



HORNCHURCH
HIGH SCHOOL
EXCELLENCE FOR ALL

Year 7

KNOWLEDGE
IS
POWER

KNOWLEDGE ORGANISER

HALF TERM 2

Contents

	Subject	Page
1.	English	3
2.	Maths	4,5
3.	Science	6
4.	Spanish	7
5.	Geography	8
6.	History	9
7.	Computing	10
8.	P.E	11
	Carousal Subjects	
9.	Performing Arts	12
10.	Food	12
11.	Art	13
12.	Design Technology	13

English

Key Term	Definition
Disability	An impairment that can affect a person in many ways. For example, a disability could be physical, mental, sensory, cognitive (processing thoughts) and many more
LGBT+	Stands for Lesbian, Gay, Bisexual and Transgender/Transsexual
Gender Inequality	The inequality or discrimination faced by women and men in a variety of social and global arenas
Classism	Prejudice or discrimination on the basis of social class
Social Class	Refers to the grouping of individuals in a hierarchy based on wealth, income, education, occupation, and social network
Racism	Prejudice or discrimination directed against someone of a different race based on the belief that one's own race is superior
Direct Address	Talking to the person who is reading. 'you', 'ladies and gentlemen'
Alliteration	Words next to each other that start with the same letter. 'Waves wearily washed'
Facts	Something that can be proven true. 'London is the capital of England.'
Opinions	An idea that cannot be proven true. 'London is the best city in the world.'
Rhetorical Questions	A question that doesn't require an answer. 'What do you think you're doing?'
Repetition	Something said more than once. 'Quickly! Quickly!'
Exaggeration	Saying something is more dramatic than it is. 'This is the worst thing to happen to the school, ever.'
Statistics	Using numbers to support a point. '11% of people are left-handed'
Triplets	Three things next to each other. 'Bigger, better, faster'

Maths

Key Term	Definition		
Co-ordinates			
Co-ordinates	Two numbers that define the position of a point		
X Axis	The horizontal number line (across)		
Y Axis	The vertical number line (up)		
Quadrant	The four areas made by the x and y axis		
Midpoint	The middle value		
Metric conversions			
Length	Mass	Capacity	
1cm = 10mm	1g = 1000mg	1cm³ = 1ml	
1m = 100cm	1kg = 1000g	1L = 1000ml	
1km = 1000m	1 tonne = 1000kg	1L = 1000cm³	
Area and Perimeter			
Perimeter	The distance around the outside of a shape		
Area	The amount of space inside a shape		
Area of a rectangle	Base x height	Area of a parallelogram	Base x height
Area of a triangle	(Base x height) ÷ 2	Area of a Trapezium	$\frac{(top + bottom) \times height}{2}$
Mathematical symbols			
=	Is the same as		
≠	Is not the same as		
<	Is less than		
>	Is more than		
≤	Is less than or equal to		
≥	Is more than or equal to		

Maths

Key Term	Definition
----------	------------




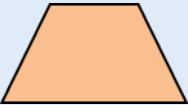
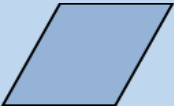

Algebra

Term	A number, letter or combination of both which forms part of an expression.
Expression	A collection of terms which can contain letters and numbers.
Equation	Two expressions which have the same value, separated by an '=' sign.
Formulae	A rule written with mathematical symbols. It has an equal sign and more than one
Expand	To multiply out brackets in an expression.
Simplify	Collect together the like terms
Factorise	To put an expression into brackets by taking out a common factor or factors
Substitution	Swapping letters for numbers

Standard Form

Standard Form	Is a way to write really big or really small numbers
Standard Form notation	Number between 1 and $9.9 \times 10^{\text{jumps}}$

Properties of shapes

Square 	4 equal sides	Kite 	4 sides, 2 pairs with the same
	2 pairs of parallel lines		No parallel lines.
	4 angles all 90°		1 pair of equal angles.
Rectangle 	4 sides, 2 pairs with the same	Trapezium 	4 sides, 1 pair are the same length
	2 pairs of parallel lines		1 pair of parallel lines
	4 angles all 90°		2 pairs of equal angles
Rhombus 	4 equal sides	Parallelogram 	4 sides, 2 pairs are the same
	2 pairs of parallel lines		2 pairs of parallel lines
	Diagonally opposite angles are the same		Diagonally opposite angles are the same

