



WOOTTON PARK

'Ipsum quod faciendum est diutius'

Year 8 Knowledge Maps

Term 5 and 6

Name:
Tutor Group:

Overview

In this term, learners will be studying up to three units which will include straight-line graphs and percentages, decimals and fractions.

Key Terms:

Unit 9:
Proportion
Direct
Inverse
Gradient

Linear Equation
Midpoint
Straight line
Intercept

Unit 10:

Fraction
Decimal
Percentage
Percentages of amounts

Key skills

Unit 9 Straight-line graphs

- 9.1 Direct proportion on graphs
- 9.2 Gradients
- 9.3 Equations of straight lines
- 9.4 STEM: Direct proportion problems
- 9 Check up
- 9 Strengthen
- 9 Extend
- 9 Unit test

Unit 10 Percentages, decimals and fractions

- 10.1 Fractions and decimals
- 10.2 Equivalent proportions
- 10.3 Writing percentages
- 10.4 Percentages of amounts
- 10.5 FINANCE: Solving problems
- 10 Check up
- 10 Strengthen
- 10 Extend
- 10 Unit test

Unit 9:

Key point

When two quantities are in **direct proportion**

- plotting them as a graph gives a straight line through the origin
- when one variable is zero, the other variable will also be zero
- when one variable doubles, so does the other.

Key point

The steepness of the graph is called the **gradient**.

To find the gradient, work out how many units the graph goes up for every one unit across.

Key point

A **linear equation** generates a straight-line (linear) graph.

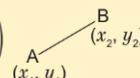
The equation for a straight-line graph can be written as

$$y = mx + c$$

where m is the gradient and c is the y -intercept.

Key point

The midpoint of a line segment is

$$\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$


Worked example

Here are the prices of some bicycle brake parts.

Brake pads	1 pair	£1.99	2 pairs	£3.75
Brake cable casing	2 metres	£4.98	5 metres	£12.45

Are the price and quantity in direct proportion for

a brake pads **b** brake cable casings?

a $\times 2$ $\left\{ \begin{array}{l} 1 \text{ pair } \text{£}1.99 \\ 2 \text{ pairs } \text{£}3.98 \end{array} \right. \times 2$

Assume they are in direct proportion.
Work out what the other price would be.
Do they match?

But two pairs here cost £3.75, so price and quantity are not in direct proportion.

b Price for 1 m is $\text{£}4.98 \div 2 = \text{£}2.49$. Price for 5 m is 5 times the price for 1 m ($\text{£}2.49 \times 5 = \text{£}12.45$), so price and quantity are in proportion.

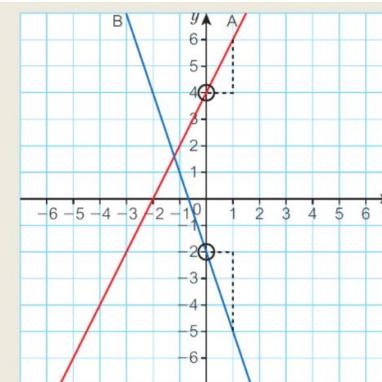
Worked example

Write the equation of

- a** line A
- b** line B.

a $y = mx + c$
gradient, $m = 2$
 y -intercept is (0, 4), so $c = 4$.
Equation of line A is $y = 2x + 4$.

b $y = mx + c$
gradient, $m = -3$
 y -intercept is (0, -2), so $c = -2$.
Equation of line B is $y = -3x - 2$.



Subject: Maths – 8A and 8B (Theta Scheme)

Term: 5

Topic: Units 9-10

Websites and further reading

- Pearson Active Learn: <http://pearsonactivelearn.com>
- Maths Watch: <http://mathswatch.co.uk/>
- BBC Bitesize: <http://www.bbc.co.uk/education/subjects/zqhs34j>
- Numeracy and Foundation level practice questions and answers: <https://corbettmaths.com/5-a-day/gcse1/>
- Maths quiz: <http://www.educationquizzes.com/ks3/maths/>
- KS3 online tests: <http://www.romsey.hants.sch.uk/maths/ks3onlinetests.htm>

Unit 10:

Key point

A **terminating decimal** ends after a definite number of digits, for example 0.64 and 1.465.

Key point

In a **recurring decimal**, a dot over the beginning and end of sequence shows it recurs. For example, $1.3\overline{64}$ is 1.36436436436...

Key point

Sometimes you might need to use a denominator of 1000 when you convert between fractions, decimals and percentages.

Key point

A positive mixed number is greater than 1, so the decimal equivalent is greater than 1 and the percentage equivalent is greater than 100%. For example, $1\frac{3}{4} = 1.75 = 175\%$.

Worked example

20% of an amount is £40.
Work out the original amount.



Key point

To **increase** an amount by a percentage, you can find the percentage of the amount, then add it to the original amount.

Key point

Sometimes you want to find the original amount after a percentage increase or decrease. You can use the **unitary method**.

Key point

Simple interest is the interest calculated only on the original amount of money invested. It is the same amount each year.

Key point

To **decrease** an amount by a percentage, you can find the percentage of the amount, then subtract it from the original amount.

Key point

A **proportion** of a whole can be written as a fraction, decimal or percentage.

Overview

In this term, learners will be revising the whole years worth of topics in preparation for the end of year assessment.

Key Topics:

1. Number
2. Area & Volume
3. Statistics, Graphs & Charts
4. Expressions & Equations
5. Real-life Graphs
6. Decimals & Ratio
7. Lines & Angles
8. Calculating with Fractions
9. Straight-line Graphs
10. Percentages, Decimals & Fractions

Units 1-5:

Work out these.

- a $466 - 172 - 35$ b $778 + 54 - 77$
 c $7625 - 84 + 555$ d $£12004 + £804 - £9963$

Estimate the answer to each calculation. Use the priority of operations. Only round the numbers you need to. Use a calculator to check your estimates.

