Year 9 Knowledge Organisers

Half Term 3

Tuesday 7th January – Friday 14th February 2025

Topic Overviews for Half Term 3

English	Writing Programme
Maths	Numbers
	Using percentages
	Maths and money
	Deduction
	Rotation and translation
	Pythagoras' theorem
Science	Building blocks of life
	Building blocks of matter
RE	The nature of god in Judaism
History	The Holocaust
	The Second World War
Geography	Development
MFL	Spanish – Free time (TV, film and technology)
	French – Food, drink and healthy lifestyle
Computing	Python
Music	Music and the moving image
Drama/ dance	The basic actions of dance
Technology	Graphics – Graphics
	Product Design
	Textiles – Key concepts and skills
	Food - Practical skills
Art	Pop Art
PE	Rotation – Basketball, badminton, football, Gymnastics, handball, health related fitness, hockey, rounder's rugby, table tennis, athletics, cricket

English

Writing KO

1) Is writer viewpoint clear?
Persuade, inform, argue, review, explain.

2) Have writer choices had an effect on the reader? Have they been made to THINK, FEEL, KNOW, DO, UNDERSTAND or LEARN something?

3) Has the learner:
* made structural choices?
(Use of discourse markers, circular structure, repetition).
* used language devices for effect?
(Use of rhetorical question, interrogative question, power of 3, statistics, expert's opinion, emotive language).
* used a range of impressive vocabulary?
* used a range of punctuation?
(brackets, exclamatory sentence, question marks, colons, semi-colons)

Maths

Y9 – Numbers

KNOWLEDGE ORGANISER

Directed number

Addition

$2 + -4 = -2$

Zero pair
$(-1 + 1 = 0)$

Take away one
$2 - -1 = 3$

Representation for calculation

Subtraction

$= 2$

Generalisation

$+ - = -$

$- - = +$

"Subtract" – means take away or remove

Generalisation

Multiplication

$-2 \times -3 = 6$

Remove 2 lots of "-3"

Substitution

$a = 5$ $b = -4$

$2a - b = 2(5) - (-4)$
$= 10 + 4$
$= \underline{14}$

Brackets around negative substitutions helps remove calculation errors

$\square = -1$
$\square = 1$

Two "-1"
$= -2$

$= 3$

Integers, real and rational numbers

Integers – whole numbers
Can be positive, negative or zero.

Rational numbers – can be made by dividing two integers.
E.g. $\frac{2}{3}$, 5, 7.8, -4.2

Irrational numbers – cannot be made by dividing two integers.
E.g. π, $\sqrt{2}$, $\sqrt{7}$

Addition/ Subtraction of fractions

$\frac{4}{5} - \frac{2}{3}$

$\frac{12}{15} - \frac{10}{15} = \frac{2}{15}$

Use equivalent fractions to find a common multiple for both denominators

Multiplication/ Division of fractions

$\frac{3}{4} \times \frac{2}{3} = \frac{6}{12}$

Shade in 3 parts on 2 rows

$\frac{3}{4} \times \frac{2}{3}$

3 rows
4 columns

Parts shaded

Total number of parts in the diagram

Remember to use reciprocals

Dividing fractions

$\frac{2}{5} \div \frac{3}{4} = \frac{2}{5} \times \frac{4}{3} = \frac{8}{15}$

reciprocal

HCF/LCM

HCF – Highest common factor

HCF of 18 and 30

18 : 1, 2, 3, 6, 9, 18
30 : 1, 2, 3, 5, 6, 10, 15, 30

HCF = 6

LCM – Lowest common multiple

LCM of 9 and 12

9 : 9, 18, 27, 36, 45, 54
12 : 12, 24, 36, 48, 60

LCM = 36

Standard form

$A \times 10^{n}$

Any integer

Any number between 1 and less than 10

E.g. $(5.1 \times 10^3) + (3 \times 10^4)$
$5100 + 30\,000$
$= 35100$
$= 3.51 \times 10^4$

Y9 – Numbers

LEARNING OBJECTIVES

I will be able to:

- Identify integers, real and rational numbers
- Understand and use surds (H)
- Work with directed number (R)
- Solve problems with integers
- Solve problems with decimals
- HCF and LCM (R)
- Adding and subtracting fractions (R)
- Multiplying and dividing fractions (R)
- Solve problems with fractions
- Numbers in standard form (R)

KEY VOCABULARY

- Real –
- Rational –
- Irrational –
- Integer –
- Surd –
- Multiple –
- Factor –

SPARX CODES
U224, U538, U793, U338, U663

UNIT TEST SCORE

$\frac{}{20}$

Y9 – Using percentages

KNOWLEDGE ORGANISER

FDP Equivalence (R)

One whole = 1

One tenth
$0.1 = \frac{1}{10} = 10\%$

One hundredth
$0.01 = \frac{1}{100} = 1\%$

units	•	tenths	•	hundredth

$= 0 + 0.4 + 0.02$
$= 0.42$

Convert FDP (R)

$\frac{70}{100}$

70 out of 100 squares
70 "hundredths"
$(70 \div 100)$ = 7 "tenths"
= 0.7
= **70%**

Change denominator to 100:
$\frac{3}{20} \quad \frac{15}{100} = 0.15 = 15\%$

Recurring decimals:
$\frac{1}{3} = 0.333... = 0.\dot{3}$

Percentage Increase/Decrease (R)

Decrease by 58%

100%

42% → Decrease by 58%

$1.00 - 0.58 = 0.42$
Multiplier

Increase by 12%

100%

Increase by 12%

$100\% + 12\% = 112\%$
$1.00 + 0.12 = 1.12$
Multiplier

Reverse Percentages

40% of my number is 16.
What am I thinking of?

Original Number (100%)

4	4	4	4	4	4	4	4	4	4

16

$40\% = 16$
$10\% = 4$
$100\% = 40$

140% of my number is 84.
What is the original number?

Original Number (100%)

6	6	6	6	6	6	6	6	6	6	6	6	6	6

84

$140\% = 84$
$10\% = 6$
$100\% = 60$

Try to scale down to 10% or 1% and then scale back up to 100%

Percentage change (R)

I bought a phone for £200.
A year later sold it for £125.

100%
£200
£125

Percentage loss:
difference → $\dfrac{75}{200} \times 100 = 37.5\%$ ← original

$\dfrac{Difference\ in\ values}{Original\ value} \times 100$

I bought a house for £180,000.
I later sold it for £216,000.

100%
£180,000

Percentage profit:
difference → $\dfrac{36000}{180000} \times 100 = 20\%$ ← original

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Y9 – Using percentages

LEARNING OBJECTIVES

I will be able to:

- Use the equivalence of fractions, decimals and percentages **(R)**
- Calculate percentage increase and decrease **(R)**
- Express a change as a percentage **(R)**
- Solve reverse percentage problems
- Recognise and solve percentage problems (non-calculator)
- Recognise and solve percentage problems (calculator) **(R)**
- Solve problems with repeated percentage change **(H)**

KEY VOCABULARY

o **Difference** – _____

o **Inverse** – _____

o **Multiplier** – _____
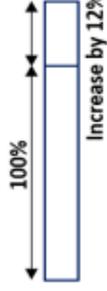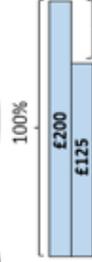
o **Depreciate** – _____

o **Exponent** – _____

UNIT TEST SCORE

$\dfrac{\Box}{20}$

Y9 – Maths and money

KNOWLEDGE ORGANISER

Bills and Bank Statements

Bills – Tell you the amount items cost and can show how much money you need to pay.

Item	Price
Milk	89p
Tea	£1.50
TOTAL	**£2.39**

Bank Statements

Incoming money → Credit
Outgoing money → Debit

Date	Description	Credit	Debit	Balance
19/09	Salary	£1500		£1500
19/09	Mortgage		£600	£900
25/09	Birthday money	£15		£915

Simple Interest

For each year of investment the interest remains the same

E.g. Invest £100 at 30% simple interest for 4 years

↓30% ↓4 years
$100 \times 0.3 \times 4 = £120$

E.g. Invest £500 at 2.5% simple interest for 3 years

↓2.5% ↓3 years
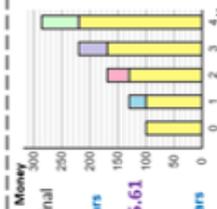$500 \times 0.025 \times 3 = £37.50$

Compound Interest

Compound interest is interest charged on the original amount and additional interest payments.

