CLEETHORPES ACADEMY HOME LEARNING

SPRING 1:
YEAR 9

We Are ***CARING*** We Are ***CURIOUS*** We Are ***CREATIVE***

SELF QUIZZING

OUR EXPECTATIONS

- The act of self-quizzing supports retrieval. Retrieval is important because the more we revisit knowledge and ideas, the more likely we are to remember it. The more we remember, the greater sense we can make of our learning.
- You should spend a minimum of *30 minutes a night* focusing on a specific subject's retrieval activity.
- You should bring your completed work to form, every Tuesday, where your work will be checked and additional retrieval activities will be completed to support your retention of the information studied at home.
- Failure to complete the activities each week, will result in further sanctions.

WHAT YOU SHOULD DO

- Each night, select a subject to focus on.
- Read the subject's information really trying hard to remember what you have read. You might want to highlight and add your own notes to the information you have been given.
- Once you are confident that you can recall the information without having to recheck, use the following blank page to write down everything you can remember, using a black or blue pen. Don't worry if you can't remember everything
- In form time, your tutor will ask you to check through your work and use a green pen to "gap fill" any information you may have missed.
- Your tutor will also ask further questions in relation to the information you have read each week, to further support your retention of new knowledge.
- You will be rewarded with carrot points for your efforts each week.

WEEK 1

ENGLISH LITERATURE

The History of Poetry

The word "poetry" itself comes from the Greek word *poieo* meaning "I create," and create it does. Poetry is used to convey love, lyrics, anger, hate, magic… poetry is a method of creation and manifestation, a method of memory and preservation.

Poetry is an art form, one that predates literacy. Researchers believe that the earliest forms of poetry were sung and passed on as an oral history. These were often chants or prayers, but from the physical records left historical accounts, instructions for everyday activities, and fiction can be counted among the poems. The majority of early oral histories were told in a poetic notation, likely because the repetition would make it easier to remember. Poetry is old enough that we can't determine when it began, not like we can with texts, though *The Epic of Gilgamesh* is cited as being one of the oldest examples of poetry along with the *Odyssey* and the *Iliad*.

The trick of using poetry for memory has been used for centuries and is still being used today as a mnemonic device. Everyone's likely heard poetry with rhyme schemes like:

"I before E except after C

or when sounding like A

as in neighbour or weigh,"

Or

"Thirty days hath September, April, June, and November;

All the rest have thirty-one,

Save February with twenty-eight days clear,

And twenty-nine each leap year."

Poetry of all genres and ages has found circulation all around the world. It has become a way to learn and understand cultures and the emotions of other people. Poetry also provides understanding on how language and symbol systems work.

WEEK 1

MATHEMATICS

Highest Common Factor

What is a factor?

A factor is a whole number is divides exactly into another whole number leaving no remainder.

What are the factors of 12?

1 x 12
2 x 6
3 x 4

The factors of 12 are 1,2,3,4,6 and 12.

What is the Highest Common Factor?

The highest common factor (HCF) of two numbers is the largest factor of all the given number.

Highest Common Factor of 12 and 16

Factors of 12: 1, 2, 3, 4, 6 and 12.
Factors of 16: 1, 2, 4, 8 and 16.

4 is the largest number in both lists.

So the HCF of 12 and 16 is 4.

WEEK 1

BIOLOGY

Key Words

Word	Meaning
Allele	An alternative form of a gene.
Asexual Reproduction	The production of offspring from a single parent by mitosis. The offspring clones of the parent.
Cystic Fibrosis	A disorder of cell membranes that is caused by a recessive allele.
DNA	A polymer that is made up of two strands that form a double helix.
Dominant	An allele that is always expressed, even if only one copy is present.
Fertilisation	The fusion of male and female gametes.
Gamete	Sperm cell and egg cell in animals; pollen and egg cell in plants.
Gene	A small section of DNA that codes for a specific protein.
Genome	The entire genetic material of an organism.
Genotype	The combination of alleles.
Heterozygous	A genotype that has two different alleles, one dominant and one recessive.
Meiosis	The two-stage process of cell division that reduces that chromosome number of the daughter cells. It makes gametes for sexual reproduction.
Mutation	A change in DNA.
Phenotype	The characteristic expressed because of the combination of alleles.
Polydactyly	Having extra fingers or toes. It is caused by a dominant allele.
Recessive	An allele that is only expressed if two copies of it are present.
Sexual Reproduction	The production of offspring by combining genetic information from the gametes of two parents. Leads to variation in the offspring.

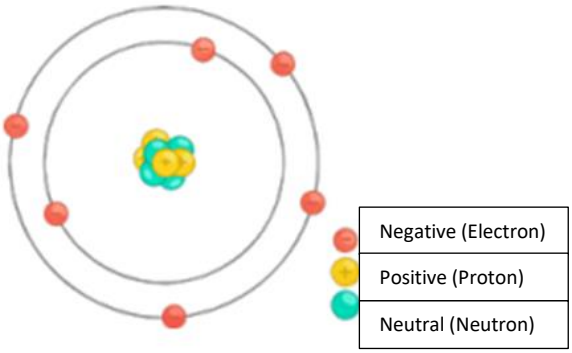
WEEK 1

CHEMISTRY

Atoms

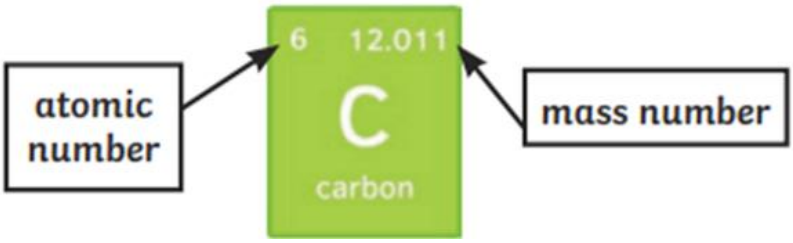
Contained in the nucleus are the protons and neutrons. Moving around the nucleus are the electron shells. They are negatively charged.

Particle	Relative Mass	Charge
Proton	1	+1
Neutron	1	0
Electron	Very small	-1



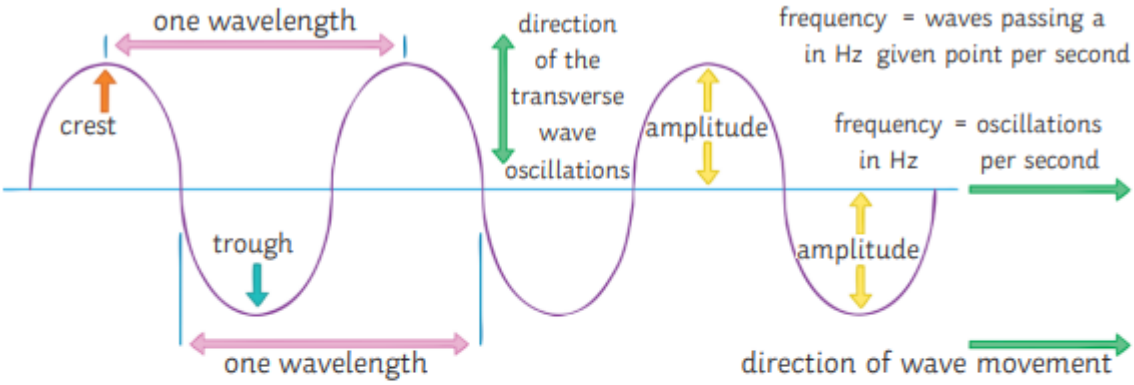
Overall, atoms have no charge; they have the same number of protons as electrons. An ion is charged particle – it does not have an equal number of protons to electrons.

Atomic Number and Mass Number



WEEK 1

PHYSICS



The **frequency** of a wave is the number of waves which pass a given point every second.

time period (s) = 1 ÷ frequency (Hz)

t = 1 ÷ f

The **wave speed** is how quickly the energy is transferred through a medium (how quickly the wave travels).

wave speed (m/s) = frequency (Hz) × wavelength (m)

v = f × λ

The speed of **sound waves** travelling through air can be measured by a simple method. One person stands a measured distance from a large flat wall, e.g. 100m. The person then claps and another person measures the time taken to hear the echo. The speed of the sound can then be calculated using the equation

speed = distance ÷ time.

WEEK 1

GEOGRAPHY

How do glaciers form and move?

Glacial ice forms in upland or polar areas above the snowline. Here, snow and ice cover the ground throughout the whole year. It takes many years for snow to become glacial ice. As snow accumulates (gains ice), it is compressed by its own weight. Gradually, dense, hard ice forms and starts to flow down-slope under its own weight. Where more ice is gained than lost over a year, it is called the zone of accumulation. If temperatures remain low, with heavy snowfalls, glaciers advance down-slope.

If accumulation (the amount of ice gained) is greater than ablation (melting), then the amount of ice stored in a glacier increases and the glacier advances. If the ablation is greater than the accumulation, then the glacier reduces in size and retreats. This occurs in the zone of ablation. The ice can move at different speeds. This creates wrinkles in the surface of the ice, forming great cracks called crevasses.

The end of the glacier is called the snout. This is where the main output from the glacier – water – is released. During the last century, most glaciers around the world have been shrinking and retreating. This is due to warmer, drier climate conditions.

WEEK 1

Personal Development

Protected characteristics

Age	People cannot be treated unfairly because they are young or old. Everyone deserves respect, no matter their age	
Disability	People with physical or mental disabilities must be treated fairly, with **reasonable adjustments** made to support them in school, work, and life.	
Gender Reassignment	A person is considered to be *transitioning* if they change their gender through actions like changing their name, pronouns, appearance, or having medical treatment to match their identity.	
Marriage and Civil Partnership	People must be treated equally whether they are married, in a civil partnership, or single.	
Pregnancy and Maternity	Pregnant people and new parents must not be treated unfairly because they are having or have had a baby.	
Race	No one should be treated unfairly because of their skin colour, nationality, or **ethnicity** (a person's cultural identity, which may include shared language, traditions, and history).	
Religion or Belief	Everyone has the right to follow their religion or beliefs, or to have no religion, without discrimination.	
Sex	People must not be treated unfairly because they are biologically male or female.	

WEEK 1

SPANISH

School Subjects	
el arte	art
el dibujo	drawing
el deporte	sport / PE
la geografía	geography
la historia	history
la literatura	literature
la religión	religion
la confección	textiles / sewing
el español	Spanish
el alemán	German
el inglés	English
el francés	French
la informática	computing / ICT
las lenguas	languages
las ciencias	science
las matemáticas	maths
Opinions	
mi pasión es	my passion is
mi asignatura favorita es	my favourite subject is
porque es/son	because it is / they are
porque puede ser	because it can be
aburrido/a/s	boring
divertido/a/s	fun
difícil/es	difficult
duro/a/s	hard
fácil/es	easy
importante/s	important
interesantes/s	interesting
práctico/a/s	practical

útil/es	useful
imposible/s	impossible

WEEK 1

ICT

CreativeJob Roles in Media

In your home learning books, please copy the table neatly.

Job Role	Job Description
Creative jobs in the media industry are roles that focus on ideas, visuals, stories and design. These jobs shape how a film, game, website or advert looks and feels. Creative workers use imagination, artistic skills and problem-solving to bring concepts to life.	
Animator	Creates lots of images (frames) that play in sequence to make characters or objects move.
Graphic Designer	Designs visuals like posters, logos, adverts and digital artwork for different media.
Script Writer	Writes the story, dialogue, characters and scenes for films, TV shows and games.
Web Designer	Designs how a website looks and functions, focusing on layout, style and user experience.