- a $152 \div 48 + 11$ b $99 - 28 \times 2.8$
 c $(29 + 29) \div 6$ d $4.8^2 + 3.5$

Work out these calculations. Use the priority of operations. Check your answers using a calculator.

- a $5 - 2 \times 7$ b $5 \times -3 - 2$ c $-10 \div 2 + 3$
 d $4 - 3 \times -2$ e $4 \times (3 - 6)$ f $-15 \div (5 - 8)$

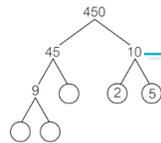
- a Work out i $4^2 \times 10^2$ ii $(4 \times 10)^2$
 b What do you notice about your answers to part a?
 c Work out these.
 i 50^2 ii 90^2 iii 120^2
 iv 300^2 v 400^2 vi 800^2

Write each product as a power. The first one has been done for you.

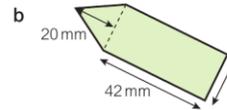
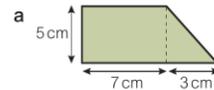
- a $4 \times 4 \times 4 \times 4 \times 4 = 4^5$ b $2 \times 2 \times 2 \times 2 \times 2 \times 2$
 c $5 \times 5 \times 5 \times 5 \times 5$ d $3 \times 3 \times 3 \times 3$

- a Copy and complete the factor tree for the number 450 until you end up with just prime factors.
 b Use index notation to write 450 as the product of its prime factors.
 c Use index notation to write each number as the product of its prime factors.

- i 350 ii 84 iii 98 iv 216 v 225

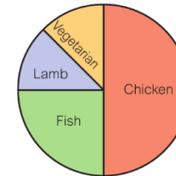


Work out the area of each compound shape.

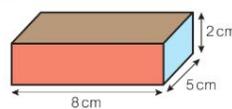


This pie chart shows the meals people ate in a restaurant.

- What fraction of the people ate
 a chicken b fish c lamb
 d vegetarian e chicken or fish?



Find the surface area of this cuboid. The working has been started for you.

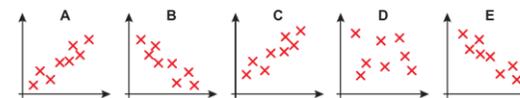


area of front face = $8 \times 2 = 16 \text{ cm}^2$
 area of right end face = $5 \times 2 = 10 \text{ cm}^2$
 area of top face = $8 \times 5 = \square \text{ cm}^2$
 total surface area = $16 + 16 + 10 + 10 + \square + \square = \square \text{ cm}^2$

Work out these conversions.

- a 4.5 litres = $\square \text{ cm}^3$
 b 8.7 litres = $\square \text{ cm}^3$
 c $2600 \text{ cm}^3 = \square$ litres
 d $840 \text{ cm}^3 = \square$ litres

For each graph, decide whether it shows positive correlation, negative correlation or no correlation.



Simplify these.

- a $c + c + c + c$
 b $c \times c \times c \times c$
 c $h + h + h$
 d $h \times h \times h$
 e $m \times m \times m \times m \times m$
 f $m + m + m + m + m$

Simplify these expressions.

- a $5(a + 1) + 3(a + 2)$
 b $3(2m + 3) + 4(2m - 3)$
 c $5(c + 2) - 3(c + 2)$
 d $4(n - 2) - 2(n + 1)$
 e $6t - 2(t + 3)$
 f $8m - 3(m - 2)$

Real The table shows the number of laptops owned by households in the UK.

Year	2000	2002	2004	2006	2008	2010	2012
Laptops (millions)	2	2	3	5	9	17	27

Source: DECC

- a Draw a line graph of this data.
 Plot 'Year' on the horizontal axis from 2000 to 2012.
 Plot 'Number of laptops (millions)' on the vertical axis from 0 to 30.
 Write the title on your graph.

Solve these equations. Expand the brackets first.

- a $6g = 2(g + 4)$
 b $5v = 3(v + 2)$
 c $6(n - 1) = 5n + 4$
 d $2(5h + 1) = 6h + 2$

Write each product using powers.

- a $4 \times t \times t$
 b $5 \times a \times a \times a$
 c $g \times g \times g \times g \times g \times g \times 2$
 d $3 \times e \times 2 \times e$
 e $5 \times m \times 2 \times m \times m$
 f $2n \times 4n$
 g $3d \times 2d \times 2d$
 h $-3t \times 5t$

Copy and complete this table.

Number of children	Frequency	Total number of children
0	3	$0 \times 3 = 0$ children
1	6	
2	10	$2 \times 10 = 20$ children
3	4	
4	1	
Total number of families		Total number of children
<input type="checkbox"/>		<input type="checkbox"/>

Work out the mean number of children for each family.

Websites and further reading

- Pearson Active Learn: <http://pearsonactivelearn.com>
- Maths Watch: <http://mathswatch.co.uk/>
- BBC Bitesize: <http://www.bbc.co.uk/education/subjects/zqhs34j>
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Units 6-10:

Round each number to one decimal place.

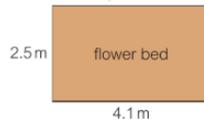
- a** 3.67 **b** 14.56 **c** 2.06 **d** 3.65

Real These are Sunday night TV viewing figures.

Programme	Viewers
Downton Abbey	9623 145
By Any Means	3450 238
Countryfile	6285 016
The Crane Gang	926 818
X Factor	9528 586

Round each number to a decimal number of millions to one decimal place.

The diagram shows a rectangular flower bed.



- a** Which is the best estimate to use for the calculation 2.5×4.1 ?

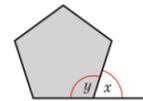
- 3×4.1 2.5×4 3×4

- b** Work out 25×41
c Use your answers to parts **a** and **b** to work out 2.5×4.1 to give you the area of the flower bed.

$3.2 \times 4.6 = 14.72$

Use this multiplication fact to work out these.