Science

Key Term	Definition
Melting	When a substance turns from a solid to a liquid
Freezing	When a substance turns from a liquid to a solid
Evaporation	When a substance turns from a liquid to a gas
Condensation	When a substance turns from a gas to a liquid
Sublimation	When a substance turns from a solid to a gas
Boiling Point	The temperature point at which a liquid turns into a gas
Melting Point	When a more reactive element takes the place of a less reactive element in a compound
Atom	The smallest unit of matter in an element
Element	A substance only made up of one type of atom
Compound	Two or more different atoms joined by chemical bonds
Mixture	Two or more different atoms or compounds not joined by chemical bonds
Proton	A positively charged subatomic particle
Neutron	A subatomic particle with no charge
Electron	A negatively charged subatomic particle
Nucleus	The centre of an atom
Energy levels	The shells surrounding a nucleus of an atom
Solubility	How well a substance dissolves into a liquid
Solution	When a substance is dissolved into a liquid
Solute	The substance being dissolved (it can be a solid or gas)
Solvent	The liquid doing the dissolving
Saturation Point	The point at which no more solute can be dissolved in a solvent
Soluble	When a substance can dissolve into a liquid
Insoluble	When a substance cannot dissolve into a liquid
Filtration	An insoluble solid is separated from a soluble substance
Distillation	A technique used to separate liquids based on their boiling points. It uses evaporation and
Crystallisation	Slowly cooling a solution to form crystals
Chromatography	A technique used to separate mixtures of liquids
Chromatogram	An image obtained from chromatography
Rf value	The ratio of how far the dye travelled to how far the solvent travelled

Spanish

Spanish	English
el atletismo	Athletics
el badminton	Badminton
el ciclismo	Cycling
la equitación	Horse riding
el fútbol	Football
el golf	Golf
la gimnasia	Gymnastics
la natación	Swimming
el patinaje	Skating
la escalada	Climbing
el rugby	Rugby
el tenis	Tennis
el esquí	Skiing
la vela	Sailing
el buceo	Diving
el baloncesto	Basketball
el hockey	Hockey

Spanish	English
jugar a las cartas	To play cards
tocar la trompeta	To play the trumpet
tocar los tambores	To play the drums
tocar el piano	To play the piano
tocar la guitarra	To play the guitar
ir de compras	To go shopping
cocinar	To cook
hacer ejercicios	To do exercises
escuchar la música	To listen to music
leer	To read
ver una película	To watch a movie
ver la tele	To watch TV
ir al cine	To go to the cinema
dibujar	To draw
bailar	To dance

me gusta	I like
me encanta	I love
no me gusta	I don't like
odio/detesto	I hate
prefiero	I prefer
me interesa	It interests me
me aburre	It bores me
normalmente	Normally
los fines de semana	At weekends
a menudo	Often

a menudo	often
a veces	Sometimes
nunca	Never
siempre	Always
aburrido	Boring
relajante	Relaxing
caro	Expensive
sano	Healthy
Cuando	When
Si	If

Geography

Key Term	Definition
United Kingdom (UK)	A country made up of England, Scotland, Wales and Northern Ireland
Great Britain (GB)	An island in north-western Europe, containing the countries of England, Wales and Scotland.
British Isles	A group of islands in north-western Europe, containing the countries of England, Scotland, Wales, Northern Ireland and Ireland.
Uplands	Land that is at a higher elevation e.g. hills and mountains
Lowlands	Land that is at a lower elevation e.g. flat land
Source	A start point of the river
Mouth	The point where the river meets the sea or lake
Tributary	A river or stream flowing into a larger river or lake
Confluence	Where two or more tributaries meet
Drainage basin	An area drained by a river and all of its tributaries
Meander	A bend in a river
Population	A group of individuals of the same species occupying a particular geographic area
Population density	The average number of people per square kilometre
Densely	Being closely compacted together, crowded or compact
Sparsely	Being thinly scattered or distributed
Ethnicity	Characteristic of a people , sharing a common and distinctive culture, religion and language
Multi-cultural	Containing several cultural or ethnic groups within society
Economically active	Part of a population who are working, usually between the ages of 20-65
Young dependents	Younger part of a population who are in education, usually between the ages of 0-19
Elderly dependents	Older part of a population who are retired, usually aged over 65