E.g. Invest £100 at 30% compound interest for 4 years

$100 \times 1.3^4 = £285.61$ Interest = £185.61
↓Increase by 30%

E.g. Invest £500 at 2.5% compound interest for 3 years

$500 \times 1.025^3 = £538.45$ Interest = £38.45
↓Increase by 2.5%

Value Added Tax (VAT)

VAT is payable to the government by a business. In the UK, VAT is 20% and added to items that are bought.

Essential items such as food do not include VAT.

Wages and Taxes

Salaries fall into tax brackets – which means they pay this much each month from their salary.

Taxable Income	Tax Rate
£12 501 to £50 000	20%
£50 001 to £150 000	40%
over £150 000	45%

Exchange Rates

1) ×1.14
£1 = $1.14
÷1.14

a) Convert £43 to $ $43 \times 1.14 = \$49.02$
b) Convert £621 to $ $621 \times 1.14 = \$707.42$
c) Convert $120 to £ $120 \div 1.14 = £105.26$
d) Convert $300 to £ $300 \div 1.14 = £263.16$

2) ×1.26
£1 = €1.26
÷1.26

a) Convert £17 to € $17 \times 1.26 = €21.42$
b) Convert €109 to £ $109 \div 1.26 = £86.51$
c) Convert £300 to € $300 \times 1.26 = €378$
d) Convert €50 to £ $50 \div 1.26 = £39.68$

Unit Pricing

To calculate unit per cost you divide by the cost.

There is a directly proportional relationship between the cost and number of units.

4 Oranges	5 cupcakes
£1	£1.20

$4 = £1.00$ ÷2
$2 = £0.50$ ÷2
$1 = £0.25$

$5 = £1.20$ ÷5
$1 = £0.20$ Cost per Unit

Y9 – Maths and money

LEARNING OBJECTIVES

I will be able to:

- Solve problems with bills and bank statements
- Calculate simple interest
- Calculate compound interest
- Solve problems with Value Added Tax
- Calculate wages and taxes
- Solve problems with exchange rates
- Solve unit pricing problems

KEY VOCABULARY

o Credit – _____

o Debit – _____

o Annual – _____

o Compound – _____

o Multiplier – _____

UNIT TEST SCORE

☐/20

Y9 – Deduction

KNOWLEDGE ORGANISER

Alternate angles ®
Alternate angles are equal

25°
25°

Corresponding angles ®
Corresponding angles are equal

130°
130°

Co-interior angles ®
Co-interior angles add to 180°

100°
80°

Solving angle problems

Link angle facts to algebra → Form an equation → State the reason → Solve

$2x° \quad 4x°$

The sum of angles on a straight line is 180° → $2x + 4x = 180°$ → $2x + 4x = 180°$
$6x = 180°$
$x = 30°$

Vertically opposite angles are equal

Angles around a point add to 360°

Angles in a triangle add to 180°

80°

Base angles of an Isosceles triangle are equal

50° 50°

Interior Angles
The angles enclosed by the polygon

Sum of interior angles
(no. of side – 2) x 180

Making conjectures with angles

True   False

Always   Never

Sometimes

Proving a conjecture
A pattern is noticed for many cases

Disproving a conjecture
Only one counterexample is needed to disprove a conjecture

Apply the angle rules
The sum of angles in a triangle is 180°

Test the theory
180 – 70 – 20 = 90
180 – 85 – 5 = 90
180 – 45 – 45 = 90

Make conjecture
The angle that meets the circumference in a semi circle is 90°

Making conjectures with shapes

Area: the amount of space inside a shape
Perimeter: the length around a shape
Regular Polygons: All sides and angles are equal

Quadrilateral Facts

Square
• All sides equal size
• All angles 90°
• Opposite sides are parallel

Rectangle
• All angles 90°
• Opposite sides are parallel

Rhombus
• All sides equal size
• Opposite angles are equal

Parallelogram
• Opposite sides are parallel
• Opposite angles are equal
• Co-interior angles

Kite
• No parallel lines
• Equal lengths on top sides
• Equal lengths on bottom sides
• One pair of equal angles

Y9 – Deduction

LEARNING OBJECTIVES

I will be able to:

- Angles in parallel lines **(R)**
- Solving angle problems (using chains of reasoning)
- Angle problems with algebra
- Conjecture with angles
- Conjecture with shapes
- Link constructions and geometrical reasoning **(H)**

KEY VOCABULARY

- Parallel – _____

- Alternate – _____

- Corresponding – _____

- Co-interior – _____

- Polygon – _____

- Isosceles – _____

SPARX CODES
U826, U655, U732, U329, U427

UNIT TEST SCORE

[ ] / 20

Y9 – Rotation and translation

KNOWLEDGE ORGANISER

Translation and vector notation

Positive value — Negative value

$\begin{pmatrix} x \\ y \end{pmatrix}$ — Right/left — Up/down

Positive value — Negative value

Examples:

$\begin{pmatrix} 1 \\ 4 \end{pmatrix}$ 1 right, 4 up

$\begin{pmatrix} -2 \\ -5 \end{pmatrix}$ 2 left, 5 down

$\begin{pmatrix} -3 \\ 2 \end{pmatrix}$ 3 left, 2 up

$\begin{pmatrix} 5 \\ -1 \end{pmatrix}$ 5 right, 1 down

$\begin{pmatrix} 10 \\ 2 \end{pmatrix}$ 10 right, 2 up

$\begin{pmatrix} 4 \\ 6 \end{pmatrix}$ 4 right, 6 up

$\begin{pmatrix} -2 \\ -7 \end{pmatrix}$ 2 left, 7 down

$\begin{pmatrix} -5 \\ 4 \end{pmatrix}$ 5 left, 4 up

Original

Compare rotations and reflections

A "line of reflection" is needed to reflect a shape

E.g. Reflection in the line $x = -2$

E.g. Reflection in the line $y = 1$

Rotations are the movement of a shape in a circular motion

Information needed to perform a rotation:
- Centre of rotation
- Direction of rotation
- Angle of rotation

Rotational Symmetry

1. Trace your shape (mark the centre point)
2. Rotate your tracing paper on top of the original through 360°
3. Count the times it fits back into itself

A regular pentagon has rotational symmetry of order 5

Rotate from a point (in a shape)

1. Trace the original shape (mark the point of rotation)
2. Keep the point in the same place and turn the tracing paper
3. Draw the new shape

Clockwise   Anti-Clockwise

Original shape

Point of rotation

Image: 90° clockwise

Rotate from a point (outside a shape)

1. Trace the original shape (mark the point of rotation)
2. Keep the point in the same place and turn the tracing paper
3. Draw the new shape

Image: 90° anti-clockwise

Point of rotation

Original shape

Y9 – Rotation and translation

LEARNING OBJECTIVES

I will be able to:

- Identify the order of rotational symmetry of a shape
- Compare and contrast rotational symmetry with lines of symmetry
- Rotate a shape about a point on a shape
- Rotate a shape about a point not on a shape
- Translate points and shapes by a given vector
- Compare rotation and reflection of shapes
- Find the result of a series of transformations **(H)**

KEY VOCABULARY

○ Regular – _____

○ Irregular – _____

○ Image – _____

○ Invariant – _____

○ Translate – _____

○ Vector – _____

Y9 – Pythagoras' Theorem

KNOWLEDGE ORGANISER

Squares and square roots

1×1	2×2	3×3	4×4	5×5	6×6	7×7	8×8	9×9	10×10
1	4	9	16	25	36	49	64	81	100

Square numbers

This can also be written as 6^2

$\sqrt{\square}$ is the square root symbol

E.g. $\sqrt{64} = 8$
Because $8 \times 8 = 64$

Identify the hypotenuse

Hypotenuse

The hypotenuse is always the longest side on a triangle
(It is opposite the right-angle)

E.g.

$a^2 + b^2 = 5^2 + 12^2 = 25 + 144 = 169$
$c^2 = 13^2 = 169$
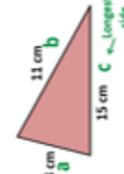$a^2 + b^2 = c^2$, so it is right-angled

Determine if a triangle is right-angled

If a triangle is right-angled, the sum of the squares of the shorter sides will equal the square of the hypotenuse.

$$a^2 + b^2 = c^2$$

E.g. $a^2 + b^2 = c^2$
$3^2 + 4^2 = 5^2$
$9 + 16 = 25$

E.g.