ART

Surrealism

Surrealism is an art and literary movement that began in Paris in the 1920s, inspired by dreams and the unconscious mind. It seeks to unlock creativity by bypassing rational thought, blending realistic and irrational imagery to explore the subconscious, and challenging conventional reality. Key techniques include using "automatism" (spontaneous, uncensored creation) and creating dreamlike scenes with unexpected juxtapositions.

Key characteristics

- **Focus on the unconscious:** Influenced by psychology, Surrealists sought to express the inner workings of the mind, including dreams, hidden thoughts, and irrational desires.
- **Challenging reality:** The movement aimed to revolutionize human experience by combining the rational with the illogical and finding magic in the unexpected and unconventional.
- **Use of chance and automatism:** Surrealists employed techniques like "automatism," which is a spontaneous and uncensored recording of images, to tap into the unconscious. Other methods included creating "exquisite corpse" drawings or using found objects.
- **Dreamlike and fantastical imagery:** Many Surrealist works depict realistic objects in bizarre and illogical settings, creating strange, dreamlike visions.

- **Salvador Dalí:** One of the most famous Surrealists, known for his highly detailed and bizarre dreamscapes.
- **René Magritte:** Famous for his thought-provoking images that challenge perception and reality.
- **Frida Kahlo:** Incorporated Surrealist elements into her work to explore identity and emotion.
- **Max Ernst:** A pioneer who developed new techniques like "frottage" and "grattage" to access the unconscious.
- **Dorothea Tanning:** Explored themes of psychological tension and dream worlds in her paintings.

Week 1

History

Protest and Reform Definitions

Key Word	Definition
Protest	a) A formal declaration of objection.
	b) the act of protesting; a public (often organised) manifestation of opposition.
Reform	Change for the better.
Laissez-Faire	Leave them be. The idea that the government should not interfere.
Unemployed	People who are involuntarily out of work.
Industrialisation	The development of industry on an extensive scale.
Poverty	Having little or no money and few or no material possessions.

WEEK 2

ENGLISH LITERATURE

Terminology	Definition	Example
Metaphor	An object used in place of another for symbolic purposes	The mind-forged manacles I hear
Simile	Comparing an object to another to develop a description	The world overflowing like a treasure chest
Personification	Giving an inanimate object living qualities	The wind spits like a tame cat turned savage
Alliteration	The repetition of the first letter in a line of words for effect	**h**e's **h**ere in my **h**ead when I close my eyes
Sibilance	Repetition of the 'ss' sound to create a hissing effect	**S**ee the mountain**s** ki**ss** high heaven
Assonance	Repetition of the vowel sound within words on a line for effect	The stuttering rifles r**a**pid r**a**ttle
Consonance	Repetition of the consonant sound within words on a line for effect	The s**t**u**tt**ering rifles rapid ra**tt**le
Onomatopoeia	Words used to represent a sound	Rattle,
Enjambment	When, in poetry, a line rolls over and continues onto the next line to create a flow	On another occasion, we get sent out to tackle looters raiding a bank.
Caesura	A punctuation break in the centre of a line of poetry	End of story, except not really.
Juxtaposition	Two opposing images discussed side by side	Every black'ning church appalls
Oxymoron	Two opposing words placed directly together	marriage hearse
Paradox	A phrase that creates an absurd, contradictory image (similar to an oxymoron)	Be terrified. It's you I love
Emotive Language	Language used to trigger emotions in the reader	I beg of you.
Rhetorical Question	Questions used to make the reader think	Does anyone see a soul worth saving?
Direct Address	When the poet talks directly to the reader	You have picked me out.

WEEK 2

ENGLISH LANGUAGE

Key Vocabulary

Key Vocabulary	Definition and Examples
Civil Rights Movement	The civil rights movement was a struggle for justice and equality for African Americans that took place mainly in the 1950s and 1960s.
Segregation	Setting someone or something apart from others.
Activist	A person who campaigns to bring about political or social change.
Rights	A moral or legal entitlement to have or do something.
Race	To a group of people who have in common some visible physical traits, such as skin colour, hair texture, facial features etc.
Discrimination	Unjust treatment of different people normally due to ethnicity, age, sex or disability.
Equality	A situation in which men and women, people of different races, religions, etc. are all treated fairly and have the same opportunities.
Martin Luther King Jr	A black church leader, King participated in and led marches for the right to vote, desegregation, labour rights, and other civil rights.
Jim Crow Law	A law that separated the white and black races in America. 'Separate but equal'.

WEEK 2

MATHEMATICS

Lowest Common Multiple

What is a multiple?

A multiple of a number is any number in its times table.

Find the first five multiple of 4

1 x 4 = 4
2 x 4 = 8
3 x 4 = 12
4 x 4 = 16
5 x 4 = 20

The first five multiples of 4 are 4, 8, 12, 16, 20.

What is Lowest Common Multiple?

The lowest common multiple (LCM) or two or more numbers is the smallest factor of all the given numbers.

Find the Lowest Common Multiple of 6 and 8

Multiples of 6: 6, 12, 18, 24, 30, 36, 42, 48
Multiples of 8: 8, 16, 24, 32, 40, 48, 56

24 is the lowest number in both lists.

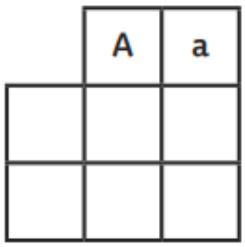
So the LCM of 6 and 8 is 24.

WEEK 2

BIOLOGY

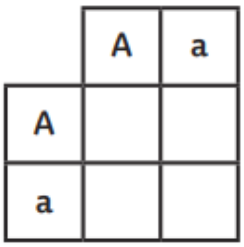
Sex Determination

How to Complete a Punnet Square



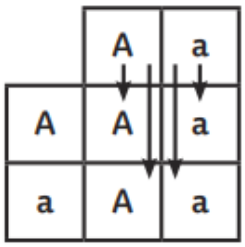
Step 1:

Put the two alleles from one parent into the boxes at the top. This parent is a heterozygote. This means they have one dominant and one recessive allele.



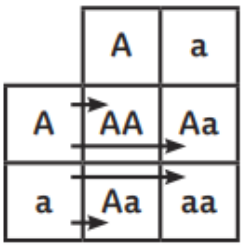
Step 2:

Put the two alleles from the second parent into the boxes on the left. This parent is also a heterozygote.



Step 3:

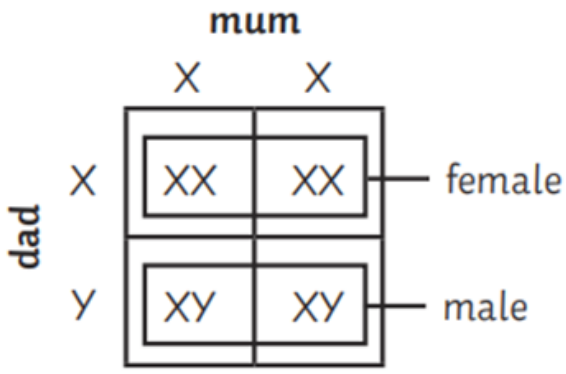
Put the alleles from the first parent into the two boxes underneath them.



Step 4:

Put the alleles from the second parent into the two boxes to the right of them.

Sex Determination



Females carry two X chromosomes.
Males carry one X and one Y chromosome.

WEEK 2

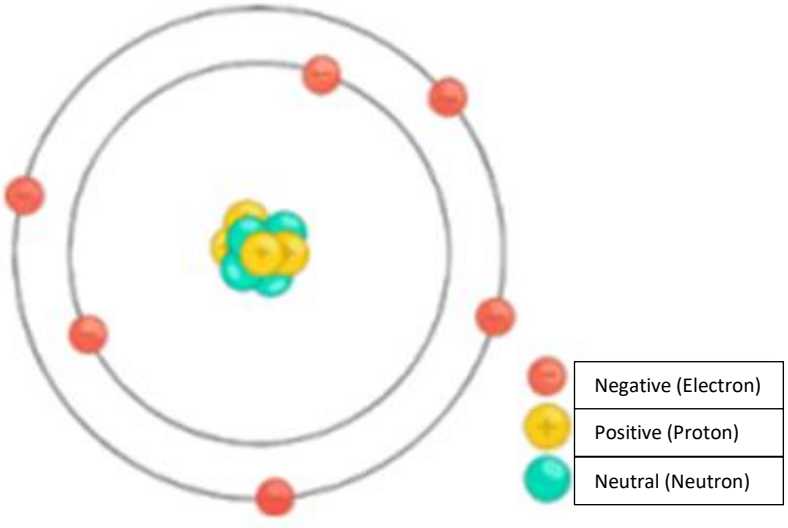
CHEMISTRY

History of the Atom

Scientist	Time	Discovery
John Dalton	Start of 19th Century	Atoms were first described as solid spheres.
JJ Thomson	1897	Plum pudding model – the atom is a ball of charge with electrons scattered.
Ernest Rutherford	1909	Alpha scattering experiment – mass concentrated at the centre; the nucleus is charged. Most of the mass is in the nucleus. Most atoms are empty space.
Niels Bohr	Around 1911	Electrons are in shells orbiting the nucleus.
James Chadwick	Around 1940	Discovered that there are neutrons in the nucleus.

Electronic Structure

Electrons are found in shells. A maximum of two in the most inner shell, then either in the 2nd and 3rd shell. The inner shell is filled first, then the 2nd then the 3rd shell.



WEEK 2

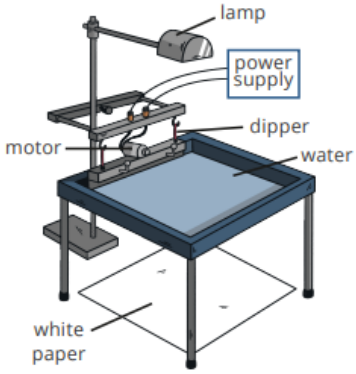
PHYSICS

Required Practical: Observing Waves

Make observations to identify the suitability of apparatus to measure the frequency, wavelength and speed of waves.

Waves in a Ripple Tank

The diagram shows the apparatus most commonly used for this investigation.



Method:

1. Set up the apparatus as shown in the diagram.
2. Turn on the power supply and observe the waves produced in the water. Make any necessary adjustments to the equipment, for example altering the potential difference of the power supply, so that the waves are clear to observe.
   The lower the frequency of the waves, the easier it will be for measurements to be made.
3. To measure the **wavelength**, use a metre ruler to measure the length of 10 waves and divide this value by 10 to find one wavelength. Repeat this several times and calculate the mean wavelength. A **stroboscope** can be used to freeze the wave pattern to make it easier to measure the waves.
4. To measure the **frequency**, mark a point on the white paper and count the number of waves that pass this point in 10 seconds. Divide the number of waves by 10 to find the number of waves that pass per second. Repeat this several times and calculate the mean frequency.
5. To calculate **wave speed**, use the equation:

wave speed = frequency × wavelength

Required Practical Investigation 8 (continued)

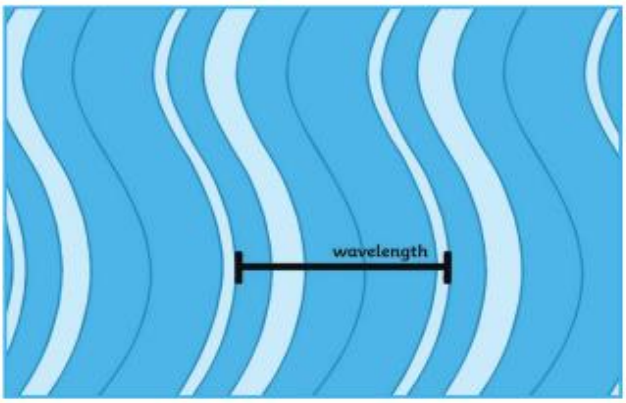
To measure the wave **frequency**, mark a given point onto the white paper and **count** the number of waves which pass the point within **10 seconds**. Divide your answer by 10 to find the number of **waves per second**.