History

Key Term	Definition
Roman Empire	Rome was founded in 753BCE. At its peak, the Roman Empire covered over 5,000,000km ²
Republic	The era of classical Roman civilization beginning with the overthrow of the Roman Kingdom,
Democracy	A system of government where the people vote to decide who will be the leader
Empire	Post-Roman Republic period of the ancient Roman civilization, characterized by government headed by emperors and large territorial holdings around the Mediterranean Sea in Europe,
Dictatorship	A system of government where one person has absolute power over everybody
Hierarchy	A system in which members of an organization or society are ranked according to relative
Pastime	An activity that someone does regularly for enjoyment rather than work; a hobby
Centurion	A professional officer of the Roman army. Most centurions commanded groups of around 80
Amphitheatre	An open-air venue used for sport. Derived from the Greek words amphi for ‘around’ and
Mythology	The study of myths. From the Greek word mythos meaning story
Pater Familias	The head of the Roman household
Aqueduct	Brought water from outside sources into cities and towns. Aqueduct water supplied public
Pontifex Maximus	The chief high priest in ancient Rome. The most important position in the ancient Roman
Julius Caesar	Gaius Julius Caesar was a Roman general and statesman. A member of the First Triumvirate, he led the Roman armies in the Gallic Wars before defeating his political rival Pompey in a
Augustus	The first Emperor of the Roman Empire, controlling Imperial Rome from 27 BC until his death
Senate	An assembly of elders who would advise the King
Boudica	Boudica or Boudicca, was a queen of the British Iceni tribe who led an uprising against the
Archaeology	The scientific study of human activity through the recovery and analysis of material culture

Computing

Key Term	Definition
Network	A network is two or more computers linked together so that they can communicate with each other
Topology	Is the word used to describe the shape of a network
Server	A server is a powerful computer which holds the operating system software to run the network
LAN	This is a network within a single building
WAN	This is a network over a wider geographical area such as in different buildings, cities or even countries
Internet	Is a huge world wide network which allows computers to communicate and share information
IP Address	Should be unique over a network and in a LAN no two nodes should have the same IP
ROM	The Internal memory that is used to store the programs a computer uses to start up
RAM	The internal memory that stores all of the data that is currently being used by the computer
Cache memory	An area of memory located on the CPU that stores the data that is most likely to be used next. Cache memory can be accessed much faster than other types of memory
Input devices	Are used to put information in to a computer e.g. Keyboard, mouse, microphone
Output devices	Are used to take information out of the computer to the user e.g. monitor, speakers
Peripherals	Any electronic device that is attached to the PC, usually via a USB connection, but can be
Bit	Is the smallest unit of data
Bandwidth	Is measured in bits per second, rates are now so good that bandwidth is usually measured in Megabits per second (Mbps) 1Mb—1 million bits
Protocol	All methods of communication need rules in place in order to pass on the message successfully. These sets of rules are called 'protocols'
Buffering	Data arriving slower that it is being processed
Internet of things	Takes everyday 'things' and connects them to the Internet e.g. smart light bulb, fridge,
Packet	Networks send/receive messages in units called packets
HTTP	Hyper Text 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
Router	Used to connect two separate networks together across the internet
Hub	Connects a number of computers together. Ports allow cables to be plugged in from each connected computer