$a^2 + b^2 = 8^2 + 11^2 = 64 + 121 = 185$
$c^2 = 15^2 = 225$
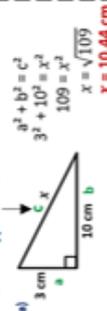$a^2 + b^2 \neq c^2$, so it is not right-angled

C ← longest side

Calculate the hypotenuse "c"

Label hypotenuse "c"

a)
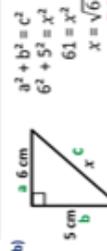$a^2 + b^2 = c^2$
$3^2 + 10^2 = x^2$
$109 = x^2$
$x = \sqrt{109}$
$x = 10.44$ cm

b)
$a^2 + b^2 = c^2$
$6^2 + 5^2 = x^2$
$61 = x^2$
$x = \sqrt{61}$
$x = 7.81$ cm

c)
$a^2 + b^2 = c^2$
$7^2 + 4^2 = x^2$
$65 = x^2$
$x = \sqrt{65}$
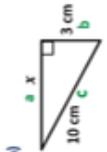$x = 8.06$ cm

Calculate missing sides

$a^2 + b^2 = c^2$

rearranges to $a^2 = c^2 - b^2$
and $b^2 = c^2 - a^2$

a)
$a^2 = c^2 - b^2$
$x^2 = 10^2 - 3^2$
$x^2 = 91$
$x = \sqrt{91}$
$x = 9.54$ cm

b)
$b^2 = c^2 - a^2$
$x^2 = 11^2 - 6^2$
$x^2 = 85$
$x = \sqrt{85}$
$x = 9.22$ cm

Pythagoras' theorem on a coordinate axis

Find the length of the line segment

The segment can be made into a right-angled triangle

E.g. $a^2 + b^2 = c^2$
$3^2 + 2^2 = c^2$
$13 = c^2$
$c = \sqrt{13}$
$c = 3.61$

Y9 – Pythagoras' Theorem

LEARNING OBJECTIVES

I will be able to:

- Squares and square roots **(R)**
- Identify the hypotenuse of a right-angled triangle
- Determine whether a triangle is right-angled
- Calculate the hypotenuse of a right-angled triangle
- Calculate missing sides in right-angled triangles
- Use Pythagoras' Theorem on coordinate axes
- Explore proofs of Pythagoras' Theorem
- Use Pythagoras' Theorem in 3D shapes **(H)**

KEY VOCABULARY

- Hypotenuse – _____

- Square – _____

- Square root – _____

- Significant figure – _____

- Pythagorean triple – _____

SPARX CODES
U385, U541

UNIT TEST SCORE

$\frac{\square}{20}$

Science

Building Blocks of life

1. Plant & animal cells
Cells are the basic building blocks of all living things. They contain organelles that have specific functions.

Plant cell
Vacuole

Animal cell
Nucleus
Cytoplasm
Cell membrane
Mitochondria

2. Microscopes
Microscopes are needed to study cells in detail. Magnification means the amount by which the image of an object is scaled up whilst resolution refers to how clear the image is. There are two main types of microscope; light microscope and electron microscope.

Magnification = Image size ÷ actual size

Eyepiece
Coarse focus
Fine focus
Arm
Stage
Objective lenses
Stage clip
Condenser
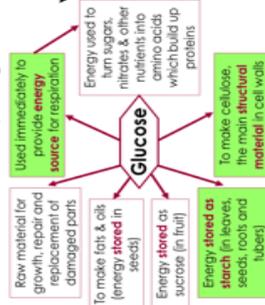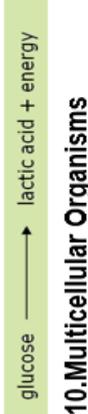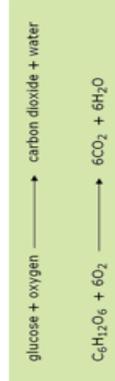Mirror

3. Specialised Cells
Specialised cells include; Sperm and Egg cells, Muscle cells, Nerve cells, Red blood cells, Root hair cells

4. Stem Cells
Stem cells are undifferentiated cells. They can be obtained from embryos or from *bone marrow*. There are ethical issues around using stem cells and therapeutic cloning.

5. Prokaryotic and Eukaryotic Cells
Organisms are made up of cells. Most organisms are multicellular and have cells that are specialised to do a particular job. Eukaryotic cells contain a nucleus (animal and plant) whilst prokaryotic cells do not (bacteria).

Plasmid DNA
Cell wall
Chromosomal DNA
Cell membrane
Flagellum (not always present)

6. DNA and Mitosis
Chromosomes carry genetic information in a molecule called DNA. A type of cell division called mitosis ensures that when a cell divides it produces two identical daughter cells. Mitosis is important for growth and replacement of damaged cells.

The cell begins to divide
The DNA replicates to form two copies of each chromosome
The nuclear membrane breaks down. The chromosomes line up across the centre of the cell
One set of chromosomes is pulled to each end of the cell and the nucleus divides
The cytoplasm and cell membranes divide to form two identical cells

7. Diffusion
Diffusion is the movement of particles from an area of high concentration to low concentration.
The rate of diffusion can be affected by the concentration gradient, the surface area and the temperature.

Oxygenated blood out
Low O₂ concentration as blood returns from the body
Alveoli
Air in
Air out
Low CO₂ concentration
High O₂ concentration
Deoxygenated blood in
High CO₂ concentration as blood returns from the body

8. Osmosis
Osmosis is the movement of water from an area of high concentration to low concentration through a semi-permeable membrane.

9. Active Transport
Active transport is the movement of particles from an area of low concentration to an area of high concentration against the concentration gradient. This requires energy.
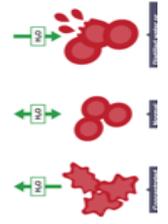
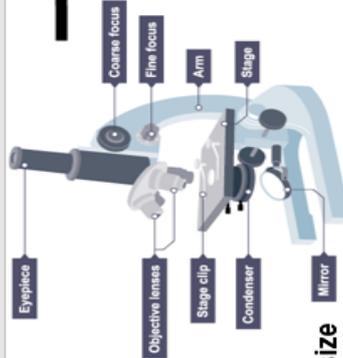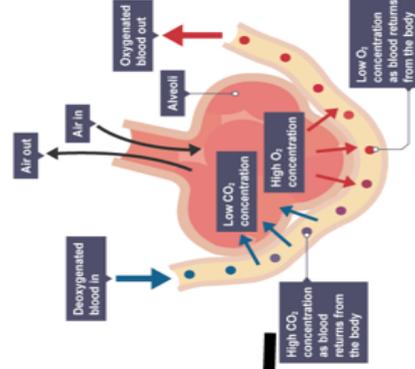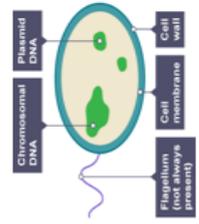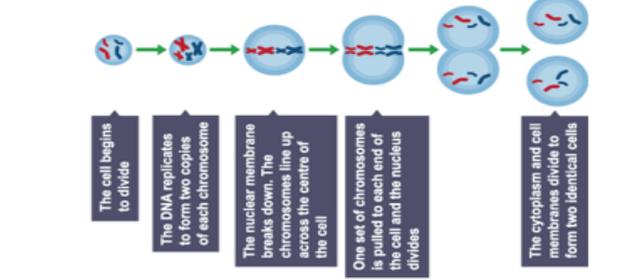### 10. Multicellular Organisms
In order of increasing complexity, multicellular organisms are made of:
cells → tissues → organs → organ systems

11. Aerobic respiration occurs in the mitochondria of cells and is an Exothermic Reaction.

glucose + oxygen → carbon dioxide + water

$$C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O$$

glucose → lactic acid + energy

12.
Photosynthesis
Word equation
Carbon dioxide + Water → Glucose + Oxygen (Light, Chlorophyll)
Symbol equation
$6CO_2 + 6H_2O \rightarrow C_6H_{12}O_6 + 6O_2$ (Light, Chlorophyll)

13. Plants' uses of plant glucose

Glucose
- Used immediately to provide energy source for respiration
- Energy used to turn sugars, nitrates & other nutrients into amino acids which build up proteins
- Raw material for growth, repair and replacement of damaged parts
- To make fats & oils (energy stored in seeds)
- Energy stored as sucrose (in fruit)
- Energy stored as starch (in leaves, seeds, roots and tubers)
- To make cellulose, the main structural material in cell walls

Building blocks of matter

Chromatography is used to separate a mixture of soluble solids. It is the science behind DNA finger printing.

Distillation is used to separate a mixture of liquids based on their boiling points.