Record 10 frequencies and calculate the **average** value.

To calculate the wave speed, use this formula:

speed = frequency × wavelength

Remember: the wavelength is the distance between one peak (or crest) of a wave and the next peak.

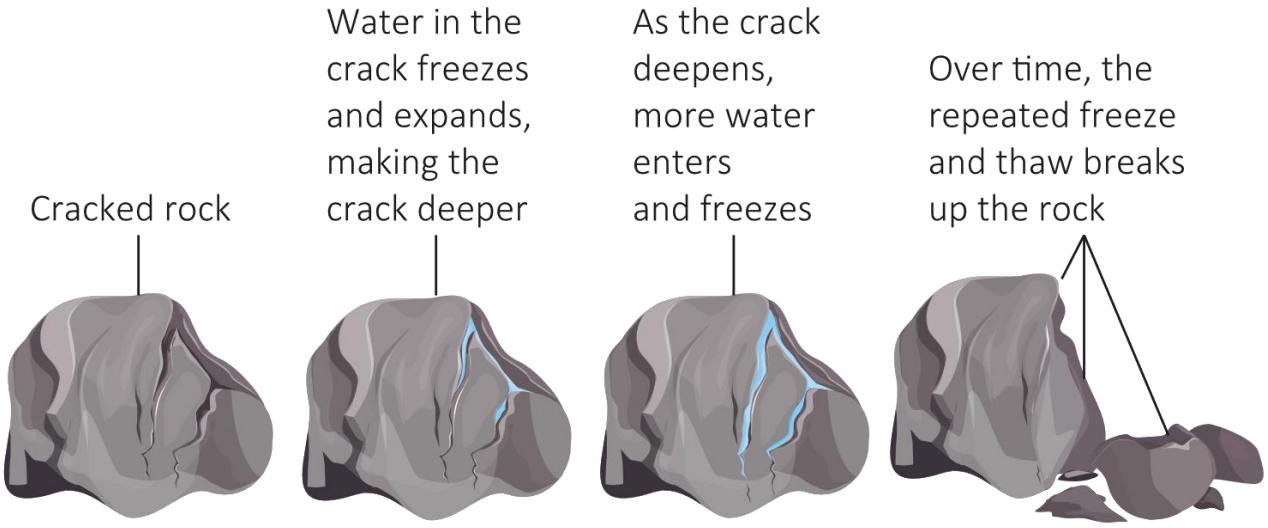


WEEK 2

GEOGRAPHY

How do glaciers erode landscapes?

Glaciers erode landscapes in the two ways shown in Photo B. Plucking takes place where loosened blocks of bedrock become frozen to the base of the glacial ice. Often the rock has already been loosened by freeze-thaw weathering. As the ice moves forward, the rock frozen to the ice moves with it, and is plucked from the bedrock. This plucked rock debris becomes embedded at the base and sides of the glacier. As the ice moves forward, these rocks scrape against the bedrock, wearing it away. This is called abrasion. It leaves behind smooth, polished rock surfaces, which may have scratches in them called striations.



WEEK 2

Personal Development

British Values

Schools follow British values to promote fairness, respect, and equality. They help create a safe, inclusive environment where everyone can learn, grow, and feel valued, no matter their differences. The British Values are as follows:

Democracy	Everyone has the right to have a say and make decisions, by voting or expressing their opinion.	
Rule of Law	Laws exist to keep people safe and ensure fairness. It's important to follow the law and respect rules, both at school and in society.	
Individual Liberty	Everyone has the freedom to make their own choices, whether it's about their beliefs, where they live, or what they want to do in life.	
Mutual Respect	We must respect each other's opinions, beliefs, and differences. Treating others with kindness and fairness is key to building a strong community.	
Tolerance of Others	It's important to respect and understand people's different religions, cultures, and beliefs, even if they are not the same as ours.	

WEEK 2

SPANISH

What are you good/bad at?	
soy bueno/a (en)....	I am good (at)…
soy malo/a (en)	I am bad (at)…
saco buenas notas (en)	I get good grades (in)…
saco malas notas (en)	I get bad grades (in)…
saco nivel.....en	I achieve level… in…
Reasons	
porque	because
(no) aprendo mucho	I (don't) learn a lot
tengo buena memoria	I have a good memory
soy artístico/a	I am artistic
soy creativo/a	I am creative
soy deportivo/a	I am sporty
soy práctico/a	I am practical
soy trabajador/a	I am hard-working
soy inteligente	I am intelligent
(no) aprendo mucho	I (don't) learn a lot

.

WEEK 2

HISTORY

What did the Liberals do to help the sick and unemployed?

The Labour Exchanges Act (1909) Offices called Labour Exchanges were set up all over the UK. Employers looking for workers advertised their vacancies at their local Labour Exchange. By 1914 there were 400 Labour Exchanges, filling a million jobs per year.

The National Insurance Act (1911) This part of the National Insurance Act was set up to deal with workers when they fell ill. Workers paid 4d a week into the insurance fund. The employers added 3d and the government 2d, making 9d for each worker.
If a worker fell ill, they got sick pay of 10s a week for 13 weeks and then 5s for further 13 weeks in any one year.

Workers in the scheme could get free medical treatment and maternity care.
The National Insurance Act, Part II (1912) This part of the National Insurance Act aimed to prevent poverty resulting from unemployment by insuring workers against periods when they were out of work. Both the workers and employers paid 2.5d a week into the fund. When unemployed, workers could claim 7s a week, for up to 15 weeks. This was not enough to live on, but helped them cope until they found another job

WEEK 2

ICT

Technical Job Roles in Media

In your home learning books, please copy the table neatly.

Job Role	Job Description
Technical jobs in the media industry involve using specialist equipment, software and technology to make a project work. These roles make sure the creative ideas can actually be produced, recorded or built. Technical workers handle cameras, sound, editing, coding and other tools that turn raw materials into a final product.	
Camera Operator	Uses cameras to capture the shots and footage needed for a film or production.
Games Developer	Helps create and build games through coding, design, animation and testing for mobile, consoles or PC.
Sound Editor	Records, edits and mixes sound effects, dialogue and audio for media projects.
Video Editor	Puts together video clips, sound and effects to create the final finished film or video.
Web Developer	Builds the behind-the-scenes part of a website, focusing on coding and technical performance.

Art
Rene Magritte

René Magritte (1898-1967) was a key Belgian Surrealist artist famous for painting ordinary objects (like bowler hats, apples, pipes) in bizarre, thought-provoking, and mysterious scenarios that challenged perceptions of reality and representation, influencing Pop Art, Conceptual Art, and popular culture with iconic works like *The Treachery of Images* (Ceci n'est pas une pipe) and *The Son of Man* (apple-faced man). He lived a deliberately ordinary life in Brussels, contrasting with his extraordinary art, often featuring dream-like juxtapositions.

Key Aspects of his Work & Life:

- **Surrealism:** He joined the Surrealist movement in Paris, exploring the unconscious, dreams, and the uncanny through precise, realistic painting styles.
- **Everyday Objects in Strange Contexts:** He placed familiar items like clouds, skies, rocks, and people in unsettling or impossible situations to question what is real.
- **Language & Image:** Magritte explored the relationship between words and images, famously asking if a picture of a pipe is *really* a pipe.
- **Everyday Persona:** He cultivated a mundane public image, often wearing a bowler hat, which became synonymous with his art, as a form of camouflage and a contrast to his surreal creations.
- **Influence:** His distinct style, blending realism with fantasy, profoundly impacted later art movements and advertising.

Famous Works:

- ***The Treachery of Images*** **(Ceci n'est pas une pipe):** A painting of a pipe with the text "This is not a pipe".
- ***The Son of Man*****:** A man in a bowler hat with his face obscured by a floating green apple.
- **The False Mirror: A** giant, lashless eye where the iris is a cloudy sky and the pupil a black void.

WEEK 3

ENGLISH LITERATURE

Poetic Devices

Terminology	Definition
Stanza	Each section of the poem
Rhyming Couplets	Where two lines rhyme together (AA BB)
Sonnet	A poem with 14 lines, and each line has 10 syllables (beats)
Irregular Rhyme Scheme	Where the poem follows no structured rhyme scheme
Alternate Rhyme	A rhyme scheme in which alternate lines rhyme (ABAB CDCD EFEF)
Rhyme Scheme	The way words are coupled together to create similar/clashing sounds
Rhythm	The flow of the poem
Beats	The number of syllables per line
Metre	The number of syllables per line, and the pattern of emphasis on each syllable (stressed/unstressed)
Iambic Pentameter	When each metre follows the 'stressed/unstressed' pattern (usually 10 syllables per line)

Word bank

Expanding Ideas	Furthermore / Moreover / In addition / To further reinforce this / Another interpretation / From another perspective
To show Similarity	Comparatively / Similarly / In a similar way / Likewise / Equally / As with
To show contrast	On the other hand / Alternatively / Conversely / However / Whereas

WEEK 3

ENGLISH LANGUAGE

Segregation in the United States

After the United States abolished slavery, black Americans continued to be marginalised through enforced segregated and diminished access to facilities, housing, education—and many other opportunities

Segregation is the practice of requiring separate housing, education and other services for people of colour. Segregation was made law several times in 19th- and 20th-century America as some believed that black and white people were incapable of coexisting.

In the lead-up to the liberation of enslaved people under the Thirteenth Amendment, abolitionists argued about what the fate of slaves should be once they were freed.

Black Codes and Jim Crow

The first steps toward official segregation came in the form of "Black Codes." These were laws passed throughout the South starting around 1865, that dictated most aspects of black people's lives, including where they could work and live. The codes also ensured black people's availability for cheap labour after slavery was abolished. Segregation soon became official policy enforced by Southern laws. Through Jim Crow laws (named after a derogatory term for Blacks), legislators segregated everything from schools to residential areas to public parks to theatres to pools to cemeteries, asylums, jails and residential homes. There were separate waiting rooms for white people and black people in professional offices and, in 1915, Oklahoma became the first state to even segregate public phone booths.
When Rosa Parks was arrested in 1955 after refusing to give up her bus seat to a white man in Montgomery, Alabama, the civil rights movement began in earnest. Through the efforts of organisers like Dr. Martin Luther King Jr. and the resulting protests, the Civil Rights Act was signed in 1964, outlawing discrimination, though desegregation was a slow process, especially in schools.

WEEK 3

MATHEMATICS

Fractions and Decimals

Converting Decimals to Fractions

To convert decimal to a fraction, you first need to convert it to a percentage by multiplying it by 100.

You then convert it to a fraction by putting it over 100 and simplifying if possible.

Example of Converting Decimals to Fractions

Example 1:
Convert 0.57 to a fraction

Step 1: 0.57 x 100 = 57%

Step 2: $\frac{57}{100}$

Example 2:
Convert 0.06 to a fraction

Step 1: 0.06 x 100 = 6%

Step 2: $\frac{6}{100} = \frac{3}{50}$

Converting Fractions to Decimals

To convert a fraction to a decimal you must divide the numerator by the denominator or if you can find an equivalent fraction with a denominator of 100, then you can just divide the numerator by 100.