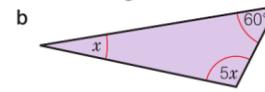
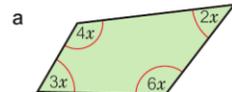
- a** 32×4.6 **b** 32×46 **c** 0.32×4.6 **d** 0.32×0.46
- The diagram shows a regular pentagon.
- a** What do you know about the angles in a regular polygon?
b Work out the size of the exterior angle x .
c Work out the size of the interior angle y .



Work out these subtractions. Use a written method.

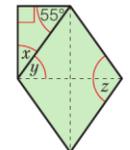
- a** $21.5 - 9.87$ **b** $28.4 - 0.015$ **c** $1235.4 - 1.245$ **d** $5.1548 - 0.0145$
- Simplify each ratio.
- a** $6.5 : 3$ **b** $8.5 : 3$ **c** $4.8 : 2$ **d** $5.4 : 6.6$

Work out the value of x in each of these diagrams.

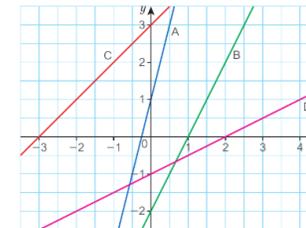


The diagram shows a right-angled triangle and a rhombus.

- a** Work out the size of angle x .
b Work out the size of angle y .
c Work out the size of angle z .



Write down the equations of these lines.



- a** Write these in descending order.

- $\frac{3}{4}, \frac{7}{8}, \frac{3}{5}, \frac{11}{15}, \frac{13}{20}$

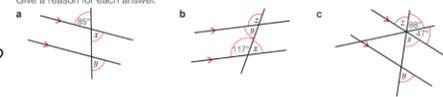
- b** Write these in ascending order.

- $\frac{2}{15}, \frac{1}{3}, \frac{3}{8}, \frac{7}{10}, \frac{15}{22}$

Marie says, $\frac{1}{10} + \frac{1}{20} = \frac{2}{30} = \frac{1}{15}$.

- a** Explain what mistake she has made.
b What is the correct answer to $\frac{1}{10} + \frac{1}{20}$?

Write down the sizes of the angles marked with letters in each of these diagrams. Give a reason for each answer.



Write down the reciprocals of these numbers.

- a** $\frac{2}{7}$ **b** $\frac{3}{4}$ **c** 5 **d** 12
e $\frac{1}{3}$ **f** $\frac{1}{2}$ **g** $\frac{1}{8}$ **h** 6

Work out these divisions. The first one has been started for you.

- a** $5\frac{1}{2} \div \frac{1}{2} = \square \times \frac{2}{1} = \frac{2 \square}{1} =$
b $3\frac{2}{11} \div \frac{4}{5}$ **c** $4\frac{1}{9} \div \frac{2}{3}$ **d** $12\frac{1}{2} \div \frac{1}{4}$ **e** $10\frac{1}{3} \div 2\frac{3}{4}$

Subject: Maths – 8D (Delta Scheme)

Term: 5

Topic: Units 9-10

Overview

In this term, learners will be studying up to three units which will include scale drawings and measures, and graphs.

Key Terms:

Unit 9:
 Maps
 Scales
 Bearing
 Congruent

Similar
 Geometry
 Ratio
 Angle

Unit 10:
 Equation
 Straight Line
 Graph
 Parallel
 Perpendicular

Gradient
 Intercept
 $y = mx + c$
 Inverse
 Product
 Function

Key skills:

Unit 9 Scale drawings and measures

- 9.1 Maps and scales
- 9.2 Bearings
- 9.3 Scales and ratio
- 9.4 Congruent and similar shapes
- 9.5 Solving geometry problems
- 9 Check up
- 9 Strengthen
- 9 Extend
- 9 Unit test

Unit 10 Graphs

- 10.1 Plotting linear graphs
- 10.2 The gradient
- 10.3 $y = mx + c$
- 10.4 Parallel and perpendicular lines
- 10.5 Inverse functions
- 10.6 STEM: Non-linear graphs
- 10 Check up
- 10 Strengthen
- 10 Extend
- 10 Unit test

Unit 9:

Key point

A **bearing** is an angle in degrees, clockwise from north.
 A bearing is always written using three digits.



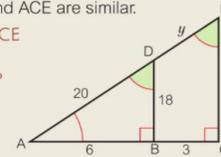
This bearing is 025°.

Worked example

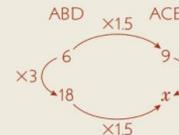
a Explain why triangles ABD and ACE are similar.

Triangle ABD	Triangle ACE
$\angle A$	$\angle A$
$\angle B = 90^\circ$	$\angle C = 90^\circ$
$\angle D = \angle E$ (corresponding angles)	

The triangles have the same angles (AAA).



b Work out length x .



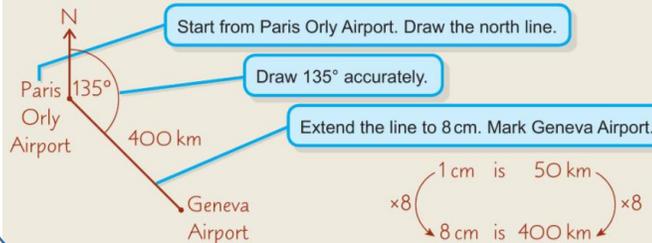
9×3 is easier to work out than 18×1.5 , but they give the same answer.

$x = 9 \times 3 = 27$

Key point
 The scale on a map is given as a ratio 1 : n . For example, 1 : 25000 means 1 cm on the map represents 25000 cm in real life.

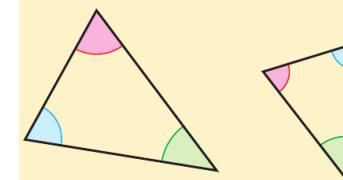
Worked example

Geneva Airport is 400 km from Paris Orly Airport on a bearing of 135°. Draw this bearing accurately using a scale of 1 cm to 50 km.



Key point

To show that two shapes are similar, show that corresponding angles are equal, or find the scale factor for corresponding sides.



