence

Law 1 — When **multiplying** numbers with the same base add the indices.

$$h^5 \times h^3 \times h = h^{5+3+1} = h^9$$

by a constant difference,

e.g 1, 4, 9 . . .

Law 2 — When **dividing** numbers with the same base subtract the indices.

$$y^8 \div y^5 = y^{8-5} = y^3$$

Law 3 — When raising a power to a power **multiply** the indices.

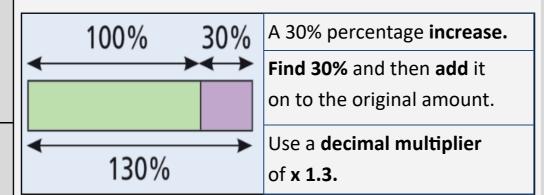
$$(a^5)^3 = a^{5x3} = a^{15}$$

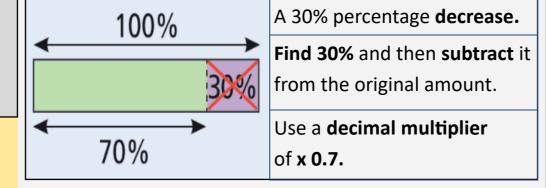


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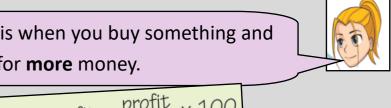
(5) Percentage Increase and Decrease

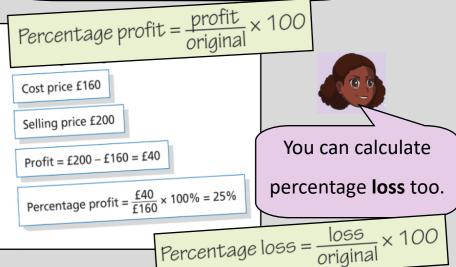




(6) Percentage Profit or Loss

Profit is when you buy something and sell it for **more** money.











(1) Biology—Genetics

DNA Structure:

- Double Helix.
- Complementary base pairs, A-T and C-G.

Natural Selection Process (sometimes called 'survival of the fittest')

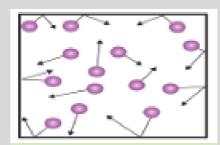
- Mutations occur randomly, which are changes in the DNA base sequence.
- This causes genetic **variation** within a species.
- The organisms that are best adapted to their environment survive.
- This means they are able to breed, and pass on their genes.

Gene banks

 To prevent species going extinct, scientists can keep records of genetic information called gene banks.

(3) Chemistry—Diffusion and Gas Pressure

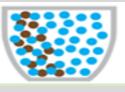
Gas Pressure—This is caused by particles of gas colliding and exerting a force on a surface, e.g. the inside of a container.

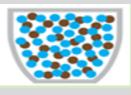


Diffusion—This is when particles spread

from an area of high concentration to an area of low concentration along a concentration gradient.







Brownian Motion—The random movement of particles in a liquid or gas (fluid).

(5) Physics—The Eye

Retina—The light sensitive part of the eye. It absorbs light waves and turns these into an electrical impulse which travels to the brain along the optic nerve.

Optic Nerve— Carries the electrical impulses from the eye to the brain.

Cornea—The protective outer layer of the eye.

Pupil—A hole, allowing light to pass into the eye.

Iris—A muscle that is able to contact and relax to control the amount of light entering the eye.

Lens—The jelly-like substance that focuses light into the eye.

Light—A **transverse** wave that travels in straight lines at a speed of 300 000 000m/s.

Light doesn't need particles to travel—it can travel through a **vacuum**. White light is made up of a **spectrum** of colours from high **frequency** violet to low frequency red.

Objects appear different colours because they **reflect** different colours of light.

Primary colours of light—red, green and blue.

Secondary colours— magenta, cyan, yellow.

(2) Biology—Other Key Vocabulary

Inheritance—When genes are passed on from parents to offspring.

Characteristic—How an organism looks or behaves.

DNA—A polymer that carries genetic information.

Gene—A section of DNA that codes for a particular characteristic/protein.

Chromosomes—Coiled strands of DNA that are stored in the nucleus of cells.

Mutation—A change in the DNA base sequence.

Natural selection—The process which organisms change over time.

Extinction—Where there are no more living individuals of a particular species anywhere in the world.

(4) Chemistry—Density

Density—A measure of how much space (volume) particles take up.