P.E

Key Term	Definition
Muscular Strength	The amount of the force muscles can generate against a resistance
Muscular Endurance	The ability to use voluntary muscles, over long periods of time without getting tired
Flexibility	The range of movement at a joint
Cardiovascular Fitness (Aerobic Endurance)	The ability of the heart and circulatory system to meet the demands of the body for a long period of time
Body composition	The percentage of a body that is fat, muscle, bone and water
Coordination	The ability to move two or more body parts at the same time
Reaction Time	The time taken for a response to occur after a stimulus
Agility	The ability to change direction at speed
Balance	The ability to keep the body steady when in a static position or when moving
Speed	The time taken to cover a set distance/complete a movement
Power	The ability to combine speed and strength
Principles of training	Guidelines that ensure training is effective and results in positive adaptations
PEP	Personal Exercise Programme
Frequency	How often the exercise takes place
Intensity	How hard the exercise is
Time	The length of the session
Type	The method of training used
Progressive Overload	Working the body harder than normal/gradually increasing the amount of exercise you
Reversibility	If training is not regular, adaptations will be reversed. This can happen when suffering
Specificity	Training should be matched to the requirements of the sport or position the performer is in. Training must be specifically designed to develop the right muscles, type of fitness or skills
Individual needs	All PEP's would differ depending on performers goals/target, strengths /weaknesses,
Overtraining	Occurs when you train too hard and do not allow the body enough rest/recovery time
Calculating Training	Karvonen formula used to calculate aerobic and anaerobic target training zones

Carousel Subjects

Performing Arts

Key Term	Definition
Performance	Where you show an audience what you have created during a rehearsal
Character	The person or thing that you are acting out at that time
Role	Your role is your job or character within a performance
Still Image	Where you create a picture that is entirely still. You will most likely do this with a group to show an audience an image of a moment in a scene
Body Language	When you use your body to show and audience what you are thinking/feeling
Facial Expressions	When you use your face to show and audience what you are thinking/feeling
Split scene	A way of showing two different times or places on stage at once. While one half of the
Thought Tracking	When a character speaks their inner thoughts and feelings while the scene is paused
Physical theatre	A style of theatre that uses our bodies to create objects and movements

Food

Key Term	Definition
Hazard	Anything that is dangerous
Kitchen Hygiene	Ensuring that everything is clean when preparing food
Kitchen Safety	Being safe in the kitchen
Cross contamination	Transfer of bacteria from one person , object or place, to another
Nutrients	Chemicals found in food that are needed for body functions
Macronutrients	Nutrients that are needed in the body large amounts
Micro-nutrients	Nutrients that are needed in the body in small amounts
Diet	All the foods that we eat
Balanced diet	Eating a variety of foods in the correct proportions to meet the body's needs
Eat well Guide	A pictorial food guide showing the amounts and types of foods that are needed to make up a healthy balanced diet
Claw Grip	A method of cutting food that ensures that finger tips are tucked out of the way and will not get caught by the knife
Bridge Hold	A method of cutting food that ensures that fingers are out of the way as the knife cuts through the food
Danger Zone	The range of temperatures in which bacteria multiply very quickly

Design Technology

Key Term	Definition
Hazard	A hazard is a potential source of harm that could cause damage to health, life or property
Geometric Shapes	A range of figures such as a square, triangle, or rectangle
Design	A plan or drawing produced to show the look and function or workings of a building, garment, or other object before it is made
Acrylic sheets	Man-made sheets from plastic. Acrylic sheets can be used to build and make a variety of products. Acrylic can also be used on the laser cutter
Liquid Solvent Cement	General purpose plastic adhesive for Perspex and acrylic sheet, apply using a paint brush or pour directly
Laser Cutter	A machine that uses a laser to cut out a variety of materials such as wood and acrylic. The laser cutter can also etch and engrave onto materials
Mechanism	A system of parts working together in a machine, such as the mechanism of a clock
Strip Heater	Is a particular machine that heats up materials such as plastics and acrylic which softens the material to make it easy to bend and twist
Jig	Is a specially made piece of equipment used to guide another tool
2Design	A type of software to use to create designs/files than can be sent to the Laser cutter

Art

Key Term	Definition
Line	An element of art defined by a point moving in space. Line may be two-or three-dimensional, descriptive, implied, or abstract
Shape	An element of art that is two-dimensional, flat, or limited to height and width
Form	An element of art that is three-dimensional and encloses volume; includes height, width AND depth (as in a cube, a sphere, a pyramid, or a cylinder). Form may also be free flowing
Value	The lightness or darkness of tones or colours. White is the lightest value; black is the darkest. The value halfway between these extremes is called middle gray
Tone	Tone means how light or dark something is. The tones artists and designers use and the contrast between them can create very different moods and visual effects
Organic	Shapes that are not regular or even, using a combination of edges that are curved or angular
Contrast	Contrast is created by using opposites near or beside one another, such as a light object next to a dark object or a rough texture next to a smooth texture