Websites and further reading

- Pearson Active Learn: <http://pearsonactivelearn.com>
- Maths Watch: <http://mathswatch.co.uk/>
- BBC Bitesize: <http://www.bbc.co.uk/education/subjects/zqhs34j>
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Unit 10:

Key point

The equation of a straight-line graph can always be written in the form $y = mx + c$. m is the gradient and c is the y -intercept.

Key point

The y -intercept is where a line crosses the y -axis.
To find the y -intercept of a graph, find the y -coordinate where $x = 0$.
To find the x -intercept of a graph, find the x -coordinate where $y = 0$.

Key point

An **inverse function** reverses the effect of the original function.

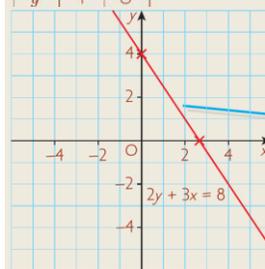
Worked example

Plot the graph of $2y + 3x = 8$.

When $x = 0$:
 $2y + 3 \times 0 = 8$
 $2y = 8$
 $y = 4$

When $y = 0$:
 $2 \times 0 + 3x = 8$
 $3x = 8$
 $x = \frac{8}{3}$
 $x = 2\frac{2}{3}$

x	0	$2\frac{2}{3}$
y	4	0



To find the **y -intercept**, substitute $x = 0$ into the equation. Solve to find the value of y .

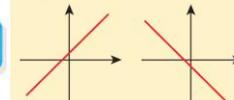
To find the **x -intercept**, substitute $y = 0$ into the equation. Solve to find the value of x .

Draw a table of values with $x = 0$ and $y = 0$.

Plot the points and join them with a straight line. Label the line with its equation.

Key point

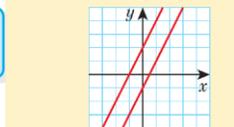
To find the gradient, work out how many units the graph goes up for every 1 unit across.



Gradients are positive (\uparrow , uphill) or negative (\downarrow , downhill).
The larger the value, the steeper the gradient.

Key point

Lines that are **parallel** have the same gradient.

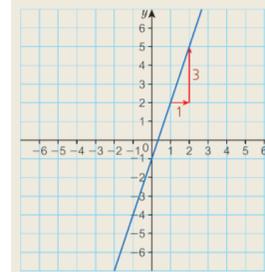


Key point

The graph of an inverse function is a reflection of the original function in the line $y = x$.

Worked example

Find the **gradient** of the line.



Gradient = 3

Key point

When two lines are **perpendicular** the product of their gradients is -1 .

Choose a point on the line.
Draw a horizontal line 1 unit in the x -direction.
Draw a vertical line to the graph line.
When the x -value increases by 1, the y -value increases by 3.

Key point

The steepness of the graph is called the **gradient**.

Key point

To find the gradient of a line calculate $\frac{\text{change in } y}{\text{change in } x}$

Worked example

Find the equation of a straight line perpendicular to $y = 3x + 2$, which goes through the point $(6, 0)$.

$y = -\frac{1}{3}x + c$
 $0 = -\frac{1}{3} \times 6 + c$
 $0 = -2 + c$
 $2 = c$

The equation is:

$y = -\frac{1}{3}x + 2$

Work out the gradient of the perpendicular line.
Substitute it for m in $y = mx + c$.

Substitute $x = 6, y = 0$ into the equation.

Solve to find c .

Rewrite the equation with the values m and c .

Overview

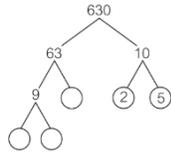
In this term, learners will be revising the whole years worth of topics in preparation for the end of year assessment.

Key Topics:

1. Factors & Powers
2. Working with Powers
3. 2D Shapes and 3D Solids
4. Real Life Graphs
5. Transformations
6. Fractions, Decimals & Percentages
7. Constructions & Loci
8. Probability
9. Scale Drawings & Measures
10. Graphs

Units 1-5:

Copy and complete the factor tree for the number 630 until you end up with just prime factors.



Use index notation to write 630 as the product of its prime factors.

Work out the HCF of each pair of numbers.

- a 32 and 36
- b 45 and 72
- c 132 and 180

Work out

a i $\frac{2^8}{2^5}$ ii $\frac{3 \times 2^8}{2^5}$

Convert

- a 6.5 Tm to km
- b 0.014 m to nm
- c 50 000 nm to mm
- d 2200 km to Mm
- e 0.000 0006 Gm to mm

Round these numbers to the given number of significant figures.

- a 63 689 (2 s.f.)
- b 63.559 (3 s.f.)
- c 0.825 (2 s.f.)
- d 0.007 3301 (3 s.f.)

Find the value of each expression when $x = -2$, $y = -4$ and $z = 3$.

- a $y^2(5z - 3x^2)$
- b $z(xy + x^2)$
- c $z^2 - yz + xz$
- d $3(z - x)^2 - 5y$

Expand and simplify

- a $3(x + 2) + 5(x + 1)$
- b $4(a + 3) + 2(a - 1)$
- c $x(x - 1) + x(x + 8)$
- d $3a(a + 2) - 5a(a - 1)$

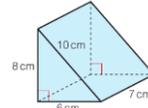
Solve

- a $6(x + 5) = 44 - 2(4 - 2x)$
- b $2(3x - 13) = 40 - 3(x + 4)$
- c $7(x + 1) = 8x + 7 - 2(3x - 5)$
- d $4(3 + 5x) = 16x + 56 - 4(2x - 1)$

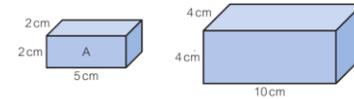
Factorise completely

- a $2x^2 + 8x^3$
- b $36d - 30d^4$
- c $6q^3 - 14q^2$
- d $27u^3 + 36u^2$
- e $5b^2 - 50b$
- f $36mn + 8m^2n^2$

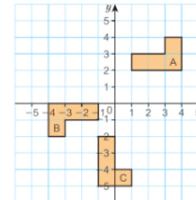
Work out the surface area of this triangular prism.