When a liquid evaporates, particles move further apart from one another because the same number of particles will now take up a larger amount of space. This means that the density has decreased.

Density $(g/cm^3) = mass (g) \div volume (cm^3)$

Density (kg/m^3) = mass $(kg) \div volume (m^3)$

ECSSU Reminder

E—Equation

C- Conversion

S—Substitute

S—Solve

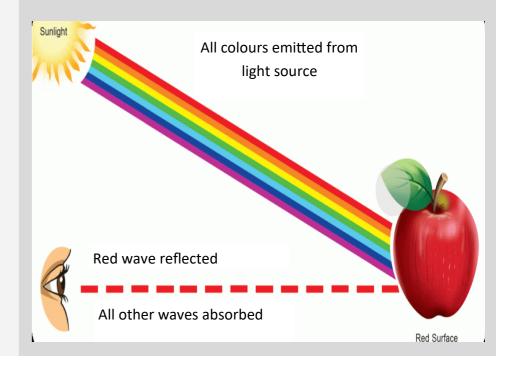
U—Units

Low Density High Density

(6) Physics—Seeing Colour

Objects appear different colours because they **reflect** different colours of light. We see the colour of light reflected into our eyes. All other colours are absorbed.

Objects appear white because the **reflect** all colours. Objects appear black because they **absorb** all colours.





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Trinity TV > Year > Subject







(1) Keywords

(I) Keywords	
Sustainability	The ability to meet the needs of today, without compromising the ability of future generations to meet their needs.
Favela	An area of informal housing on the edge of a city.
Quality of Life	The standard of health, comfort and happiness experienced by people.
Rural-Urban	People moving from the countryside to live in the
Migration	city.
Indigenous Tribes	Distinct cultural and social groups of people native to a place.
Biodiversity	The variety of plant an animal life in a particular habitat.
Ecotourism	A type of travel that aims to conserve the environment.
Cattle Ranching	The industry of raising cattle e.g. cows to sell for meat.

(2) Where is South America?



(3) What is sustainability?

For something to be sustainable, it must:

- Not harm the planet (environment).
- Not be too expensive (economic).
- Not be harmful to people (social).

It must also last long into the future (meting the needs of future generations).

It is important to achieve a balance between social, economic and environmental factors for something to be sustainable.



(4) How sustainable are South American cities?

Some cities in South America are unsustainable because:

- Air pollution causing health problems.
- Rapidly increasing population from migration.
- High crime rate from drug gangs.

Some cities in South America are becoming more sustainable because:

- Public transport e.g. cable cars.
- Bike routes.
- Electric vehicles.
- More green spaces in cities.
- Recycling schemes.

(5) How sustainable is South American rainforest?

The Amazon Rainforest must be protected because:

- It is home to 30% of the world's species.
- 400 indigenous tribes live there.
- It helps reduce the effects of climate change.

It is being deforested at an unsustainable rate.

Cattle ranching is the reason for 80% of the deforestation in the Ama**zon.** The effects of this are:

- 340 million tons of carbon are released every year.
- It creates 8.7% of Brazil's GDP.

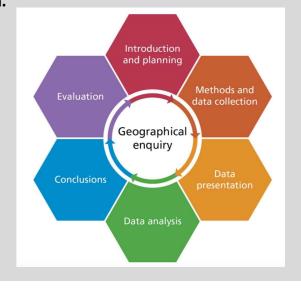
Ecotourism is a sustainable way to make money in the Amazon rain**forest.** The benefits are:

- Local people can work in this industry.
- People around the world learn how to protect the rainforest.
- People are encouraged to protect the rainforest to encourage visitors.

(6) How do I conduct a fieldwork investigation?

There are six stages to a fieldwork enquiry. They are:

- Introduction and planning.
- Data collection.
- Data presentation.
- Data analysis.
- Conclusions.
- **Evaluation.**



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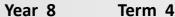
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Trinity TV > Year 8 > Geography



How was morale built on the Homefront in World War Two?







Causes of World War Two

- Hitler came to power in Germany in 1933 and began to expand the German empire.
- Chamberlain attempted to pursue a policy of appeasement to give into Hitler's demands to avoid war. In March 1938, Hitler's Germany invaded Austria. Chamberlain allowed this to happen.
- Germany invaded Poland on 1 September 1939. On 3 September, Britain declared war on Germany.

3 September Britain declares war on Germany.

Appeasement

The attempt by Chamberlain to keep Hitler happy in order to try and avoid war.

Morale

The confidence and enthusiasm shown by a person or group of people at a particular time.