Cooling water out — Vapour condenses in the condenser — Cooling water in — Water — Pure water — 100°C — Heat

5. Separating mixtures

Evaporation is use to separate an insoluble solid from a liquid and **Evaporation** is used to separate a soluble solid from a solvent.

solvent vapour — solution — HEAT — evaporating basin — gauze

Filtration is use to separate an insoluble solid from a liquid and used to separate a soluble solid from a solvent.

liquid and insoluble solid — filter paper — filter funnel — filtered solid – residue — filtered liquid – filtrate

1/2/3 Elements and compounds

A compound is a substance that contains atoms of two or more different elements, and these atoms are chemically joined together.

4. Mixtures

A mixture contains different substances that are not chemically joined to each other. For example, a packet of sweets may contain a mixture of different coloured sweets.

Mixtures — Separated — Mixture

6/7/8. The atom

Everything is made up of tiny things called atoms. They have a radius of around 0.1nm. Their nucleus is about 1/10,000 the size of the atom. Protons and neutrons are around the same size, we say they have a mass of 1. Electrons have almost no mass. Protons have a positive electrical charge, neutrons are neutral and electrons have a negative charge.

Nucleus — Neutrons — Protons — Electrons

9. Ion formation

When metals react with other substances they give up electrons and form a **positive ion**. When non-metals react they gain electrons to form a negative ion.

10. Development of model of atom...

SOLID SPHERE MODEL — PLUM PUDDING MODEL — NUCLEAR MODEL — PLANETARY MODEL

JOHN DALTON — J.J. THOMSON — ERNEST RUTHERFORD — NIELS BOHR

11/12. Periodic Table

For years, scientists tried to put the elements into some kind of order based on their mass and their properties. A Russian scientist named Dmitri Mendeleev is credited with developing the periodic table. He left gaps for elements that hadn't yet been discovered.

The modern periodic table is ordered according to atomic number (the number of protons in an atom), not atomic mass. The columns are called groups and the rows are called periods.

Groups — Periods

13. Group 1- Alkali metals

Soft metals, all very reactive. React with water to produce an alkali and hydrogen gas. React easily with group 7 elements. Get more reactive as you go down the group.
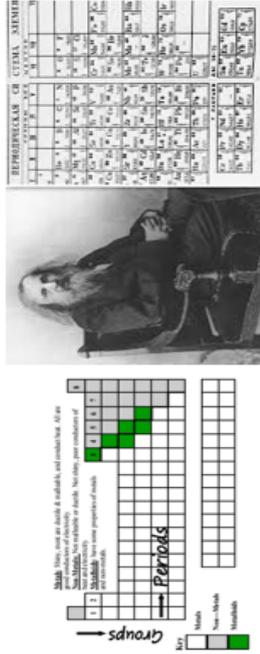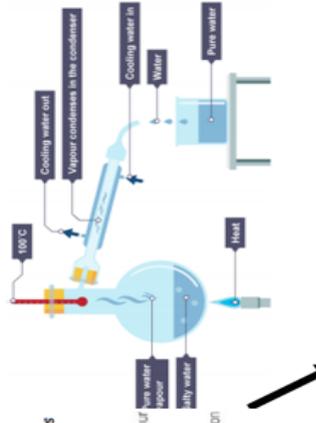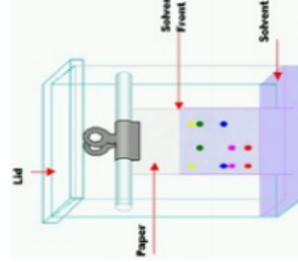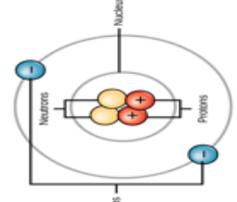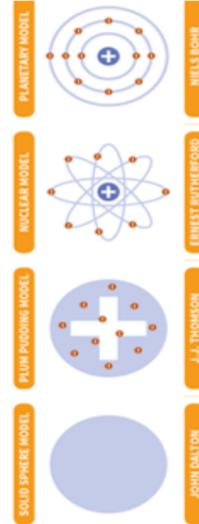
Li — Na — K — Rb — Cs — Fr

INCREASING REACTIVITY

14. Group 7- Halogens

Colourful non-metals, all very reactive. All very poisonous. Get less reactive as you go down the group. Melting point and boiling point increase as you go down the group.

F — Cl — Br — I — At

DECREASING REACTIVITY

15. Group 0- Noble gases

All very unreactive. Melting points and boiling points increase as you go down the group.

How many electrons per shell?

Each shell has a maximum number of electrons that it can hold. Electrons will fill the shells nearest the nucleus first.

1st shell holds a maximum of 2 electrons

2nd shell holds a maximum of 8 electrons

3rd shell holds a maximum of 8 electrons

This electron arrangement is written as 2,8,8.

Building blocks of matter

16. Metals and properties

The majority of elements are metals and they are found on the left and in the middle of the periodic table.

Most metals share a lot of properties, such as being good conductors of heat and electricity.

Non-metals often have the opposite properties. For example, they are usually poor conductors of heat and electricity.

Property	Metals	Non-metals
Electron arrangement	1 – 3 outer shell electrons	4 – 7 outer shell electrons
Bonding	Metallic bonding due to loss of outer shell electrons	Covalent by sharing of outer shell electrons
Electrical conductivity	Good conductors of electricity	Poor conductors of electricity
Type of oxide	Basic oxides (a few are amphoteric)	Acidic oxides (some are neutral)
Reaction with acids	Many react with acids	Usually do not react with acids
Physical characteristics	• Usually lustrous (shiny) • Solid at room temperature (excluding mercury) • Malleable, can be bent and shaped • High melting and boiling points	• Dull, non-reflective • Different states at room temperature • Flaky, brittle • Low melting and boiling points

17/18. Reactivity series

Metals react differently. Some are very reactive and others are unreactive.

Observations of reactions can be used to put metals into an order of reactivity.

metal + oxygen → metal oxide

Oxidation is gain of oxygen
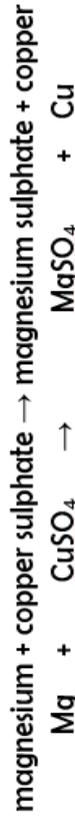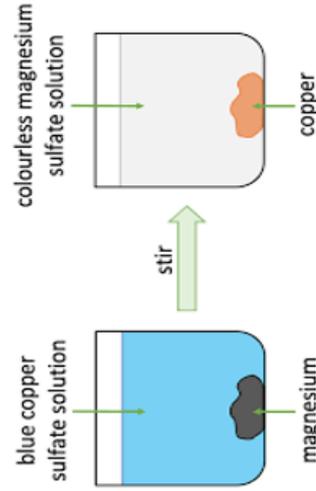**Reduction is loss of oxygen**

metal + acid → salt + hydrogen
metal + water → metal hydroxide + hydrogen

Two non-metals, carbon and hydrogen, are often included in the reactivity series.

This is because they allow us to predict particular chemical reactions.

Most reactive

Decreasing reactivity

Sodium
Calcium
Magnesium
Aluminium
Carbon
Zinc
Iron
Lead
Copper
Silver
Gold

Least reactive

19. Extraction of metals

Metals mostly occur as compounds in rocks and minerals and must be extracted before they can be used.

The method used to extract the pure metal depends on its position in the reactivity series. Zinc, iron and copper are all found as compounds within rocks. These metals are extracted using carbon in a displacement reaction

Aluminium is extracted by the electrolysis of **aluminium oxide and cryolite** (as it is more reactive than carbon).

gas
iron ore
coke
600°C
1000°C
2000°C
air
Cast iron
slag

Positive Carbon Anodes
Alumina + Cryolite
Aluminium
Steel container
Negative Carbon Cathode
Aluminium out

20. Displacement reactions

In displacement reactions a more reactive metal will displace a less reactive metal from its **compound**. If there is no difference in reactivity between two metals, then no reaction can take place.

The **reactivity series** can be used to predict displacement reactions.

magnesium + copper sulphate → magnesium sulphate + copper

Mg + CuSO$_4$ → MgSO$_4$ + Cu

Naming salts:
hydrochloric acid = -chloride
sulphuric acid = -sulphate
nitric acid = -nitrate

blue copper sulfate solution
magnesium
stir
colourless magnesium sulfate solution
copper

RE

What is the nature of God in Judaism?