A cuboid is enlarged by scale factor 2.
a Work out
i the volume of the original cuboid
ii the volume of the enlarged cuboid.
b Find the missing number.
Enlarged volume = original volume \times \square

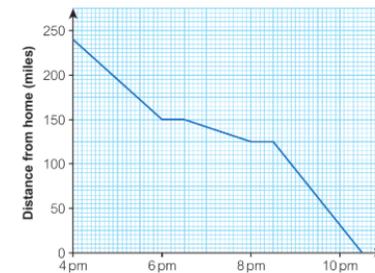


Describe the rotation that takes shape A to a shape B



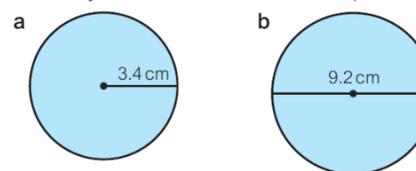
The Murphys' travel home after their holiday.

- a How often did they stop on the journey?
- b How many miles does one small square on the vertical axis represent?
- c What is the total distance from holiday to home?
- d How many minutes does one small square on the horizontal axis represent?
- e What is the total time to travel home? Write it as a decimal.
- f Work out the average speed in miles per hour using the formula
average speed = $\frac{\text{total distance in miles}}{\text{total time in hours}}$



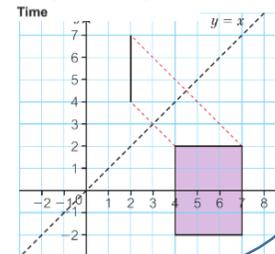
Work out the area of each circle.

Round your answer to 1 decimal place.



Margaret has started to reflect the rectangle in the mirror line $y = x$.

- a Copy the diagram.
- b Turn the page so the mirror line is vertical and continue the reflection.
- c Trace your completed diagram. Fold your diagram along the line $y = x$. What happens to the image and the object?



Websites and further reading

- Pearson Active Learn: <http://pearsonactivelearn.com>
- Maths Watch: <http://mathswatch.co.uk/>
- BBC Bitesize: <http://www.bbc.co.uk/education/subjects/zqhs34j>
- Numeracy and Foundation level practice questions and answers: <https://corbettmaths.com/5-a-day/gcse1/>
- Maths quiz: <http://www.educationquizzes.com/ks3/maths/>
- KS3 online tests: <http://www.romsey.hants.sch.uk/maths/ks3onlinetests.htm>

Units 6-10:

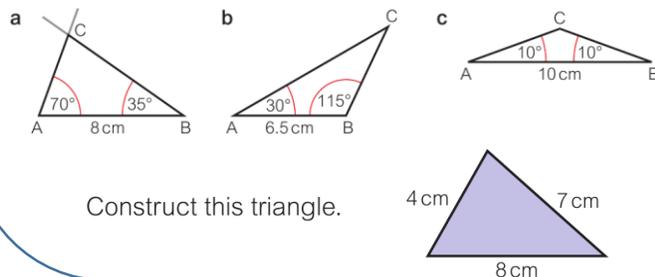
- a Write $\frac{1}{6}$ as a decimal using dot notation.
- b Write $\frac{4}{6}$ as a decimal using dot notation.
- c Write another fraction that has the same decimal equivalent as $\frac{4}{6}$.
- d Do all fractions with a denominator of 6 recur? Explain your answer.

Find the new quantities after these percentage increases.

- a Increase 65 by 20%
- b Increase 80 by 15%
- c Increase 140 by 7.5%

- a Work out the percentage profit made on each item.
 - i Bought for £12, sold for £15
 - ii Bought for £15, sold for £19.50
 - iii Bought for £240, sold for £444
- b Check your answers.

Use a ruler and protractor to draw each triangle accurately.



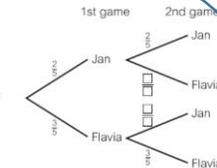
Construct this triangle.

- a Draw the perpendicular bisector of a line AB 9 cm long.
- b
 - i Choose a point on the perpendicular bisector.
 - ii Measure its distance from A and from B.
 - iii Do this again for another point on the perpendicular bisector. What do you notice?
- c Write the missing words in this sentence. 'Points that are all the same distance from two dots make the _____ of the line joining them.'



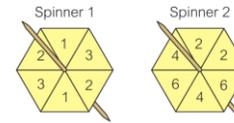
Jan and Flavia play draughts. They play two games. The result of the first game does not affect the result of the second game.

- a Copy and complete the tree diagram.
- b Work out the probability that
 - i Jan wins both games
 - ii Flavia wins both games
 - iii Jan and Flavia win one game each.



Brianne spins these two spinners.

- a Draw a sample space diagram to show all the possible outcomes. How many are there?
- b Work out the probability of
 - i a 3
 - ii one number being half the other.
 - iii both numbers being at least 2.
- c Which is more likely: two even numbers or two odd numbers?

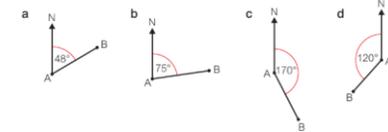


A map has scale 1 cm to 50 m.

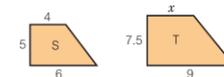
What distance on the map represents a real-life distance of

- a 100 m
- b 300 m
- c 1000 m
- d 2000 m
- e 1 km?

Write the bearing of B from A in each of these diagrams.



Reasoning Find the missing length x in these similar shapes.

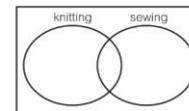


Copy and complete this table.

Equation	Gradient	y-intercept
a $y = 3x + 1$	3	(0, □)
b $y = 2x$		(0, 0)
c $y = x + 5$		(0, □)
d $y = 2x - 3$		(□, -3)

16 people go to a knitting group. 13 people go to a sewing group. 9 people go to a knitting and sewing group.