Example of Converting Fractions to Decimals

Example 3:

Convert $\frac{2}{5}$ to a decimal

$2 \div 5 = 0.4$

Example 4:

Convert $\frac{4}{25}$ to a decimal

Step 1: Multiply top and bottom by 4 to find equivalent fraction

$= \frac{16}{100}$

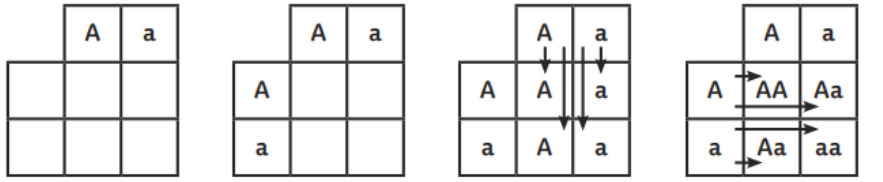
Step 2: Divide top number by 100 = 0.16

WEEK 3

BIOLOGY

Probability

How to Complete a Punnet Square



Step 1:
Put the two alleles from one parent into the boxes at the top. This parent is a heterozygote. This means they have one dominant and one recessive allele.

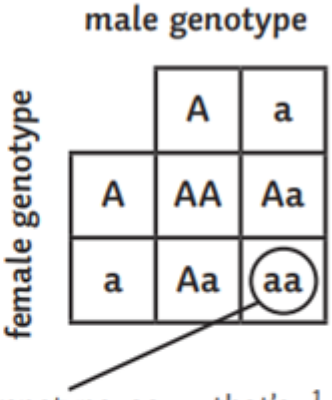
Step 2:
Put the two alleles from the second parent into the boxes on the left. This parent is also a heterozygote.

Step 3:
Put the alleles from the first parent into the two boxes underneath them.

Step 4:
Put the alleles from the second parent into the two boxes to the right of them.

Probability

There are four possible combinations of gametes that offspring can inherit.



One of these four has the genotype aa – that's $\frac{1}{4}$, 25% or 0.25.

The recessive phenotype has a ratio of 1:3 because only one combination will show the phenotype while the other three will not.

Probability

There are four possible

male genotype

WEEK 3

CHEMISTRY

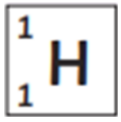
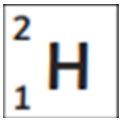
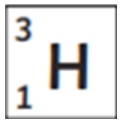
Elements

Elements are made of atoms with the same atomic number. Atoms can be represented as symbols:

N= Nitrogen **F=** Fluorine **Zn=** Zinc **Ca=** Calcium

Isotopes

An isotope is an element with the same number of protons but a different number of neutrons. They have the same atomic number but different mass number.

Isotope	Protons	Electrons	Neutrons
	1	1	1 – 1 = 0
	1	1	2 – 1 = 1
	1	1	3 – 1 = 2

Compounds

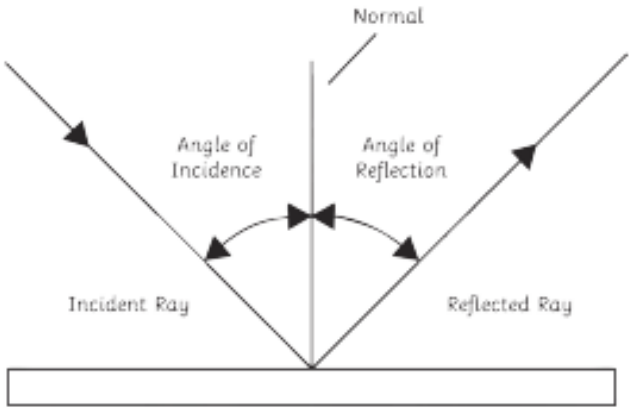
A compound is when two or more elements are chemically joined. Examples of compounds are carbon dioxide and magnesium oxide. Some examples of formulas are CO_2, NaCl, HCl, H_2O, Na_2SO_4. They are held together by chemical bonds and are difficult to separate.

WEEK 3

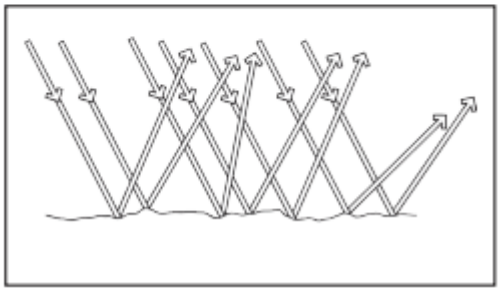
PHSYICS

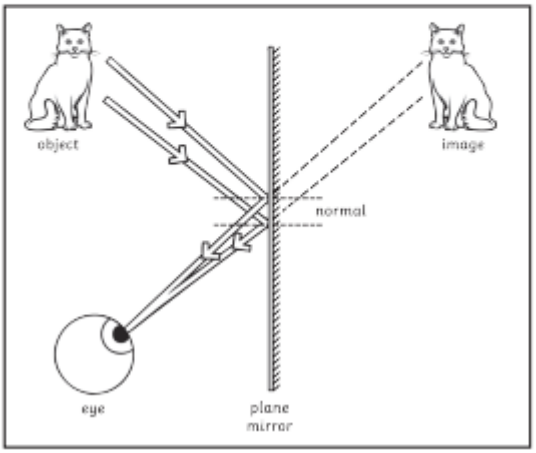
What does the law of reflection state?

The law of reflection states that the angle of incidence must equal the angle of reflection.



Reflection occurs on different surfaces. Reflection on a smooth surface is called **specular reflection**. Reflection on a rough surface is called **diffuse reflection** – this results in the image being **distorted** as the reflected rays of light scatter in many different directions. Individual light rays obey the **law of reflection**. On rough surfaces, different rays of light are reflected at different **angles**.





WEEK 3

GEOGRAPHY

The formation of U-Shaped Valleys

One of the most dramatic changes to a landscape caused by glacial erosion is the formation of U-shaped valleys. A series of small corrie glaciers move down-slope from the hollow on the mountainside where they formed. They slowly join together to form one large glacier, like river tributaries flowing into a main river. This large glacier can erode more powerfully. It therefore creates a deeper valley with sheer, straight sides and a flat bottom. This valley looks like the letter 'U', hence the name – U-shaped valley.

Hanging valleys and truncated spurs

When a U-shaped valley is created, the glacier cuts through the interlocking spurs that previously formed the river valley. This leaves behind steep cliffs along the sides of the U-shaped valley – these are called truncated spurs.

Once the ice melts and the river flows once more, the tributary streams and their small valleys are left hanging high above the new U-shaped valley floor. This landform is called a hanging valley. Often the tributary streams fall from this hanging valley as waterfalls.

WEEK 3

Personal Development

Protected Characteristics

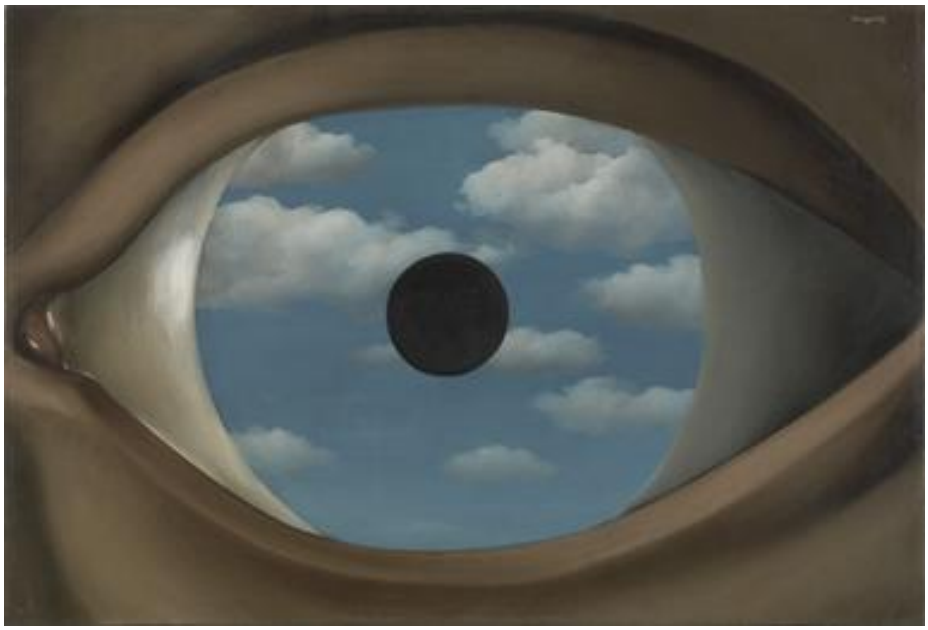
Age	People cannot be treated unfairly because they are young or old. Everyone deserves respect, no matter their age	
Disability	People with physical or mental disabilities must be treated fairly, with **reasonable adjustments** made to support them in school, work, and life.	
Gender Reassignment	A person is considered to be *transitioning* if they change their gender through actions like changing their name, pronouns, appearance, or having medical treatment to match their identity.	
Marriage and Civil Partnership	People must be treated equally whether they are married, in a civil partnership, or single.	
Pregnancy and Maternity	Pregnant people and new parents must not be treated unfairly because they are having or have had a baby.	
Race	No one should be treated unfairly because of their skin colour, nationality, or **ethnicity** (a person's cultural identity, which may include shared language, traditions, and history).	
Religion or Belief	Everyone has the right to follow their religion or beliefs, or to have no religion, without discrimination.	
Sex	People must not be treated unfairly because they are biologically male or female.	

Art

The False Mirror – Rene Magritte

The False Mirror is a 1928 oil painting by Rene Magritte, which jolts the viewer by removing the eye from its usual context, presenting it without the face to which it belongs. It further disrupts expectation by placing a circular sky inside the otherwise ordinary oculus. Sometimes called magical realism, such juxtaposition of normally unrelated objects within a seemingly incongruous context is characteristic of much of Magritte's oeuvre. For Magritte and Surrealists working in a similar mode, these surprising, even bizarre combinations were considered the products of their unconscious minds. By visualizing them, the artists believed, they might also touch the unconscious minds of their viewers.

Many of Magritte's Surrealist colleagues, including Man Ray, Salvador Dali, and Max Ernst, made use of eyes as a motif in their art. In their works, as in Magritte's eyes undermine our basic assumptions they are recontextualized, multiplied, and assaulted; on occasion, they cry glass tears. The Surrealists meant these kinds of images to make viewers uneasy, to unsettle complacent attitudes about art and life. By replacing the eyes iris with a blue, cloud-filled sky in False Mirror, Magritte challenges us to question what we see and what we think we know. Is the sky a reflection of what the eye is seeing? Is the eye in fact an opening into another reality? Are we looking at an inner vision, or something else entirely? One thing is certain: Magritte's **The False Mirror** is an invitation to look at the world differently.



WEEK 3

HISTORY

What did the Liberal Government do to help children?

Free school meals (1906) – gave local councils the power to provide free school meals for poor children. By 1914, 158,000 children were having free meals once a day, every day.

Free school medical inspections (1907) – all children were to be inspected once a year by a doctor. Treatment could be recommended and given.

School Clinics (1912) – a network of school clinics was set up that provided free medical treatment for children. This was because some parents could not afford to pay for medical treatments that were recommended by the doctor who carried out the school inspection.

WEEK 3

SPANISH

Who do you like/dislike?	
Me gusta/ no me gusta/ odio/ etc	I like / I don't like / I hate / etc
Me llevo bien con…	I get on well with…
Me llevo mal con….	I get on badly with…
Mi profesor favorito es	My favourite (male) teacher is…
Mi profesora favorita es	My favourite (female) teacher is…
Mi profesor menos favorito es….	My least favourite (male) teacher is…
Mi profesora menos favorita es...	My least favourite (female) teacher is…
el señor….	Mr…
la señorita…..	Miss…
mi profesor de (subject)	my (male) … teacher
mi profesora de (subject)	my (female) … teacher
More complex reasons	
aprendo mucho	I learn a lot
siempre está contento/a	He / She is always happy
siempre está enfadado/a	He / She is always angry
pone muchos deberes	He / She gives a lot of homework

WEEK 3

ICT

Job Roles in Media

In your home learning books, please copy the table neatly.