Key beliefs	Essential knowledge	Key Concepts	Definition	Key Sources of Authority
1 God as One	• Jews believe in one God (**monotheism**). The **shema** prayer states "Hear O Israel the Lord Our God, the Lord is one." • God is all knowing (**omniscient**), all powerful (**omnipotent**) and always existing (**omnipresent**). • **Synagogues** show this belief by not having statues of any living beings. • Some Jews believe the name of God is so special that they write G-d and bury anything with God's name on it's no longer used.	**Covenant**	A promise or agreement between God and the Jews	A. "Hear O Israel the Lord Our God the Lord is one" part of the Shema
		Shekhinah	Place where God's presence rests and can be felt	B. "Thou shalt have no other gods before me' Exodus 20 (Ten Commandments)
2 God as Creator	• Many Jews believe God alone **created** all life as stated in **Genesis**, the first book of the Torah. • Some Jews believe God literally created the world in six days. Others believe the story should not be taken literally as what is important is the story hows God is creator of all. • The weekly festival of **Shabbat** celebrates creation. As God gave life, then the preservation of life **Pikuach Nefesh** is very important.	**Messiah**	Anointed one who will bring about a new age for mankind	C. "In the beginning God created heavens and earth" Genesis 1
3 God as Law Giver	• God revealed to **Moses** the duties that Jews should keep, including the **Ten Commandments**. • Through the following of these laws Jews are fulfilling what God wants and forming a relationship with him – they are keeping the **covenant** by keeping the **miztvot**	**Mitzvot**	Duties or commandments	D. 'In the image of God, He created him, male and female He created them" Genesis 1
		Shabbat	Day of rest for Jews from Friday to Saturday sunset	**Key Connections**
4 God as Judge	• God is a God of **justice** and **mercy** and is a judge of how the duties of the Torah are followed. • At the festival of **Rosh Hashanah** God judges every person. • God's ways may not be understandable, but they are considered to be just/fair.	**Kosher**	Foods and practices allowed	How do beliefs about the nature of God relate to other areas of your study? Shabbat, worship, Rosh Hashanah, Moses, Pikuach Nefesh, Care of the Environment
		Synagogue	Place of worship and learning for Jews	The STORY of MOSES
5 Shekhinah	• Used in the **Torah** to describe God's dwelling on the earth. • Some Jews believe the **shekhinah** never left the **Temple** and that is why **Israel** has a special spirituality. • Through the **shekhinah** God's presence can be felt and creates a sense of peace and calm e.g. when **Shabbat** candles are lit.	**Torah**	The five books of the Tenakh	

History

Unit 2: The Holocaust

Big Question: *"How did the persecution of undesirables develop in Germany over time?"*

Timeline

Year	Event
1933	Adolf Hitler becomes Chancellor of Germany.
1934	Jewish owned shops are marked with the yellow Star of David.
1935	The Nuremberg Laws are passed.
1938	Kristallnacht—Jewish people and businesses attacked.
1941	Operation Barbarossa—Nazi invasion of Russia (USSR).
1942	The Wannsee Conference.

Key Figures

Heinrich Himmler	Leader of the SS elite bodyguards and an architect of the Auschwitz Concentration and later death camp.
Joseph Goebbels	Goebbels was Head of Propaganda for the Nazi Party. He was the man who turned the ordinary German citizen against Jews through various forms of propaganda.
Reinhard Heydrich	Heydrich was chief of the Reich Security Main Office. He was a leading voice at the Wannsee Conference that called for a more efficient way to kill the Jews on an industrialised scale.

Key Terms

Term	Definition
Anti-Semitism	Hostility or prejudice towards Jewish people.
Einsatzgruppen	Often called "mobile killing units," are best known for their role in the murder of Jews in mass shooting operations during the Holocaust.
Genocide	The deliberate killing of a large group of people, especially those of a particular nation or ethnic group.
Fascism	A way of organizing a society in which a government ruled by a dictator controls the lives of the people and in which people are not allowed to disagree with the government.
Euthanasia	The act of deliberately ending a person's life to relieve suffering.
Euphemism	A mild word or expression used for one that is considered to be too harsh or blunt when referring to something unpleasant.
Perpetrator	A person who colludes or cooperates with others to carry out an immoral act.
Collaborator	A person who tries to prevent immoral acts from happening or tries to save those it targets.
Bystander	A person who carries out a harmful, illegal, or immoral act.
Rescuers/ Resisters	A person who is present at an event or incident but does not take part.
Sonderweg	A word used to describe the unique journey that German anti-Semitism followed which led ultimately to the "Final Solution". It was a journey over centuries of German history.

Key Themes

Historical Anti-Semitism

- Anti-Semitism is not exclusive to Germany. Throughout hundreds of years of European History there are countless examples of countries being Anti-Semitic.

Some of examples of this:
- **Jews murdered Jesus.**
- **Jews started the Black Death in the Medieval Period.**
- **Jews are demonic creatures like Vampires.**
- **Jews are greedy and take away people's money.**

Propaganda

- Joseph Goebbels was Hitler's Head of Propaganda and he used many different techniques to turn the German people against Jews.

- Propaganda comes in many different forms. The most popular during this time period were the use of newspapers and posters to spread lies about the Jews in Germany.

- Goebbels also used new technology like radios to spread propaganda about Jews in Germany.

Stages of Genocide

- The Holocaust is not the only genocide in human history. The stages of genocide were created to allow people and nations to recognise when another nation may be on the path towards committing genocide.
- The order of the stages can be subject to change depending on the country.
- In the 1930s Nazi Germany hit every one of the stages of genocide on their way to the 'Final Solution'.

'Final Solution'

- The 'Final Solution' is the term used by the Nazis which refers to their solution to the Jewish problem (genocide).
- The term is a euphemism designed to make it sound like what the Nazi's were doing was not really that bad.
- The Nazi's began by simply shooting Jews which proved very costly. Finally, with the creation of Zyklon– B gas the Nazis built gas chambers in their concentration camps to create the 'Final Solution'.

Unit 3: Second World War

Big Question: 'Which allied power played the biggest role in defeating Germany?'

Timeline

1939-1945	The Second World War.
1940	Battle of Britain.
1942-43	Battle of Stalingrad.
1943	Battle of Kursk.
1944	D-Day
1945	Anglo-American forces cross the River Rhine
1945	The two leading Soviet Generals race for Berlin.

Key Figures

Winston Churchill was Prime minister of Britain between 1940-1945 taking over from Neville Chamberlain.

Churchill spoke out a lot against the Nazis a lot in the 1930s and refused to sign a peace treaty with Germany after the Fall of France (1940).

Adolf Hitler became Fuhrer (leader) of Germany in 1934. He was originally voted into power by the German people in 1933.

Hitler was well known for his hatred of Jews and others and believed Germany should take revenge on other countries after the First World War.

Franklin Delano Roosevelt is still to this day arguably America's most popular President. He became President in 1932 and remained till his death in 1945.

During the Second World War before America joined, Roosevelt sent machines and weapons to help Britain in its fight against Germany. He was a strong advocate for America joining the war.

Joseph Stalin was the Communist dictator of Soviet Russia from 1924 to his death in 1953.

Stalin and Hitler were political enemies. When the Nazis invaded Russia they were brutal. When the Russian's pushed them back to Germany they were just as harsh.

Key Terms

Military Operation	A military operation is the coordinated military actions of a country, in response to a developing situation.
Artillery	Artillery are ranged weapons that launch munitions far beyond the range and power of infantry firearms.
Retreat	Withdraw from enemy forces as a result of their superior power or after a defeat.
Outflank	Move round the side of (an enemy) so as to outmanoeuvre them.
Dog fights	A close combat between military aircraft.
Amphibious landings	A military action of coordinated land, sea, and air forces organized for an invasion.
Lebensraum	The territory which a group, state, or nation believes is needed for its natural development.
Division	A division is a large military unit or formation, usually consisting of between 6,000 and 25,000 soldiers.
Ally	A person or group that provides assistance and support in an ongoing effort.
Anglo-American	Relating to both Britain and the USA.
Radar	A device that sends out radio waves for detecting aircraft.

Key Themes

Overview

- This topic will focus on the four main countries who took part in the fighting in Europe during the Second World War.
- We will study at least two events about each country and how they had an impact on defeating Germany in May 1945.
- Pupils must decide by the end of this topic which country they think played this biggest role in defeating Germany.

Britain

- **Allies:** USA + Soviet Russia (USSR).
- **In the war:** September 1939 – August 1945.
- **Key operations:** Battle of Britain, D-Day.

Germany

- **Allies:** Italy + Japan.
- **In the war:** September 1939 – August 1945.
- **Key operations:** Fall of France, Operation Barbarossa.

Soviet Russia (USSR)

- **Allies:** Britain + USA.
- **In the war:** July 1940 – August 1945.
- **Key operations:** Battle of Stalingrad, Battle of Kursk.