- a Copy the Venn diagram.
 - i Write the number for knitting and sewing in the section where the circles overlap.
 - ii How many people need to go in the rest of the knitting circle?
 - iii How many people need to go in the rest of the sewing circle?

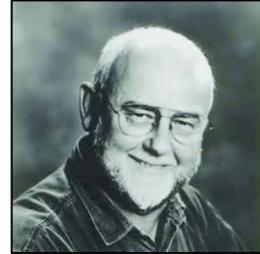


Subject: English

Term: 5 and 6

Topic: Stone Cold – End of Year Exam Revision

Robert E. Swindells is an English author of children's and young adult fiction. For the young-adult novel Stone Cold, which dealt with homelessness, he won the annual Carnegie Medal from the Library Association, recognizing the year's outstanding children's book by a British subject.



Plot:

Stone Cold is a realistic young-adult novel by Robert Swindells, published by Heinemann in 1993. Set on the streets of London, the first-person narrative switches between Link, a newly-homeless sixteen-year-old adjusting to his situation, and Shelter, an ex-army officer scorned after being dismissed from his job, supposedly on 'medical grounds'.

Key Characters:

Link: Our young protagonist. A 16 year old homeless boy.

Ginger: Link's close friend on the streets.

Shelter: A mysterious man who is trying to 'help' he homeless.

Gail: A female friend of Link and Ginger.

READING STRATEGIES

PREDICT Determine what you think will happen in the text. Use the title, text, and illustrations to help you.

VISUALIZE Create mental images of the settings, characters, and events in the text.

QUESTION Stop and ask yourself questions to see if the text makes sense. Reread the text if you need more information.

CONNECT Think about what you already know about the text. Find ways to relate the text to yourself, other texts, and the world around you.

IDENTIFY Determine the author's purpose. Find the important details, the main idea, and the themes of the text.

INFER Use clues in the text and your own knowledge to fill in the gaps and draw conclusions.

EVALUATE Think about the text as a whole and form opinions about what you read.

Key Vocabulary

1 st Person narrative	Social prejudice
Dual narrative	Realism
Colloquialisms	Campaign
Dramatic Irony	Protagonist
Foreshadowing	Antagonist

Key themes:

Homelessness, Fear, Domestic Issues, Perspectives, Family, Murder, Anxiety, Loneliness

Websites for issues associated with homelessness:

<http://www.homeless.org.uk/facts/homelessness-in-numbers/health-needs-audit-explore-data>

<https://centrepoint.org.uk/>

<http://www.shelter.org.uk/>

Persuasive writing practice:

http://www.bbc.co.uk/bitesize/ks3/english/writing/argue_persuade_advise/revision/1/

- P**ower of three Including lists of three items/reasons in your writing.
- E**motive language Words, phrases and imagery that arouse an emotional response.
- R**hetorical questions Questions to get your audience thinking – they don't require an answer.
- S**ay again Repeating the same word, phrase or idea more than once for emphasis.
- U**ndermine opposing views Criticise the opposing argument.
- A**ncedote Including little stories to illustrate a point.
- D**irect address Involve your audience by speaking to them directly using personal pronouns and shared experiences.
- E**xaggeration Being over-the-top to get a point across.

Subject: English

Term: 5 and 6

Topic: End of Year Exam Revision –
Section B

Writing Non-Fiction? Remember the GAPS

Genre - this could be a letter, article, formal planned speech etc. You should follow the conventions of the type of writing.

Audience - this could be a certain age group, readers of a particular publication, a councillor etc. Use a vocabulary and style that suits them.

Purpose - this is an argument so the purpose is to **influence** the readers views, to change minds.

Style - this might be chatty and informal, depending on the audience, or use vocabulary in a particular way.

Step 1: Developing your arguments

For	Against

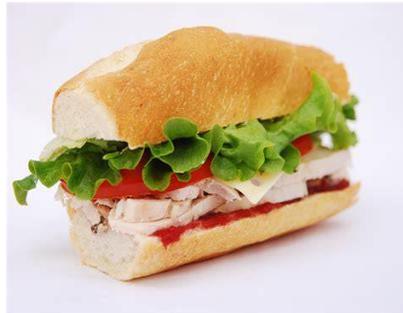
Always plan your points first

Step 2: What language should I use? DAFOREST?

Direct Address
Alliteration
Facts/Figures
Opinions
Repetition/Rhetorical Questions
Emotive Language/Exaggeration
Similes
Tri-colons/Triples

Step 3: Structure your argument (Make your sandwich)

- 1) Topic sentence/introduction
- 2) Argument 1 + Supporting Evidence
- 3) Argument 2+ Supporting Evidence
- 4) Counter-argument + Evidence
- 5) Conclusion (Summary of min argument)



Further Reading

How to write an argument/examples

<http://www.bbc.co.uk/schools/gcsebitesize/english/writing/writingtoarguerev1.shtml>

<https://www.thoughtco.com/write-an-argument-essay-1856986>

Lesson Topics

Animals in Captivity

<https://www.theguardian.com/science/lost-worlds/2014/aug/19/why-zoos-are-good>

Gun Laws in the USA

<http://www.debate.org/opinions/should-guns-be-banned-in-america>

Step 4: Connect your ideas

It could be argued...
 In addition...
 Furthermore...
 However....
 Alternatively...
 As a result....
 Lastly...
 Conclusively...

Topics Covered

Biology – Variation

- 10.1.1 Variation
- 10.1.2 Continuous and discontinuous
- 10.1.3 Adapting to change

Biology – Human Reproduction

- 10.2.1 Adolescence
- 10.2.2 Reproductive system
- 10.2.3 Fertilisation and implantation
- 10.2.4 Development of a Foetus
- 10.2.5 The Menstrual Cycle

Variation: 10.1.1 Variation

Different **species** have different characteristics, e.g. a fish has fins and gills, a dog has four legs and is covered in fur. Differences in characteristics are known as **variations**, e.g. blonde hair, brown hair and red hair.