Job Role	Job Description
Senior jobs in the media industry are leadership and management roles that supervise teams and guide the whole project. These roles make the big decisions, organise people, manage budgets and ensure the work is completed to a high standard. Senior workers are responsible for planning, quality control and overall direction.	
Campaign Manager	Plans and runs marketing campaigns to promote a product, project or event.
Creative Director	Leads the creative team, guiding ideas, design and creative decisions.
Production Manager	Oversees the production process to make sure work is safe, on time and high quality.

WEEK 4

ENGLISH LITERATURE

Poetic Forms

Poetic Form	Description
Acrostic	This type of poetry spells out a name, word, phrase or message with the first letter of each line of the poem. It can rhyme or not, and typically the word spelt out, lays down the theme of the poem.
Ballad	An old form of poetry that tells a dramatic or emotional story. They came from Europe in the late Middle Ages and were initially passed down from one generation to another. Ballads do have a set form; they are typically four lines (quatrain) and have a rhyme scheme of ABAB or ABCB.
Dramatic Monologue	A dramatic monologue is a speech delivered by a single character in a story, play, or poem. Dramatic monologues can be delivered from one character to other characters or from a character to the audience.
Elegy	An elegy doesn't have rules like some of the other forms of poetry but it does have a set subject: death.
Epic	A long narrative poem in elevated style recounting the deeds of a legendary or historical hero.
Free Verse	Free verse is a popular style of modern poetry. There is a lot of freedom when it comes to writing a poem like this. Free verse can rhyme or not, it can have as many lines or stanzas as the poet wants, and it can be about anything you like!
Haiku	The haiku is an ancient form of Japanese. Renowned for its small size, haikus consist of just three lines (tercet); the first and third lines have five syllables, whereas the second has seven. Haikus don't have to rhyme.

EEK 4

MATHEMATICS

Percentage Increase and Decrease

Increase by Percentage

When increasing by a percentage we can calculate the percentage amount we are increasing it by and then add it onto the original amount.

Example of Increase by Percentage

Example: Increase £80 by 20%

Step 1: Work out 20% of £80.
20% of £80 = £16

Step 2: Add the amount to the original value.
£80 + £16 = £96

So £80 increased by 20% = **£96**

Decrease by a Percentage

When decreasing by a percentage we can calculate the percentage amount we are decreasing it by and then take it off the original amount.

Example of Decrease by Percentage

Example: Decrease £80 by 20%

Step 1: Work out 20% of £80.
20% of £80 = £16

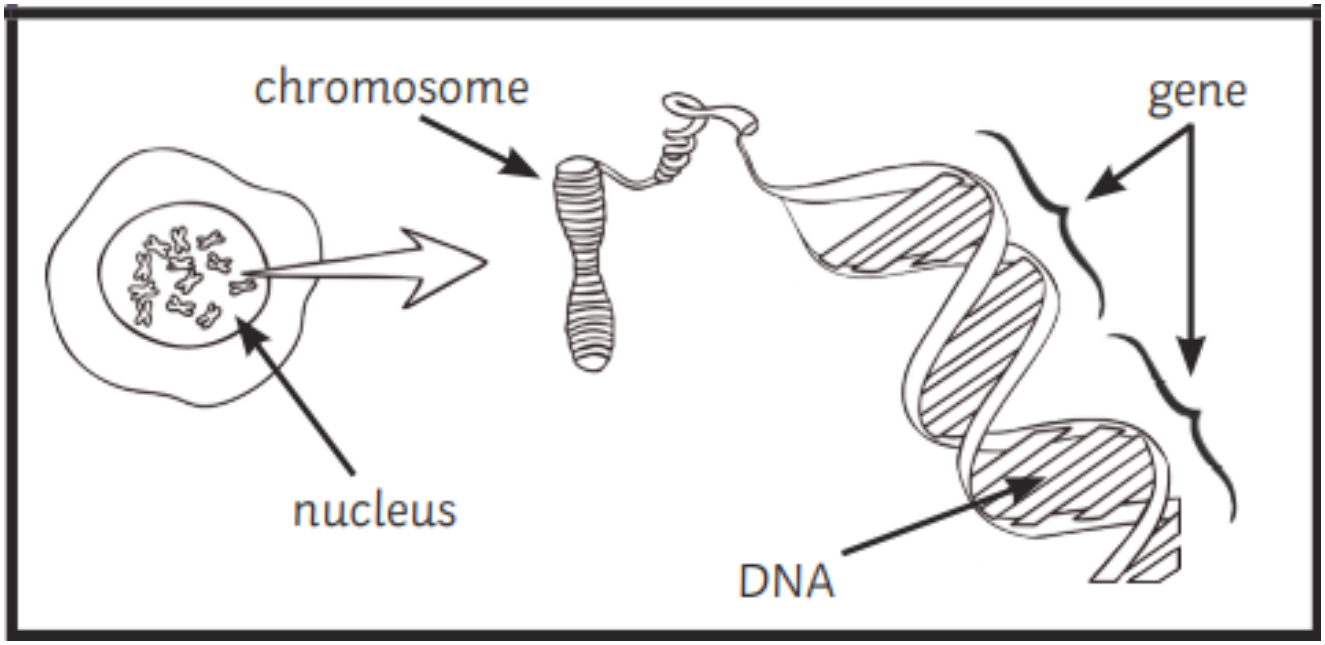
Step 2: Subtract the amount to the original value.
£80 - £16 = £64

So £80 decreased by 20% = **£64**

WEEK 4

BIOLOGY

Key Words



WEEK 4

CHEMISTRY

Alkali Metals

The alkali metals (group 1 elements) are soft, very reactive metals. They all have one electron in their outer shell, making them very reactive. They are low density. As you go down the group, they become more reactive. They get bigger and it is easier to lose an electron that is further away from the nucleus.

They form ionic compounds with non-metals.

They react with water and produce hydrogen.

Example

Lithium + water → lithium hydroxide + hydrogen

$2Li + 2H_20 \rightarrow 2LiOH + H_2$

They react with chlorine and produce a metal salt.

Example

Lithium + chlorine → lithium chloride

$2Li + Cl_2 \rightarrow 2LiCl$

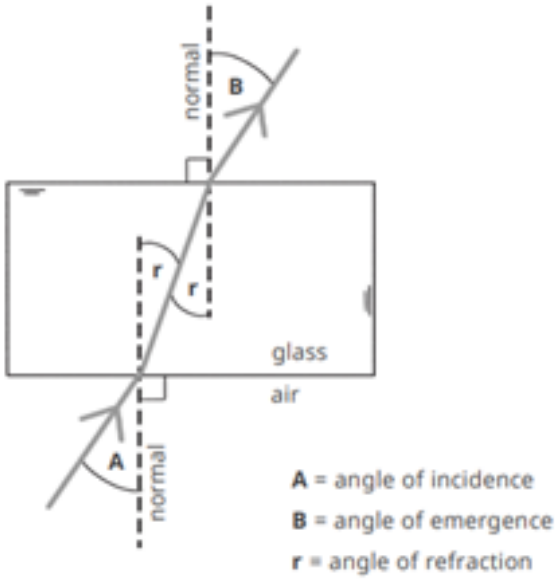
They react with oxygen to form metal oxides.

WEEK 4

Physics

Properties of Electromagnetic Waves

When a wave moves into a medium with a different density (e.g., from air into glass), the wave changes direction. This is called refraction. This can be represented by a ray diagram.



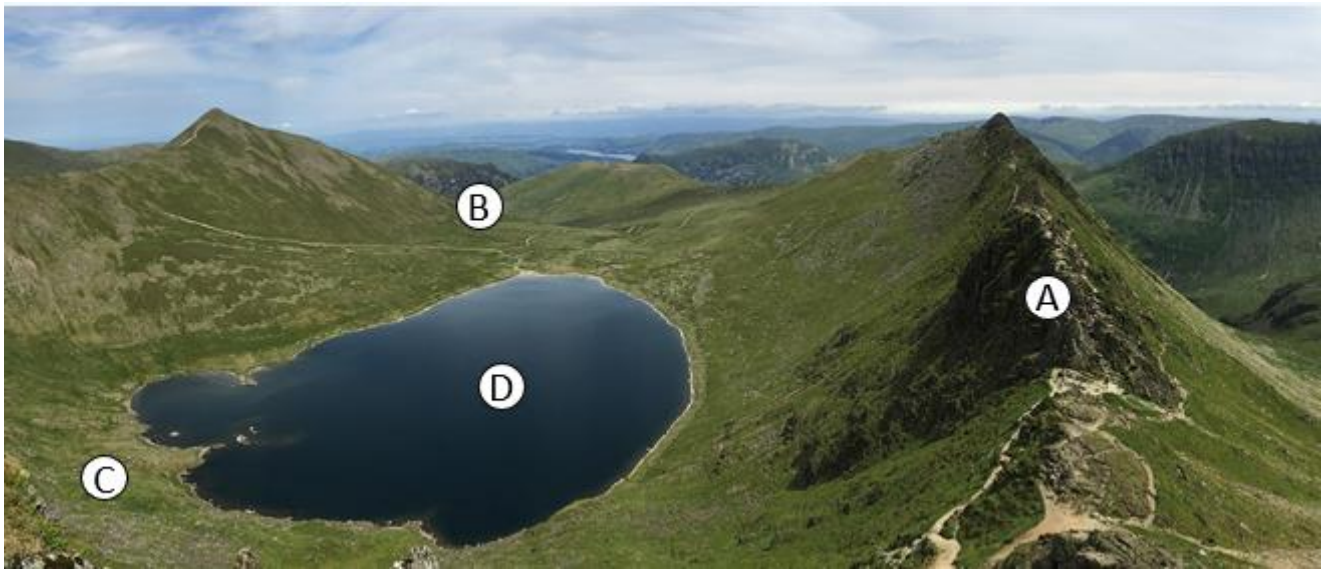
When a wave enters the glass block at an angle to the normal, it bends towards the normal. The angle of refraction is smaller than the angle of incidence. The angle at which the wave leaves the glass block (angle of emergence) is equal to the angle at which it enters the glass block (angle of incidence).

If a wave enters a different medium at 90° (perpendicular to the boundary), it will not change direction but instead carry on in a straight line.

WEEK 4

GEOGRAPHY

Features of Helvellyn



A	Arete – Striding Edge
B	Lip
C	Steep back wall
D	Hollow – Red tarn

Art

Salvador Dali

Salvador Dalí (1904-1989) was a famous Spanish Surrealist artist known for his eccentric persona, dreamlike paintings featuring melting clocks, and contributions to film, sculpture, and design, becoming a leading figure in 20th-century art by exploring the subconscious through his unique "paranoiac-critical method". He was a master of precise, realistic technique applied to bizarre, imaginative, and often scandalous imagery, making modern art accessible and popular.