United States of America (USA)

- **Allies:** Britain + Soviet Russia (USSR).
- **In the war:** December 1941 - August 1945.
- **Key operations:** D-Day, Battle of the Bulge.

Geography

Key Term Definitions:

GDP: Gross Domestic Product – Total sum of goods/services sold by a country
GDP/Capita: A country's GDP divided by it's population
Life Expectancy: the average age someone is expected to live to
Literacy Rate: The amount of adults who can read and write over the age of 14
Infant Mortality Rate: the amount of babies under 1 who die before their 1st birthday
HIC: High Income Country – A wealthy country with high GDP
LIC: Low Income Country – A poorer country with a low GDP
NEE: Newly Emerging Economy – A country rapidly growing from poorer to richer

Reasons some countries can't develop:

- Poor climate
- War/Conflict
- Colonialism
- Natural disasters
- No trade links

India's Development

Statistic	1980	2018
Population	696 million	1.4 billion
GDP/Capita	$557	$7,183
Life expectancy	54	68
Literacy rate	41%	81%
Urban population	23%	33%
Infant mortality rate (per 1000)	114	32

Strategies to help poorer countries

Strategy	How does it help?	Limitations/Issues
Fairtrade	Helps farmers to get minimum price for their produce	Low demand for Fairtrade as products expensive
Debt Relief	Countries can spend money on development instead of debt repayment	Become reliant
Aid	Money is invested to fund development projects to targeted areas of need	Becomes reliant Corruption

How does Unilever help India?

Positives of Unilever:
- Run hygiene programmes that have improved lives of 115m people
- Employs 16,000 people
- The 'Shakti Project' – small loans for rural women

Negatives of Unilever:
- Employees often work long hours for low wages
- Lots of mercury leaks leading to brain damage

MFL

 Year 9 – TV, Film and Technology.

LEARNING OBJECTIVES

I will be able to:

- Identify and explain different genres of TV programmes and films.
- Describe different types of music.
- Describe what technology you use.
- Give extended and more complex opinions on TV, film and technology.
- Use the present tense.
- Understand a photo card and develop speaking skills.

KEY VOCABULARY

Scan the QR code on your phone's camera or 'Scan QR code' option on the notification menu to go to the Quizlet link with the vocabulary.

THE BIG PICTURE | Year 9 Half Term 3 | THE BIG PICTURE

Essential Prior Knowledge: **Opinions Masculine + feminine**

Types of programmes

Frequency / time phrases

Online habits

I can: **Explain what I do in my free time using three tenses.**

Types of films

Genres and opinions on music

KNOWLEDGE ORGANISER

Year 9 French Term 2
Food, Drink & Healthy Lifestyle

Healthy Lifestyles

THE BIG PICTURE — Year 9 Half Term 3 — THE BIG PICTURE

- Foods and drinks and quantities
  - Shopping for food
  - Say what you eat and drink and when.
- Decide if your lifestyle is healthy
- Sports and frequency
- Plan a healthier lifestyle

Essential Prior Knowledge:
- Frequency words.
- Opinions.

I can:
- Say what I do to stay fit and healthy.
- Reflect on how to improve my health and lifestyle.

Year 9 French Term 2
Food, Drink & Healthy Lifestyle

Year 9 LEARNING OUTCOMES Term 2

I will be able to:

- Name foods & drinks in French
- Say what I eat and drink
- Say when I eat and drink
- Talk about healthy & unhealthy foods
- Name the body parts in French
- Say if you have an ache, pain or illness
- Say how I keep fit
- Give healthy lifestyle advice
- Use a variety of complex structures
- Give opinions
- Use at least three tenses.

KEY VOCABULARY

Click on the Quizlet link for the vocabulary.

Food & Drink - https://quizlet.com/890011362/foods-and-drinks-french-flash-cards/?i=he9w3&x=1jqt

Healthy Lifestyle Sports https://quizlet.com/583297240/healthy-lifestyle-sports-flash-cards/?i=he9w3&x=1jqt

Body Parts https://quizlet.com/799125234/french-body-parts-flash-cards/?i=he9w3&x=1jqt

Sports- https://quizlet.com/571598505/es-sports-flash-cards/?i=he9w3&x=1jqt

Past Tense https://quizlet.com/859186237/past-tense-flash-cards/?i=he9w3&x=1jqt

Future Tense https://quizlet.com/567736274/using-the-future-tense-flash-cards/?i=he9w3&x=1jqt

Health Three Tenses - https://quizlet.com/370617678/health-three-tenses-flash-cards/?i=he9w3&x=1jqt

Computing

Python Programming — Year 9 Spring Term

python™

I will be able to

- Set up the python interface properly
- Understand how the colour coding system works in python code
- Read code and explain what it does
- Identify bugs in code
- Remove errors from code
- Write simple code for a specific task

Keywords

Keywords	
Sequence	When instruction are followed in order from top to bottom
Selection	Decisions in code that can lead the code to take different paths depending on values of variables that are either inputted or changed in the code **if, elif, else**
Iteration	The process of repeating coding instructions. This can be done by counter loops (repeat for a set number of times) Or condition controlled (repeat until a value of a variable changes)
Variable	A value that can be changed
Data Type	int (whole numbers), float (decimal numbers), str (strings – text), boolean (True or False)
Debugging	Identify and remove errors from code

Programming Commands

Command	Description
print ( )	Outputs whatever is in the parentheses to the screen.
If	Decision command, it must be followed by a question. If the answer to the question is true the next line is run.
elif	Decision command used when a second question is asked. Multiple choice. The command below the elif will be run when the answer is true
else	This is the decision command used when all the
input	num = int(input()) – this allows for users to put variables in
for	The command to make a repeat (used for counter loops)
while	The repeat command (used for condition loops)
=	Used to declare a variable
==	To check if to values are equal (True or False)
!=	To check if two values are not equal (True or False)
>,<, >=, <=	Greater than, less than, greater or equal, less that or equal

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PRIOR LEARNING

HOW COMPUTERS WORK (y9 Autumn)
Binary
Boolean Logic

CURRENT TOPIC

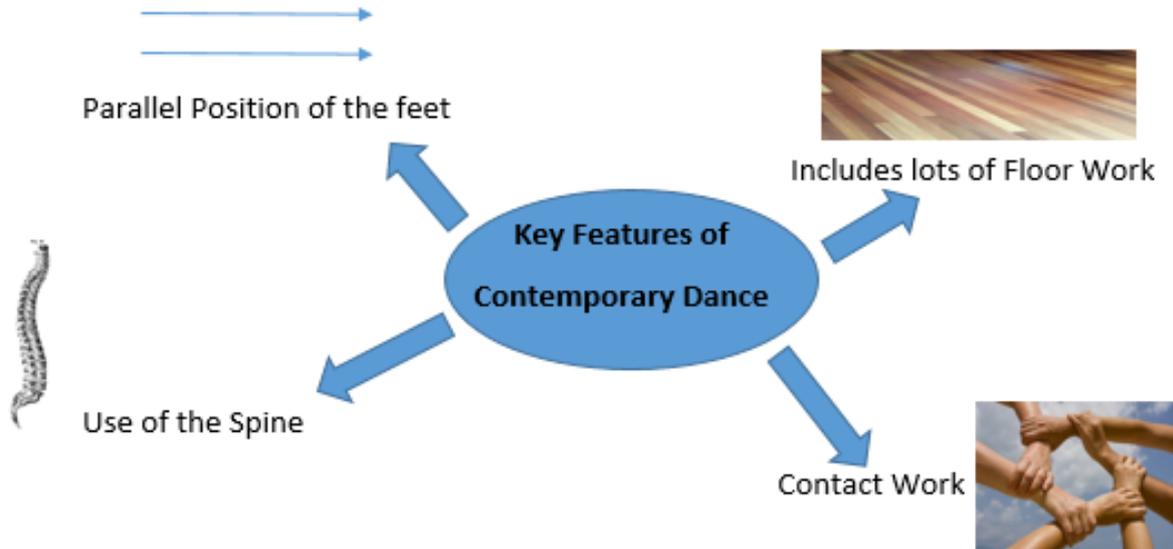**Python Programming**

NEXT TOPIC

Searching and Sorting

Music

Music Knowledge Organiser

Year 9
Unit 3
Music and the Moving Image

Leitmotif

A Leitmotif is a frequently recurring short melodic or harmonic idea which is associated with a character, event or object.

It is a characters theme tune.
The Leitmotif can be used to describe a character, e.g. happy, evil, silly, sad...

Key Composers

John Williams
Star Wars
Jaws
Harry Potter
Indiana Jones
Superman, E.T.