These variations are either **inherited variations** or **environmental variations**.

Inherited Variations

These are characteristics we get from our parents, e.g. hair colour, eye colour and are a mixture of their parents' genes.



◀ Whether you have lobed or lobeless ears depends on your parents.

Environmental Variations

These are characteristics that can be affected by the environment around us, e.g. weight, education, dyed hair etc.

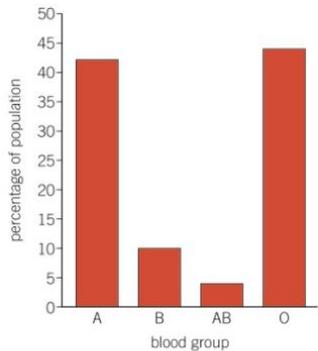


▶ These people have environmental variation.

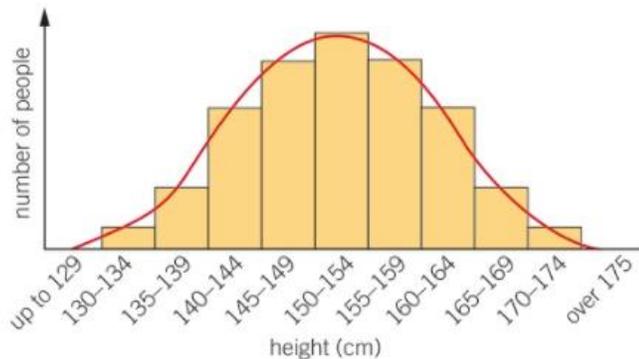
Variation: 10.1.2 Continuous and discontinuous

Discontinuous variations are variations that can only fall into certain categories. For example, sex is a discontinuous variation, so is blood group or eye colour.

Continuous variations are variations that can take any value within the range. For example, height is a continuous variation, so is body mass or hair length.



▶ Discontinuous data is always plotted on a bar chart.

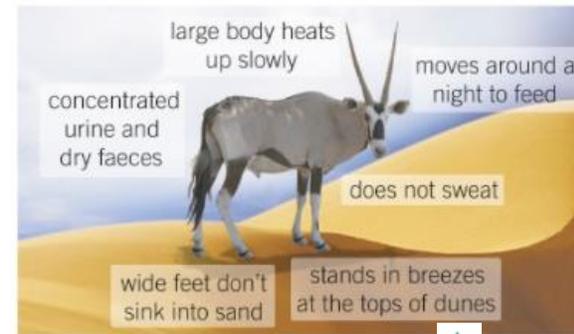


▶ Continuous data is always plotted on a histogram.

Variation: 10.1.3 Adapting to change

Adaptations are characteristics that enable an organism to be successful, and survive.

How can animals live in the desert?



▶ Adaptations of an oryx.

How can plants live in the desert?

- A waxy layer that covers the plant to stop water escaping
- Stems that can store water
- Widespread roots – to collect water from a large area
- Spines instead of leaves – this gives a smaller surface area to reduce water loss. They also prevent the plant being eaten.



▶ Cacti are very well adapted to surviving in a desert.

Topics Covered**Biology – Human Reproduction**

- 10.2.1 Adolescence
- 10.2.2 Reproductive system
- 10.2.3 Fertilisation and implantation
- 10.2.4 Development of a Foetus
- 10.2.5 The Menstrual Cycle

Human Reproduction: 10.2.1 Adolescence

Adolescence involves both emotional and physical changes. During adolescence your body goes through physical changes; this is called **puberty**. Puberty takes place between the ages of about 9 and 15. Generally girls start puberty before boys, but everyone is different.

What happens to a girl during puberty?

- Breasts develop
- Ovaries start to release egg cells
- Periods start
- Hips widen

What happens to a boy during puberty?

- Voice breaks
- Testicles and penis get bigger
- Testicles start to produce sperm
- Shoulders widen
- Hair grows on face and chest



▲ To reduce unwanted body odour, you should wash regularly and use deodorant.

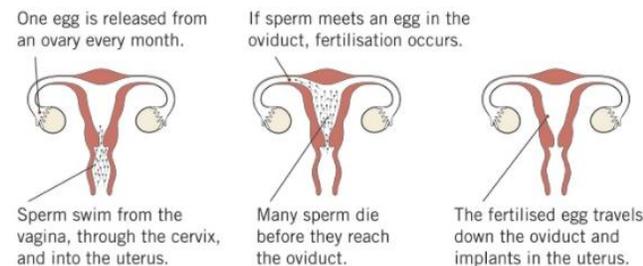
Human Reproduction : 10.2.2 Reproductive system

The function of the male **reproductive system** is to produce **sperm cells** and release them inside the female. The main parts of the male reproductive system are:

- Testicles (testes)
- Scrotum
- Semen
- Sperm ducts
- Urethra
- Penis

The function of the female **reproductive system** is to produce **egg cells** and then grow a baby for long enough that it can be born and survive. The main parts of the female reproductive system are:

- Ovaries
- Oviducts
- Uterus
- Cervix
- Vagina
- Urethra

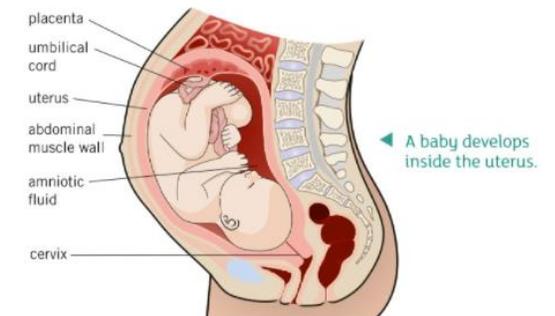
Human Reproduction: 10.2.3 Fertilisation and implantation**How do sperm cells reach the egg cell?**

▲ Sperm cells swim from the vagina to meet the egg cell.