Key Aspects of His Life & Work:

- **Surrealism:** Dalí joined the Surrealist movement in Paris, influenced by Freud, and developed a method to tap into subconscious imagery, creating works like *The Persistence of Memory* (1931).
- **Artistic Style:** He blended meticulous, classical painting techniques with fantastical, hallucinatory visions, often featuring melting clocks, ants, and vast landscapes.
- **Multi-Media Artist:** Beyond painting, he excelled in sculpture, graphic arts, fashion, jewellery, writing, and film (collaborating with Luis Buñuel on *Un Chien Andalou*).
- **Eccentric Persona:** His flamboyant self-promotion, bizarre acts, and striking mustache made him a famous public figure, though it sometimes overshadowed his art.
- **Themes:** His art explored dreams, science, religion, sex, death, and the subconscious, often reflecting his childhood belief that he was the reincarnation of his dead brother.
- **Legacy:** He became the most famous Surrealist, influencing pop art and modern expression, with a dedicated museum in Figueres, Spain, housing his work.

WEEK 4

Personal Development

British Values

Schools follow British values to promote fairness, respect, and equality. They help create a safe, inclusive environment where everyone can learn, grow, and feel valued, no matter their differences. The British Values are as follows:

Democracy	Everyone has the right to have a say and make decisions, by voting or expressing their opinion.	
Rule of Law	Laws exist to keep people safe and ensure fairness. It's important to follow the law and respect rules, both at school and in society.	
Individual Liberty	Everyone has the freedom to make their own choices, whether it's about their beliefs, where they live, or what they want to do in life.	
Mutual Respect	We must respect each other's opinions, beliefs, and differences. Treating others with kindness and fairness is key to building a strong community.	
Tolerance of Others	It's important to respect and understand people's different religions, cultures, and beliefs, even if they are not the same as ours.	

WEEK 5

ENGLISH LITERATURE

Romanticism

Romanticism (or Romantic movement) is a movement, or style of art, literature and music in the late 18th and early 19th century in Europe.

The movement said that feelings, imagination, nature, human life, freedom of expression, individualism and old folk traditions, such as legends and fairy tales, were important. It was a reaction to the aristocratic social and political ideas of the Age of Enlightenment and the Industrial Revolution.

It was also a reaction against turning nature into a mere science.

The movement showed most strongly in arts like music, and literature. However, it also had an important influence on historiography, education, and natural history.

British Romanticists:

Hopefully you will recognise the names:

- William Wordsworth
- Samuel Taylor Coleridge
- Lord Byron
- Shelley
- William Blake
- Robert Burns
- Walter Scott
- J. M. W. Turner

Glossary:

The Age of Enlightenment: an 18th-century intellectual movement in Europe to make people more aware about science rather than religion and tradition.

WEEK 5
ENGLISH LANGUAGE

Noun

A Noun is a thing; a person, a place, an object or a concept. Some common nouns are things we can see (concrete nouns) such as dog, cat, castle, mother, father, Scotland, England, table or cloak. More unusual or less common ones are ones we can't necessarily see (abstract nouns) which relate to concepts such as fear, passion or guilt.

Adjective

An adjective is a word which describes the noun in the sentence. Often, these relate to size, shape, colour, emotions or personality. For example: big, small, round, square, red, blue, yellow, sad, happy, positive.

Pronoun

A pronoun takes the place of a noun to avoid it being repeated again. Common pronouns are things like: I, you, it, he, she, mine, his, hers, yours, theirs. In the sentence 'the dog played with the ball but the dog also liked playing in the sea', the noun 'the dog' is repeated twice, so it sounds clumsy. Pronouns mean it can sound smoother, like this: 'the dog played with the ball but he also liked playing in the sea.'

Verb

A verb is a doing word. The easiest way to identify the verb in a sentence is find the word which tells the reader what is being done. For example: run, jump, laugh, write, plot, sing, tell.

Adverb

An adverb is a word which describes how something is being done and normally has an 'ly' ending. It could describe speed, direction or the quality of an action. For example: quickly, slowly, lazily, directly, wonkily, badly or positively.

WEEK 5

MATHEMATICS

Interest

Compound Interest

Compound interest is charged at the end of every year. As the amount grows each year, so does the interest.

Example of Compound Interest

Jim invests £200 with a fixed rate of interest of 5% each year.
How much money will he have after 20 years?

After year 1 he has £200 x x1.05 = £210
After year 2 he has £210 x x1.05 = £220.50 or £200 x (1.05 x 1.05)
After year 3 he has £200 x 1.05 x 1.05 x 1.05 or £2000 x 1.05^3
After year 3 he has £200 x 1.05^4

After year 20 he has £200 x 1.05^{20} = **£530.66**

Compound Interest Formula

Amount after "n" years = $a(1+r)^n$

r = interest rate as a decimal (eg 5% = 0.05)
a = initial amount
n = number of years

Simple Interest

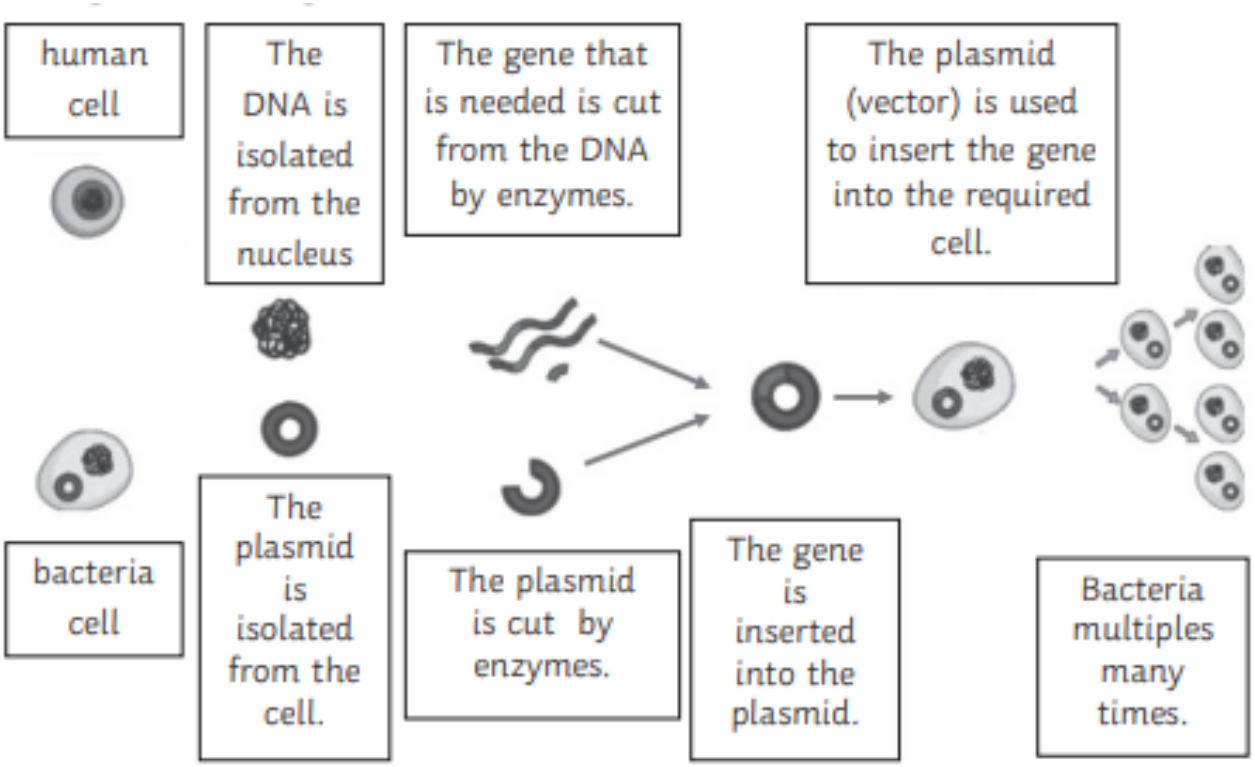
Simple interest has the same amount of interest each year. The amount of interest is calculated from the initial amount.

WEEK 5

BIOLOGY

Genetic Engineering

Genetic engineering is the process by which scientists manipulate and change the genotype of an organism.



WEEK 5

CHEMISTRY

Group 7 Elements and Noble Gases

Halogens

The halogens are non-metals: fluorine, chlorine, bromine, iodine. As you go down the group they become less reactive. It is harder to gain an extra electron because its outer shell is further away from the nucleus. The melting and boiling points also become higher.

Physical properties

The halogens exist as simple *molecules*. Each molecule contains two halogen *atoms* joined by a single *covalent bond*. The table shows the colour and physical *states* of chlorine, bromine and iodine at room temperature.

Element	Colour	State
Chlorine, Cl_2	Pale green	Gas
Bromine, Br_2	Brown	Liquid
Iodine, I_2	Purple-black	Solid

The *melting points* and *boiling points* of the halogens increase going down group 7. This is because, going down group 7:

- the molecules become larger
- the *intermolecular forces* become stronger
- more *energy* is needed to overcome these forces

WEEK 5

PHYSICS

Required Practical Investigation 9

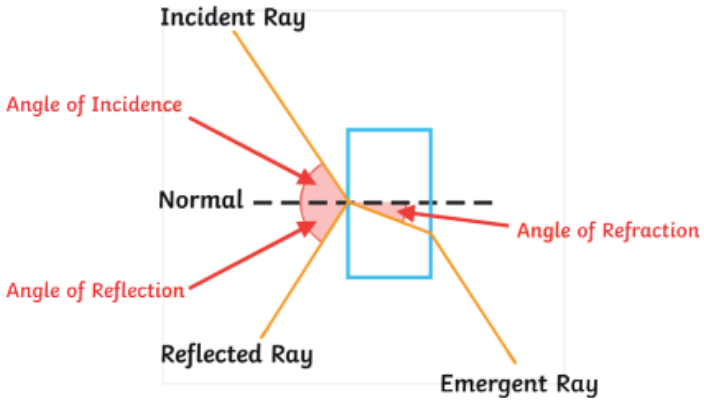
Aim: investigate the reflection of light by different types of surface and the refraction of light by different substances.

Method:

1. In a darkened room, set up the ray box on a flat surface and insert the filter to produce a single ray of light.
2. Place a glass block in the centre of a piece of plain A3 paper.
3. Draw a line around the glass block.
4. Draw a line at 90°C to the glass block and label the line normal, as shown in the diagram.
5. Position the ray box so the ray of light hits the glass at an angle.
6. Using a pencil, draw the incidence, reflected and emergent rays as shown in the diagram.
7. Remove the glass block and draw the refracted ray going through the block.
8. Using a protractor, measure the angles of incidence, reflection and refraction. Record your results.
9. Repeat the experiment by placing a clear acrylic block on the A3 paper in the same position as the glass block.
10. The incident ray must follow the same line as before. Draw the reflected and refracted rays and measure using a protractor.
11. Collect four sets of results from other members of the class.