(2) Evacuation of Dunkirk

- Operation Dynamo was launched to save 338,000 men trapped at Dunkirk. Despite saving over a third of a million men, Dunkirk was a military disaster.
- Churchill declared that Britain would never surrender to Hitler and insisted Britain would bounce back.



29 May 1940

Rationing

The evacuation of Dunkirk begins.

(3) The Blitz

- People were warned of air raids using sirens. Air raid shelters were built and blackouts were enforced.
- The Blitz lowered morale because 32,000 people were killed.



7 September 1940

The London Blitz starts and lasts for 8 months.

The Blitz

The Blitz was heavy and frequent bombing attacks.

Homefront

The people who stay in their own country during a war.

(4) Evacuation

- Children were evacuated from industrial cities to the countryside.
- Many children stayed with middle and upper class families who were shocked by the conditions of people arriving from industrial cities.



13t September	children, mothers of children ander 5 and	
1939	teachers start to be evacuated.	
	The mass evacuation (1.5 million) of school	
Operation Pied	children, mothers with children under five, and	
Piper	pregnant women from cities to the countryside to	
	avoid air raids	

Children mothers of children under 5 and

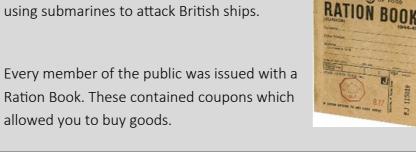
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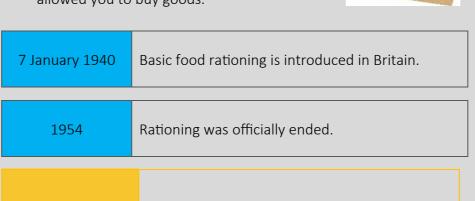
For more help, visit Trinity TV and watch the following

Trinity TV > Year 8 > History> Term 4

(5) Rationing

- To make the British weak, the Germans tried to cut off supplies of food and other goods by using submarines to attack British ships.
- Every member of the public was issued with a Ration Book. These contained coupons which





Where goods are limited.

(6) Halifax in World War Two

- Halifax was relatively safe during World War Two.
- People in Halifax had more food an some of the cities like London.
- Many people were evacuated to Halifax to escape the bombing that was happening in the larger cities.









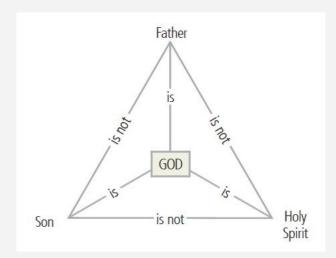
(1) Keywords

Worship	A way of showing admiration and adoration for God.
The Trinity	The three persons of the Christian God: Father, Son & Holy Spirit.
Nicene Creed	A quote created by the Nicene council to describe the persons of the Trinity.
Incarnate	God in human form—Jesus in God incarnate.
Pentecostal	Worship that emphasises the presence of the Holy Spirit.
Parable	A story Jesus taught, with a moral meaning.

(2) What are the Natures of God?

Keyword	Meaning	
Omnipotent	Powerful	
Omnibenevolent	All Loving	
Omnipresent	Always there	
Omniscient	All knowing	
Merciful	Forgiving	

(3) The Persons of The Trinity



Term 4

The Father: The creator of life, all mighty & omnipotent.

The Son: Refers to Jesus, God incarnated.

The Holy Spirit: The guidance in life, omnipresent.

(4) How is each person of The Trinity worshipped?

Person	Worship
The Father	Christians will pray to him, to thank him for his creation of the world.
The Son	Christians will celebrate Christmas and Easter, as these remember his birth and his resurrection.
The Holy Spirit	Christians will go to Pentecostal church and sing, dance and speak in tongue with the Holy Spirit guiding them.

(5) Lords Prayer & Nicene Creed

Lords Prayer

"Our Father in heaven, <u>hallowed be your name</u>, your Kingdom come, your will be done, on earth as in heaven. Give us <u>today our daily</u> bread.

Forgive us our debts, as we also have forgiven our debtors. Lead us not into temptation, but deliver us from the evil one.

For the kingdom, the power, and the glory are yours now and forever.

Nicene Creed

We believe in one God, <u>the Father, the Almighty, maker of heaven</u> and earth. We believe in one Lord, <u>Jesus Christ, the only Son of God, eternally born of the father.</u> We believe in the <u>Holy Spirit, the giver of life,</u> who proceeds from the Father and the Son."