Danny Elfman
Mission Impossible
Batman Returns
Men in Black
Spider Man

The Lion King
Gladiator
Dunkirk
Blade Runner 2049
No Time to Die

Scales

A scale is a collection of notes used to create a piece of music

C Major
C D E F G A B C
T T S T T T S

C Natural Minor
C D Eb F G Ab Bb C
T S T T S T T

Chromatic
S S S

Harmony

Chords use three notes at once. Major chords are happier sounding, **minor chords are sad sounding**

Concord is when the notes in the chord feel stable, **discord** is when there is a note creating dissonance (unpleasant sound).

| Assessment | ??? | ??? | ??? | ??? | ??? | ??? | ??? |

Drama/ Dance

Parallel Position of the feet

Includes lots of Floor Work

Key Features of Contemporary Dance

Use of the Spine

Contact Work

The name "Contemporary Dance" describes a range of techniques and styles used in classes, workshops and dance choreography.

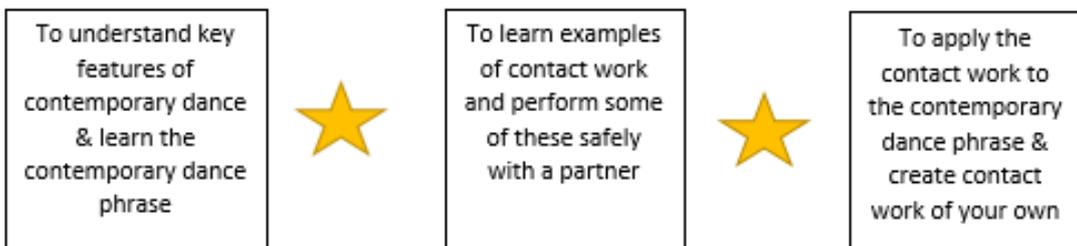Contemporary dance was developed in the early 20th century as a reaction against the rigid techniques of ballet.

Dancers such as Isadora Duncan and Martha Graham searched for ease of movement using the body's natural lines and energy.

This allowed a greater range and fluidity of movement than conventional dance techniques.

Contemporary dance can be danced to almost any style of music, or united with other dance forms to create new styles of movement.

KEY WORDS	Definition
Contact Work	Lifts, supports or balances with a partner
Counter Balance	To equally push towards your partner
Counter Tension	To equally lean/pull away from partner

The Journey from Lesson 1 to Assessment

To understand key features of contemporary dance & learn the contemporary dance phrase	⭐	To learn examples of contact work and perform some of these safely with a partner	⭐	To apply the contact work to the contemporary dance phrase & create contact work of your own

Design Technology – Graphics

D&T/Art Knowledge Organiser

Name:

Year: 9   Subject: Graphics

Period of learning: Sept - Feb 2025

The Design Process

Key Concepts

- 3D drawing techniques
- Manufacturing a prototype
- Use CAD software & CAM equipment to create a graphic product
- Creativity
- Produce a detailed one point perspective streetview
- Using SketchUp to produce a CAD prototype
- Assemble a graphic product

Key Skills

- Manipulate images using Photoshop
- Write a specification
- Use 2D Design to create a graphic product

Key vocabulary

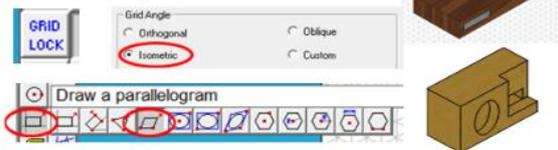| Word	Definition
Perspective drawing	Realistic style of drawing where objects get smaller the closer they get towards the vanishing point.
Vanishing point	The point/s where all the depth lines are drawn to on a perspective drawing.
Depth lines (orthogonals)	
Adobe Photoshop	Computer software used to manipulate images to create graphic products.
Bitmap image	
Image manipulation	Using tools on a software (e.g. Photoshop) to edit pictures and add special effects
Design specification	A checklist of what your design must do and include (material, size, aesthetics, target market etc).
Evaluation	Discussing the positives and areas for improvement of a design or product.
Techsoft 2D Design	
Vector image	
CAD/ CAM/ CNC	
LASER Cutter	
Quality control	

Design Technology – Product Design

Knowledge Organiser 1 Y9 Product Design

HOW?

There's a hidden channel in the middle section of the passive amplifier. This aims the sound in a particular direction. **By concentrating more sound energy into a smaller volume of air it will sound louder.** Some passive amplifiers create a resonating chamber to spread the sound more effectively. How could you apply this to YOUR designs?
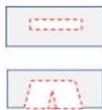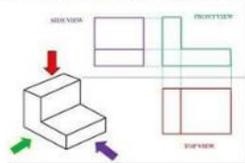
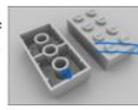### Isometric projection 2D Design

Iterative design

Orthographic projection

Cutting enclosed shapes and refitting blades

Tolerance = the "margin of error". Think Lego!

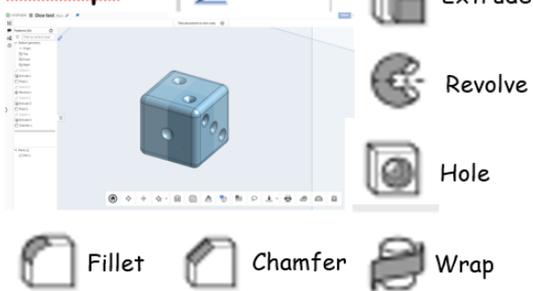| Key vocabulary	
Word	**Definition**
Passive amplifier	Makes things louder (amplifies) without the use of power. It works a bit like a trumpet making sound louder.
Resonating chamber	A space which allows sound to echo and amplify.
CAD	Computer Aided Design e.g. Tinkercad, OnShape, SketchUp
CAM	Computer Aided Manufacture e.g. laser cutter, 3D printer
Orthographic projection	Representing 3D objects in 2D (front, side, plan)
Isometric	3D drawing with horizontal lines at 30°
Iterative design	Continually improving designs based on testing
Prototype	The 'first draft' of a product to test an idea

Knowledge Organiser 2 Y9 Product Design

3D printing (additive manufacturing)

PLA filament

OnShape

Sketch — Extrude — Revolve — Hole — Fillet — Chamfer — Wrap

Cura and slicing

Support
Supports are needed on prints with overhangs of more than 45 degrees

Build Plate Adhesion
Adding a 'skirt' increases the chances of your print sticking to the build plate

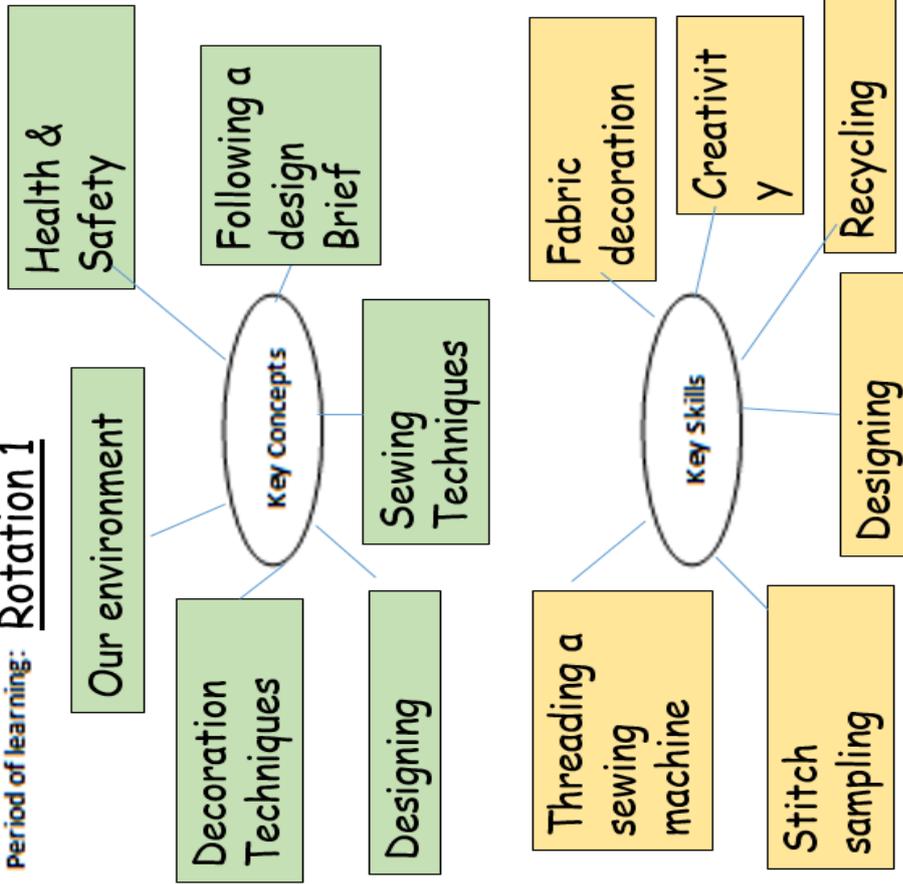| Kay Vocabulary	
Word	**Definition**
Laser cutter	CAM tool using a thin, focused laser beam to engrave or cut materials.
3D printing	A way of creating a 3D object from a computer created design by printing thin layers of heated filament (often plastic) layer-by-layer. Also known as additive manufacturing.
Synthetic polymers	Man-made plastics made from the drilling of crude oil (a non-renewable source) from the Earth. The crude oil is broken down into different bi-products through fractional distillation. These plastics never biodegrade.
Bioplastics	Plastics from renewable sources, such as corn starch or sugar cane e.g. PLA
PLA	Polylactic acid – the bioplastic filament commonly used in 3D printing. Made from renewable sources like corn starch making it much more sustainable than regular synthetic polymers.
Acrylic	A synthetic plastic that can be laser cut and line bent. It can be reheated and reshaped many times.
Slicing	Before being 3D printed a CAD model must be converted from an STL file into code that the 3D printer can understand. This process is called slicing because the model is "sliced" into many thin layers. This machine language is called the G-Code and tells the printer head where to print.