The law of reflection states:

angle of incidence = angle of reflection

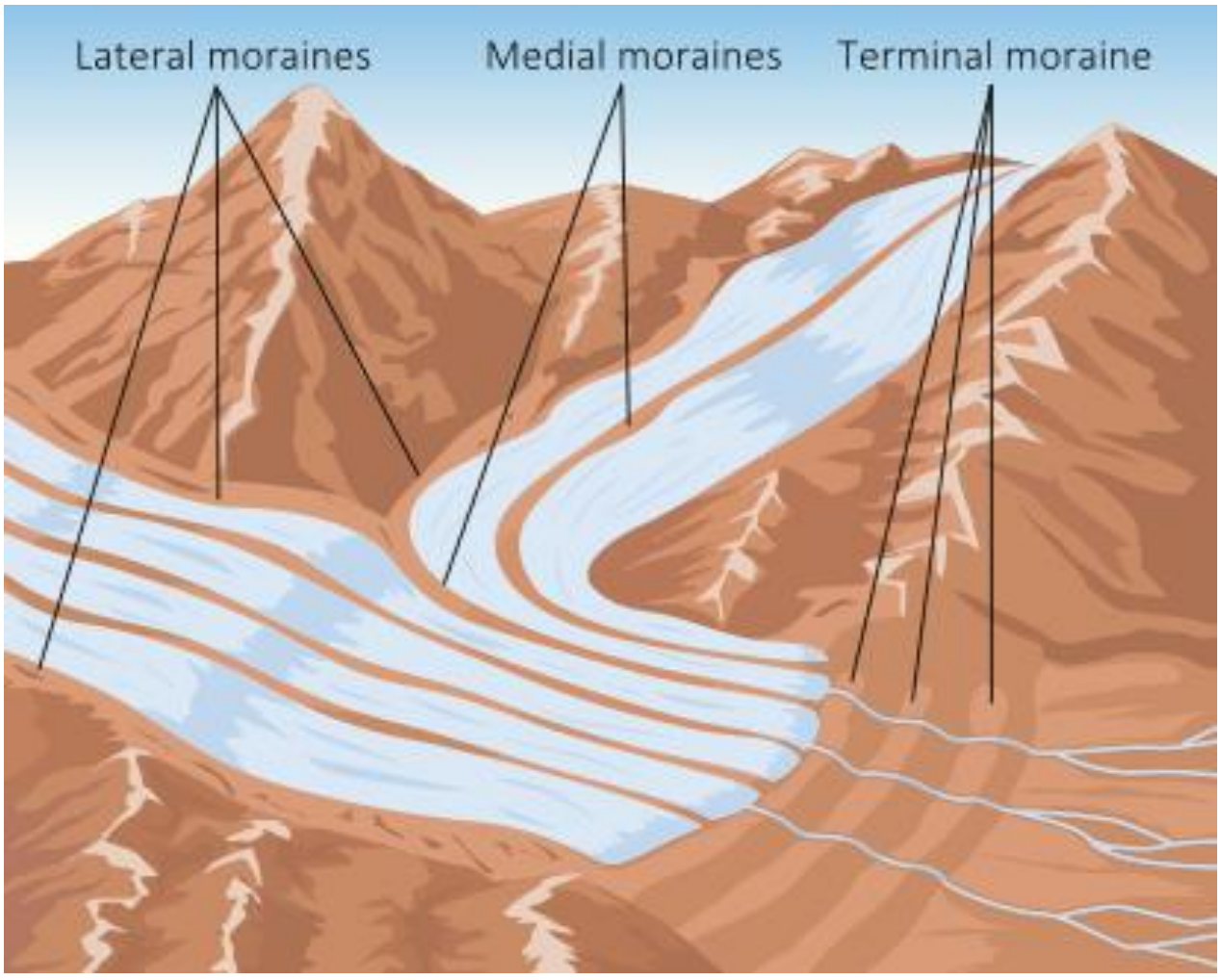


WEEK 5

GEOGRAPHY

Types of Moraine

Debris at the sides of the glacier forms a ridge as the glacier advances. As the glacier melts and gets smaller, it deposits this ridge and the sides, forming lateral moraines. When two glaciers meet, often two lateral moraines merge together to form a large ridge of debris in the middle of the glacier – a medial moraine. These medial moraines are also deposited as the glacier begins to melt.



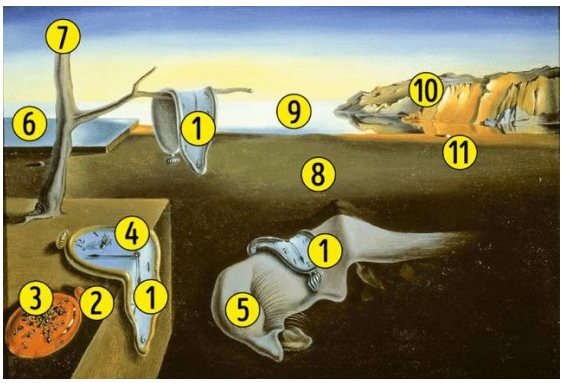
Art

The Persistence of Memory – Salvador Dali

Understanding Dalí's Masterpiece

The twilight sky of *The Persistence of Memory* is that of a beach near Portlligat, in the north of Catalonia, where the artist grew up. The idea for the painting came to him while Gala and some friends were out at the cinema. **Dalí** ended up sitting alone in the middle of a strangely quiet kitchen… In the centre of his plate, melting camembert caught his eye. The artist then let his mind wander and resorted to an artistic technique of his own creation: the paranoiac-critical method.

The latter is built in two perfectly opposite steps. First, Dalí fantasizes and allows his most delirious thoughts to manifest themselves. Once this is over, he's ready to objectify them. This method led to the cheese transforming into soft melting pocket watches. They are reminiscent of the artist's fascination for temporality. Dalí paints his watches over the landscape that was done prior to that. It was waiting for them; *The Persistence of the Memory* is born.



Salvador Dalí's *The Persistence of Memory* plunges the viewer into **a dreamlike and definitely strange universe** where hard and soft surfaces coexist. The artwork opposes Surrealism to reality and questions the ineluctability of time. It cements the artist's obsession for its symbolism. Are we at the mercy of time? One thing Dalí makes very clear, is that time passes but leaves behind memories; the memory persists. We must be break down the painting into different elements, as numbered above.

1. Three soft watches symbolize time, which is relative, in movement. As in our dreams, past, present and future coexist and function in synergy. Each watch is placed on a different surface, and represent these three temporalities.
2. The orange watch does not melt. It echoes the passing of time as it is turned over and covered by ants.
3. The ants invade the solid watch and symbolize decomposition and death. The painter made this link as a child when he observed ants swarming over the remains of a bat.
4. Time flies and passes… It is represented by this insect.
5. A strange object —or, rather, character— is lying on the ground and could represent the painter or the inner world and its dreamlike nature.
6. The mirror embodies inconstancy as it reflects reality as well as the imaginary.
7. The olive tree, symbol of wisdom, is dry, dead. It's a sign of the past.
8. Dali symbolises his emotional emptiness by the empty shoreline.
9. The bright sea symbolizes memory and reality. It contrasts with the dark foreground which is reminiscent of an imaginary and overwhelming world.
10. The mountains are rooted in the ground as they are in the painter's memory. They belong to the painter's childhood.
11. The egg is the symbol of birth and, therefore, renewal.

WEEK 5

Personal Development

Protected Characteristics

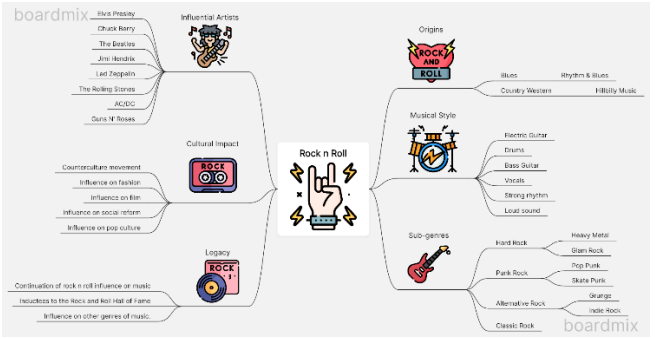
Age	People cannot be treated unfairly because they are young or old. Everyone deserves respect, no matter their age	
Disability	People with physical or mental disabilities must be treated fairly, with **reasonable adjustments** made to support them in school, work, and life.	
Gender Reassignment	A person is considered to be *transitioning* if they change their gender through actions like changing their name, pronouns, appearance, or having medical treatment to match their identity.	
Marriage and Civil Partnership	People must be treated equally whether they are married, in a civil partnership, or single.	
Pregnancy and Maternity	Pregnant people and new parents must not be treated unfairly because they are having or have had a baby.	
Race	No one should be treated unfairly because of their skin colour, nationality, or **ethnicity** (a person's cultural identity, which may include shared language, traditions, and history).	
Religion or Belief	Everyone has the right to follow their religion or beliefs, or to have no religion, without discrimination.	
Sex	People must not be treated unfairly because they are biologically male or female.	

WEEK 5

ICT

Mood boards and Mind-Maps

Pre-production documents are used to **plan a media project** before any work begins. They help organise ideas, check requirements, and make sure everyone involved knows what the final product should look like.

Moodboard	Mind Map
 *Example – a Disney-themed moodboard*	 *Example – a rock-n-roll moodboard which shows the impact of the genre on society.*
A moodboard is a visual way to show ideas, using images, colours, textures and examples that inspire the final design. It's essentially a collage of images that follow a theme or style. 1. Helps **visualise** the style and theme of a project. 2. Gives the whole team a **shared understanding** of how the product should look and feel.	A mind map is a **visual way to lay out and connect ideas**, showing how different thoughts link together around one main topic. 1. Helps **generate lots of ideas quickly**. 2. Makes it **easy to organise information**

WEEK 5

SPANISH

Good and bad things about your school	
Lo bueno es/son	The good thing is / The good things are
Lo malo es/son	The bad thing is / The bad things are
Lo que más me gusta es/son	What I like most is / What I like most are
los edificios	the buildings
las clases (de)	the lessons / classes (of)
la comida	the food
el uniforme	the uniform
las instalaciones	the facilities
la gente	the people
el día escolar	the school day
los deberes	the homework
las reglas	the rules
las actividades extraescolares	the extracurricular activities
modernos/viejos	modern / old (masculine plural)
modernas/viejas	modern / old (feminine plural)
deliciosa/cara	delicious / expensive
cómodo/incómodo	comfortable / uncomfortable
modernas/viejas	modern / old (feminine plural)
simpática/antipática	friendly / unfriendly
corto/largo	short / long
aburridos/útiles	boring / useful (masculine plural)
aburridas/necesarias	boring / necessary (feminine plural)
interesantes/divertidas/ creativas/graciosas	interesting / fun / creative / funny

WEEK 6

ENGLISH LITERATURE

Poetic Laureates of the United Kingdom

The British Poet Laureate is an honorary position appointed by the monarch of the United Kingdom on the advice of the prime minister. The role does not entail any specific duties, but there is an expectation that the holder will write verse for significant national occasions. The laureateship dates to 1616 when a pension was provided to Ben Jonson, but the first official Laureate was John Dryden, appointed in 1668 by Charles II.

On the death of Alfred, Lord Tennyson, who held the post between November 1850 and October 1892, there was a break of four years as a mark of respect; Tennyson's laureate poems "Ode on the Death of the Duke of Wellington" and "The Charge of the Light Brigade" were particularly cherished by the Victorian public.

Historically appointed for an unfixed term and typically held for life, since 1999 the term has been ten years. The holder of the position as at 2024 is Simon Armitage who succeeded Carol Ann Duffy in May 2019 after 10 years in office.

Poet Laureates that you are studying:

- William Wordsworth
- Alfred Tennyson
- Ted Hughes
- Carol Ann Duffy
- Simon Armitage

WEEK 6

ENGLISH LANGUAGE

How to Structure Your Analysis

1. Point

This should state your argument.

Examples:

- *I think that…*
- *In this paragraph I will argue that…*
- *I agree with this statement…*

2. Evidence

This should support your argument; it should be linked.

Examples:

- *Source X shows that…*
- *We can see in Source X that…*
- *Source X supports this. It shows…*
- *My evidence for this is…*

3. Explanation

This should link your point and evidence to the question. It should wrap it all together.

Examples:

- *This shows that…*
- *As a result…*
- *This is because…*

WEEK 6

MATHEMATICS

Reverse Percentages

Reverse Percentages

When reversing a percentage, we need to know the current percentage as the original percentage was 100%

We divide the amount by the current percentage to find 1% and then multiple that by 100 to ger to the original 100% amount.