(6) Parables

Parable of the Good Samaritan

A man going from Jerusalem to Jericho is attacked by robbers who strip him and beat him. A priest and a Levite pass by without helping him. But a Samaritan stops and cares for him, taking him to an inn where the Samaritan pays for his care.

Parable of the Sheep and Goats

This parable strongly encourages Christians to take action to help those in need. In this parable, Jesus makes it clear that to get to heaven you must help people in need.

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For more help, visit Trinity TV and watch the following videos:

Trinity TV > Y7 > Religious Studies > Term 3







Week 1 - Computer Systems

Core Knowledge

- A programmable device that takes in data, processes it, and then outputs as information.
- General purpose computers are devices that have a variety of
- **Embedded systems** are specialised that can perform a limited number of actions.
- Computers work due to combination of hardware and software
- **Operating systems** allow interactions between software and hardware.

Key Literacy Computer

Definition - A programmable device that takes in data, processes it and then outputs as information.

Associated terms - Machine, Device, Mobile Phone, Network, Virtual Reality, Networking.

- •I use my computer to do homework and research for school.
- •My computer has a powerful processor, which makes it great for gaming.

Week 2 - CPU

Core Knowledge

- Modern computers use the Von Neumann Architecture that allows store and run programs.
- The control unit runs the instructions and communicates with the other
- Arithmetic Logic Unit (ALU) calculates the logic operations that are required.
- **Clock** is used to regulate the number of cycles carrier out per second.
- Registers in the CPU: Memory Address Register, Memory Data Register, Current Instruction Register, Program Counter, Accumulator.
- A CPU Bus transports data between components inside the processor and memory.

Key Literacy CPU

Definition - The central processing unit, is a large chip inside the computer. It is the brains of the computer; it controls everything.

Associated terms - Processor, Clock Speed, Cores, Cache, Overclocking.

- •In our computing class, we learned about the CPU and its role in running software and handling data.
- •The processor's clock speed determines how quickly a computer can process data and run applications.

Week 6 & 7 - Optical / Magnetic Storage & Understanding Binary

Optical Storage utilises discs with a reflective surface to store data.

Optical devices use **light** to store data. A **laser** burns marks into the

Magnetic Storage uses discs but sections of the material are mag-

reflective surface of the disc. These marks are called **PITS** and the gaps

Week 3 - FDE Cycle

Core Knowledge

- **Fetch** Instructions are loaded into the random access memory before the processor starts running the program.
- **Decode** Binary representation of an instruction needs to be decoded before it is executed.
- **Execute** Instructions are executed and the control unit will communicate with other components in which order to be executed for the instructions to work.

Key Literacy Fetch— Decode-Execute Cycle

Definition - The fetch-decode-execute cycle describes the basic operations of modern computers.

Associated terms - Programme Counter, Memory, Opcode, Instructions.

- •The Fetch-Decode-Execute Cycle is a series of steps that a CPU goes through to carry out program instructions.
- •The CPU's efficient execution of the Fetch-Decode-Execute Cycle is key to the speed and functionality of a computer.

Week 4 & 5 - Main Memory & Secondary Storage

Core Knowledge: Main Memory

- Random Access Memory is volatile and data is lost when the power is switched off.
- **Read Only Memory** is non-volatile that the memory is not lost when the power is switched off.
- **Cache** improves the performance of a computer system by saving frequently used instructions.
- **Solid State** storage has no moving parts, and is very expensive that can also be called flash memory.
- Optical Storage is used to distribute media and software such as movies or video games.
- Magnetic Storage is the oldest form of storage and is stored in series as polarized dots.

Factors when comparing storage devices: Cost, Capacity, Access speed, durability, reliability, portability.

are called lands.

Core Knowledge: Optical & Magnetic Storage

netised and demagnetised to represent data.

Binary system is also known as 'base 2' as the are only two digits to se-

BIT table: 128, 64, 32, 16, 8, 4, 2, 1.

Core Knowledge: Understanding Binary

- lect from (1 & 0) and data is converted using the power of two.

Key Literacy Binary

Definition - Binary is a number system that only uses two digits: 1 & 0. Associated terms - Bit, Byte, Binary System, Binary Arithmetic, Binary Logic.

- •The binary system is a base-2 numbering system used in computing, as opposed to the decimal system, which is base-10.
- A bit is the smallest unit of data in binary code, representing a single binary digit, either 0 or 1.