Design Technology – Textiles

Key vocabulary

Word	Definition
Biodegradable	Capable of being decomposed by bacteria or other living organisms and thereby avoiding pollution.
Fabric decoration	Different methods of adding embellishment to fabric
6 R's	The '6 Rs' are Reduce, Reuse, Recycle, Refuse, Rethink and Repair. These are all terms related to ways we can lead a more sustainable life and lessen our impact on the environment.
Upcycling	reuse (discarded objects or material) in such a way as to create a product of higher quality or value than the original:
Design Brief	A design brief is a document that outlines the core details and expectations of a design project for a brand.
Fast fashion	Inexpensive clothing produced rapidly by mass-market retailers in response to the latest trends

D&T/Art Knowledge Organiser

Name:

Year: 9

Subject: Textiles

Period of learning: Rotation 1

Key Concepts
- Health & Safety
- Following a design Brief
- Our environment
- Sewing Techniques
- Decoration Techniques
- Designing

Key Skills
- Fabric decoration
- Creativity
- Recycling
- Designing
- Threading a sewing machine
- Stitch sampling

Design Technology – Food

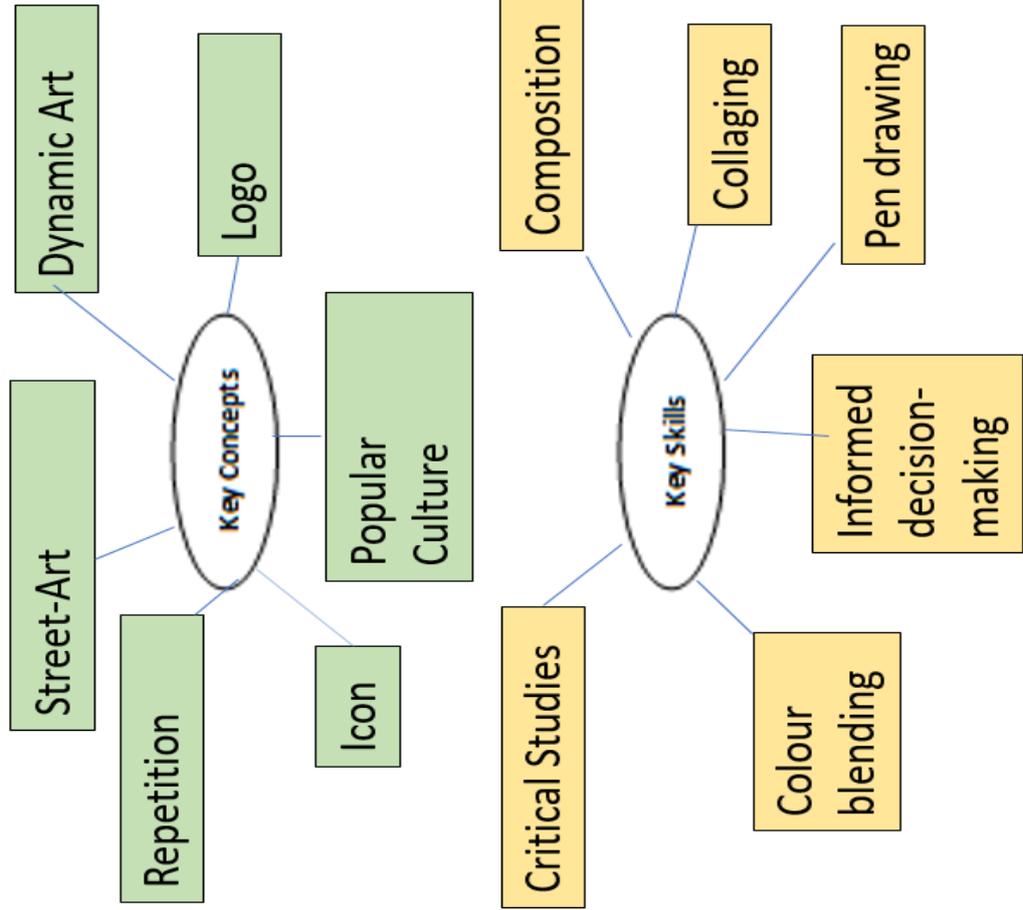| Key word	Definition
Cross-contamination	Cross-contamination is the physical movement or transfer of harmful bacteria from one person, object or place to another.
Food poisoning	Food poisoning is caused by eating something that has been contaminated with germs
Bacteria	Bacteria are tiny, single-celled living organisms. There are millions of different types of bacteria
Cook-Chill	Cook-Chill involves cooked food being rapidly chilled, using either a blast chiller or blast freezer, and then stored at controlled temperatures
Hygiene	Hygiene is a set of practices performed to preserve health
Danger zone	The temperature in which bacteria thrive.

Y9 Knowledge Organiser Food Technology

Health and safety/4 C's

Food poisoning

Food poisoning bacteria

TYPES OF FOOD POISONING

SYMPTOMS OF FOOD POISONING

Visible/ non visible symptoms

Danger zone

Temperature Danger Zone
>4°C-60°C
Including room temperature

>60°C
I'm about to die!

≤4°C
I'm not dead yet. I'm just dormant.

60°C
4°C

Safe food storage

The 4 C's of food safety
COOKING
CROSS-CONTAMINATION
CHILLING
CLEANING

Right Zones in the Fridge for safe food storage

Practical skills

Shaping

Meat safety

Pastry making

THE CREAMING METHOD

Art and Design

Word	Definition	
Pop Art	Art movement emerging from the 1950s depicting mass-media and popular culture.	
Elite	A select group of people perceived as having high intellect, wealth, power, special skills, or experience.	
Colour blending	Fusing together 2 colours when blending and layering coloured pencil crayons	
Ben-Day dots	A dot (pointillism) technique used by Roy Lichetenstein to create a comic book style image on a large scale	
Mark making (pen)	Using marks and layering to create tone, shape and texture	
Composition	A style or category of art.	
Collage	A technique using various paper to create an image.	

Key Concepts

- Dynamic Art
- Logo
- Street-Art
- Popular Culture
- Repetition
- Icon

Key Skills

- Composition
- Collaging
- Pen drawing
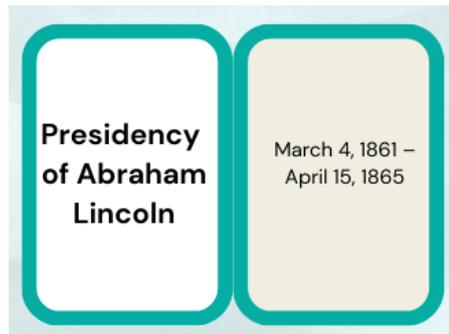- Informed decision-making
- Critical Studies
- Colour blending

Top Tips!

How to use these KO's to revise

- Highlight the key words
- *Make a mind map*

- *Make some flash cards* – Put the key word on one side and the facts/ important information on the back (just the key info!) – use the Leitner system shown to you in forms.

- *Self-test* – memorise the KO organiser, turn it over and then see how much you can remember
- *Peer test* – memorise the KO organiser then get someone else to test you (friend, family etc)