Example 1 – Reverse Percentages

The price of a bar of chocolate has increased by 20% to 72p

What was the original price?

Step 1: Current percentage = 100% + 20% = 120%

Step 2: 1% = 72p ÷ 120 = 0.6p

Step 3: 100% = 0.6 x 100 = 60

So original price = 60p

Example 2 – Reverse Percentages

A calculator was reduced in price by 30% to £8.40

What was the original price?

Step 1: Current percentage = 100% - 30% = 70%

Step 2: 1% = £8.40 ÷ 70 = £0.12

Step 3: 100% = 0.12 x 100 = £12.00

So original price = £12

WEEK 6

BIOLOGY

Selective Breeding

1. Choose parents who have the desired characteristics.

2. Select the best offspring and breed these to make the next generation.

3. These offspring are then bred again and again, over many generations, until a desired result is achieved.

WEEK 6

CHEMISTRY

Noble Gases

The noble gases (group 0 elements) include: helium, neon and argon. They are un-reactive as they have full outer shells, which makes them very stable. They are all colourless gases are room temperature.
The boiling points all increase as they go down the group – they have greater intermolecular forces because of the increase in the number of electrons.

USES

- Light bulbs
  Argon is used in many types of light bulb.
- Diving gas
  Noble gases combined with oxygen are used in the gas in scuba tanks.
- Helium balloons
  Helium is used in balloons because it is lighter than air.
- Welding
  Argon is used as a 'gas blanket' in arc welding.
- Neon signs
  Neon sign advertising the café.
- Silicon computer chip manufacture.
  Helium is used in the manufacture of silicon computer chips.
- TV tubes
  Neon is used in TV tubes

WEEK 6

Physics

Volcanoes, earthquakes and explosions cause **seismic** waves to travel through the earth. There are two different types of seismic waves: **S-waves** and **P-waves**.

- P-waves are longitudinal waves which travel relatively quickly through solids and liquids.
- S-waves are transverse waves and they travel slower and only in solids.

Seismic waves can **change direction** when they are **reflected** or **refracted** at the boundary of different media (solid, liquid or gas). The **epicentre** of an earthquake can be found by calculating the difference in time taken for S- and P-waves to reach a certain point. Since the waves can change direction, at least three points are used to **triangulate** the data and pinpoint the source (where they all intercept).

The study of seismic waves has given scientists new **evidence** about the structure of the earth in parts which are not visible for direct observations.

Ultrasound waves are sound waves which have a **higher frequency** than the range which is detectable by the human ear. When the waves reach a boundary between different media, they are **partially reflected** and a detector is used to measure the time taken and calculate the distance. Ultrasound is used for **medical** and **industrial imaging**.

WEEK 6

GEOGRAPHY

Tourism in Geiranger

Tourism was not initially welcomed by the local community in Geiranger. However, the first cruise ship to call in to the Geirangerfjord in 1869 proved to be a success.

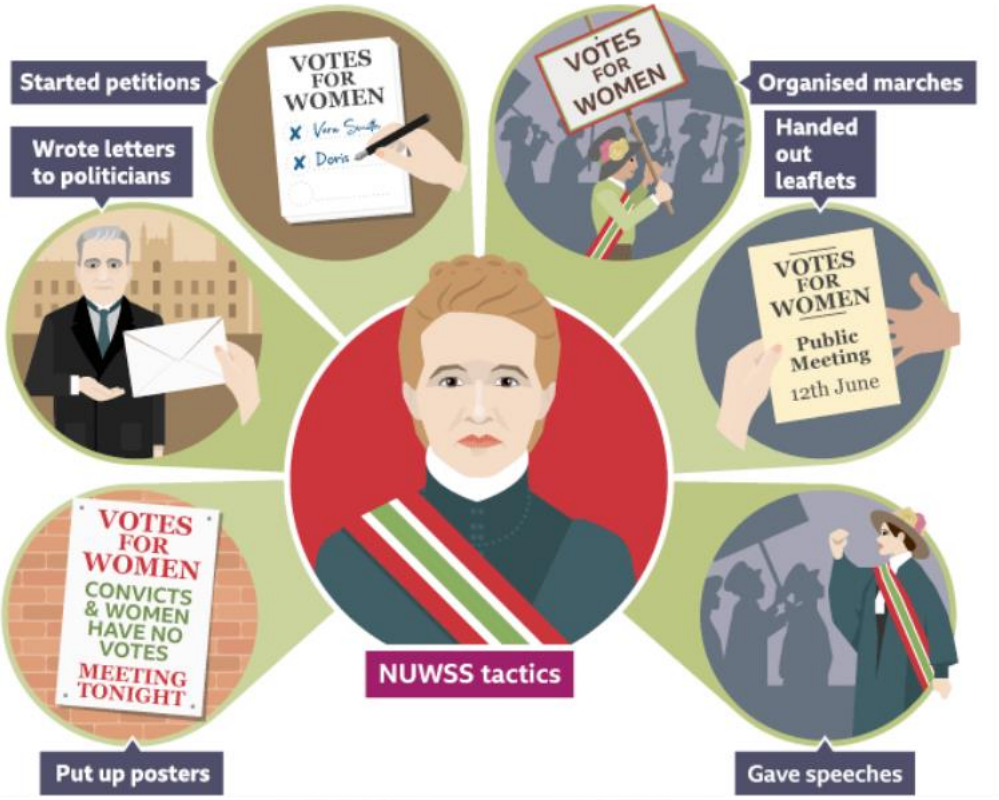
This small isolated community is amazingly now the third biggest cruise ship port in Norway, receiving 140 to 180 ships during the four-month tourist season.

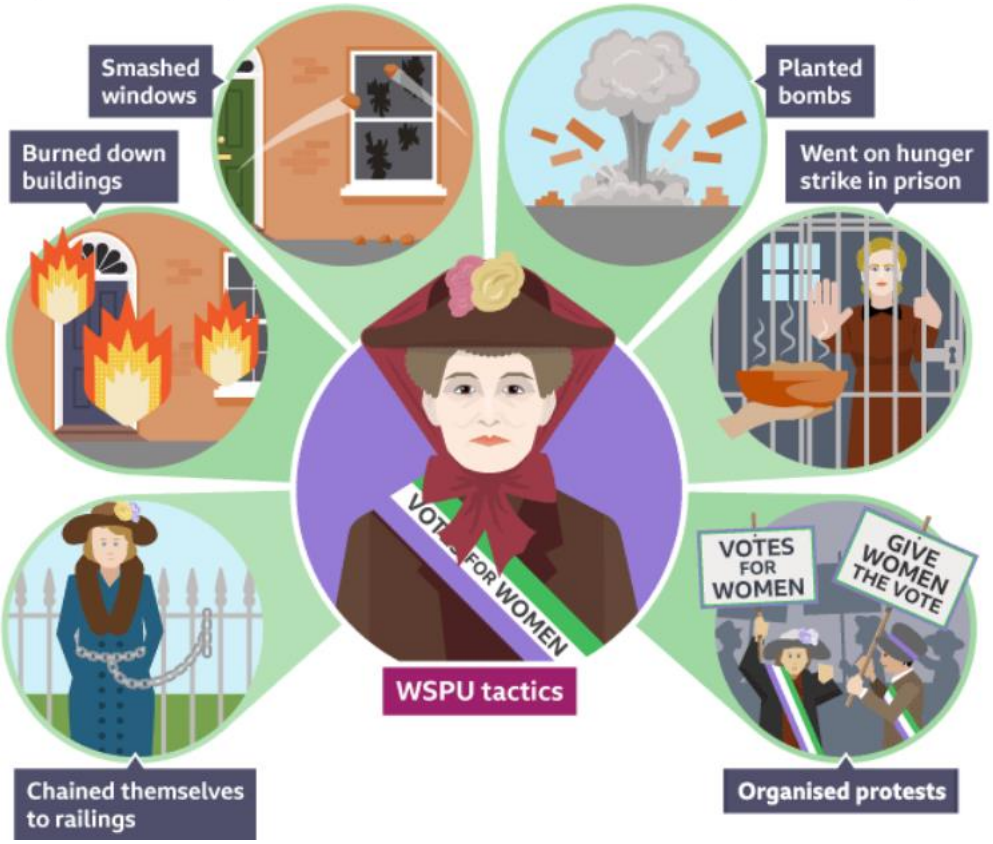
Geiranger has just 215 permanent inhabitants, but is visited by about 700,000 tourists a year. There are five hotels and over ten camping sites.

The tourist season stretches from May to early September.

WEEK 6

HISTORY





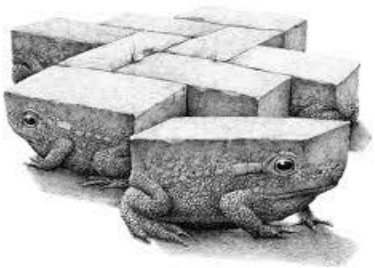
Art

Redmer Hoekstra

Redmer Hoekstra (1982) graduated from the Art Academy in Zwolle as a visual artist and illustrator in 2009. "I've always loved alienation and fantasizing, daydreaming. As a child I had all kinds of theories about how the world worked. At the Academy I was able to rediscover this and process this into my work. How things work is a fascination of mine and in many drawings, you can find this. I open up appliances and objects and freely change what is inside. Often a subject gets a completely different feeling or meaning.
I play with form, meaning and function, while new combinations arise.
Often surprising, strange and funny but also with a strange kind of logic, a fantastic and surreal world.

I find my inspiration riding the train or on the road, where my mind can float through the landscape and new connections between things appear. A philosophical view of the world and myself. Who am I? What is my reality and how do I get to decide how it looks and works? They are pen drawings on paper. I work with fine liners. By shading I create light and space, which gives a drawing life. It is important to draw as realistically as possible, to make the alienation most powerful. It's a laborious and almost artisanal technique. A drawing on average takes 32 to 40 hours".

Redmer takes mundane everyday objects and combines them with animals, usually observing similar shapes or characteristics.



WEEK 6

Personal Development

British Values

Schools follow British values to promote fairness, respect, and equality. They help create a safe, inclusive environment where everyone can learn, grow, and feel valued, no matter their differences. The British Values are as follows:

Democracy	Everyone has the right to have a say and make decisions, by voting or expressing their opinion.	
Rule of Law	Laws exist to keep people safe and ensure fairness. It's important to follow the law and respect rules, both at school and in society.	
Individual Liberty	Everyone has the freedom to make their own choices, whether it's about their beliefs, where they live, or what they want to do in life.	
Mutual Respect	We must respect each other's opinions, beliefs, and differences. Treating others with kindness and fairness is key to building a strong community.	
Tolerance of Others	It's important to respect and understand people's different religions, cultures, and beliefs, even if they are not the same as ours.	

WEEK 6

SPANISH

What are you like as a pupil?	
siempre	always
a veces	sometimes
nunca	never
soy	I am
puede ser	it can be
muy	very
demasiado	too / too much
bastante	quite / fairly
un poco	a little
perezoso/a	lazy
trabajador/a	hard-working
responsable	responsible
organizado/a	organised
tímido/a	shy
hablador/a	talkative
antipático/a	unfriendly
motivado/a	motivated
independiente	independent
travieso/a	naughty
simpático/a	friendly
arrogante	arrogant
Llevo mis bolígrafos	I bring my pens
Llego a tiempo	I arrive on time
No falto a clase	I don’t skip class
No soy maleducado	I am not rude
Hago mis deberes	I do my homework
Escucho al profesor	I listen to the teacher
Hago las tareas	I do the tasks
Sigo las reglas	I follow the rules