Week 8 - Logic Gates

Core Knowledge

- Three fundamental logic gates: AND, OR, NOT.
- Logic gates switch on and off, depending on the input that been provided and the type of gate being used. If the inputs evaluate to **True**, then the electrical current flow through the gate. If the inputs evaluate to False, then the electrical current flow through will be stopped.
- **Logic Circuits** used a combination of logic gates.
- **Truth tables** are used to plan the different inputs for a logic gate or logic circuit and show the different outputs.

Key Literacy Logic Gates

Definition - A logic gate is an electronic component that performs a specific Boolean operation on one or more input signals to produce an output signal, which is determined by a set of logical rules.

Associated terms - Truth Table, Boolean Logic, AND Gate, OR Gate, NOT Gate.

- Logic gates are used in various computing and electronics applications, such as microprocessors, memory units, and control systems.
- Boolean logic is a mathematical system used to manipulate binary data using logical operators like AND, OR, NOT, XOR, and XNOR.

Key Literacy Memory

Definition - Memory, also known as primary storage, is used by a computer to store data and instructions.

Associated terms - Choices, Decision, Creation, Options, Independent.

•There is a selection of chocolate.



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Trinity TV > Year 8 > Computing

Spanish — Mi casa — My house

Year 8





Week 1 and 2 Vocabulary

Week 1: en casa at my house there is/are hay there isn't / aren't no hay

el comedor dining room el dormitorio bedroom el jardín garden los servicios toilets el salón living room el cuarto de baño bathroom kitchen la cocina la habitación room vivo con I live with el piso flat la casa house

Week 2:

el armario wardrobe el escritorio desk el estante shelf wash basin (sink) el lavabo el refrigerador fridge el sillón armchair el sofá sofa el televisor T.V los pósteres posters la bañera bath la cama bed la cómoda chest of drawers la consola games console la ducha shower la lavadora washing machine wall la pared la silla chair la tina bath

window

Week 3 and 4 Vocabulary

in
in front of
behind
between
under(neath)
on
next to
to the right of
to the left of
opposite
far (from)
close (to)

Week 4:

tan.....como as...as less...than menos...que más...que more...than Bonito beautiful (m) beautiful (f) Bonita Cómodo comfortable (m) Cómoda comfortable (f) Acogedor cosy (m) Acogedora cosy (f) Grande big Hermoso pretty (m) hermosa pretty (f) Moderno modern (m) Moderna modern (f) Nuevo new (m) nueva new (f) small (m) Pequeño Pequeña small (f)

Week 5 and 6 Vocabulary

Week 5: Key Phonics

Looks like:	Sounds like:
qu	k
v	b
j	h
ca / co / cu	ka / ko / koo
ce / ci	theh / thee

Remember: the letter 'h' at the beginning of a word is

always **SILENT**.

Week 6:

Term 4

	Vivo	I live
	Viví	I (have) lived
	voy a vivir	I'm going to live
\dashv	Es	it is
	Fue	it was
	Será	it will be
+	ayer	yesterday
	mañana	tomorrow
	esta mañana	this morning
_	esta tarde	this afternoon
۹	el año pasado	last year

el año que viene next year

la semana pasada last week

la semana que viene next week

Week 1 and 2 Grammar

mi padrastro

mi madrastra

my stepdad

my stepmum

Possession in Spanish

la ventana

To say 'my', 'your' or 'his/her' you need to use the correct possessive determiner depending on if you are describing something masculine, feminine or plural.

Careful: if you want to say that someone owns something you need to use 'de' and change word.

	Masculine	Feminine	Plural
Му	mi	mi	mis
Your	tu	tu	tus
His/Her	su	su	sus

Week 3 and 4 Grammar

Prepositions

Prepositions describe where someone or something is:

El mercado está detrás del restaurante.

The market is behind the restaurant.

When using prepositions that take 'de' after them, we use masculine / feminine / plural:

De + el = del, e.g la bolera está al lado del supermercado.

De + la = de la e.g. la piscina está enfrente de la bolera.

De + los = de los e.g. la cocina está al lado de los servicios.

+ el = del

+ la = de la + los = de los

Week 5 and 6 Grammar

Comparatives and superlatives:

To compare things in Spanish we use:

Másque- More than

Menos....que - Less than

Tan.....como - As...as

Es más inteligente que yo. - He is more clever than me.

Es tan rápida como yo. - She is as fast as me.

An exception is:

Mejor que - better than

Peor que - worse than



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Trinity TV > Year > Subject