Once the egg has been fertilised it divides several times to form a ball of cells called an **embryo**. The embryo attaches to the lining of the uterus and begins to develop into a baby. This is called **implantation**.

Human Reproduction: 10.2.4 Development of a Foetus

The time in the uterus from fertilisation until birth is known as **gestation**, in humans it takes 9 months.

Where does the baby grow?

Topics Covered**Biology – Human Reproduction**

10.2.1 Adolescence

10.2.2 Reproductive system

10.2.3 Fertilisation and implantation

10.2.4 Development of a Foetus

10.2.5 The Menstrual Cycle

Human Reproduction: 10.2.4 Development of a Foetus

There are 3 important structures in the uterus:

- **Placenta** – an organ where substances pass between the mother's blood and the foetus, blood.
- **Umbilical cord** – this connect the foetus to the placenta
- **Amniotic fluid** – this acts as a shock absorber, protecting the foetus from any bumps.

How does a baby develop?

Just a dot



1 week – cells beginning to specialise

3 mm long



4 weeks – spine and brain forming, heart beating

3 cm long



9 weeks – tiny movements, lips and cheeks sense touch, eyes and ears forming

7 cm long



12 weeks – fetus uses its muscles to kick, suck, swallow, and practise breathing

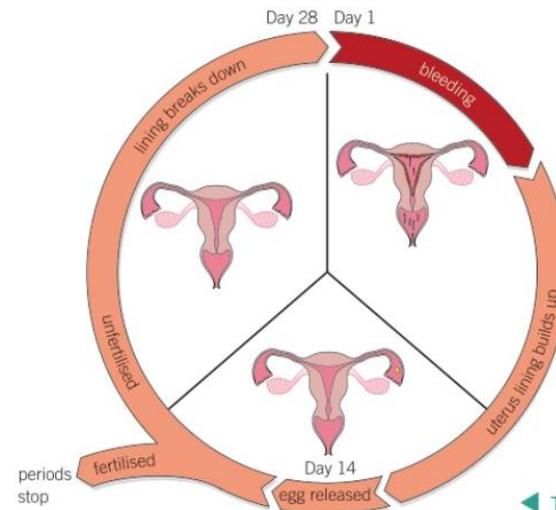
Human Reproduction: 10.2.5 The Menstrual Cycle

During puberty a girl will start her **periods**, also known as **menstruation**.

Around once a month, blood from the lining of the uterus leaves the body through the vagina. Each period normally last between 3 and 7 days.

The female reproductive system works in a sequence called the **menstrual cycle**. This lasts 28 days, though length and timing of each stage is different for each female. The cycle is controlled by **hormones**.

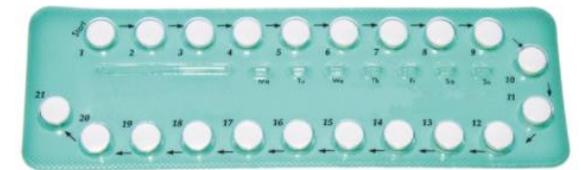
- Day 1 – blood from the uterus lining leaves the body through the vagina
- Day 5 – bleeding stops. The lining of the uterus begins to re-grow.
- Day 14 – an egg cell is released from one of the ovaries. This is called **ovulation**.



◀ The menstrual cycle.

What is contraception?

Contraception is a form of protection to prevent pregnancy. The two most common forms are **condoms** and the **contraceptive pill**.



▲ The contraceptive pill is very effective at preventing pregnancy.

Topics Covered

Physics – Energy Costs

- 3.1.1 Food and fuels
- 3.1.2 Energy resources
- 3.1.3 Energy and Power

Physics – Energy Transfer

- 3.2.1 Energy adds up
- 3.2.2 Energy dissipation

Energy Costs: 3.1.1 Food and fuels

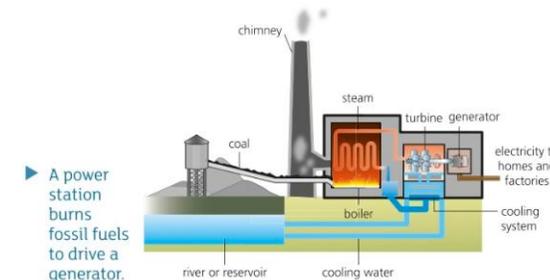
Different foods have different amounts of **energy**. Energy is measured in **joules (J)**. One joule is a very small amount of energy so we often use **kilojoules (KJ)**. 1 KJ = 1000J. The more active you are, the more energy you need.

Food	Energy (kJ) per 100 g
apple	200
banana	340
peas	250
chips	1000
cooked beef	1000
chocolate	1500

Energy Costs: 3.1.2 Energy resources

Coal, gas and oil are **energy resources**, these three are known as **fossil fuels**. These fuels are also known as **non-renewable** fuels and release carbon dioxide into the atmosphere.

We need to find **renewable** resources to make sure we can continue generating electricity without the resources running out or without damaging the environment.



Energy Costs: 3.1.3 Energy and power

Electrical appliances have a power rating in **watts (W)**. It tells us how much energy is transferred per second. To calculate power we can use this formula:

$$\text{Power (W)} = \frac{\text{Energy (J)}}{\text{Time (s)}}$$



Understanding this can also help us to calculate our electricity bills.

$$\text{Cost (p)} = \text{Power (kW)} \times \text{Time (hours)} \times \text{Price (per kWh)}$$

Energy Transfer: 3.2.1 Energy adds up

Energy cannot be created or destroyed only transferred. This is the **law of conservation of energy**.

- Most
 - Kids
 - Hate
 - Learning
 - G
 - C
 - S
 - E
 - Energy
 - Names
- Magnetic
 - Kinetic
 - Heat
 - Light
 - Gravitational
 - Chemical
 - Sound
 - Elastic
 - Electrical
 - Nuclear

Energy Transfer: 3.2.2 Energy dissipation

When you drive a car, you use various forms of different energy. Electrical to power the radio, chemical to fuel the car, sound to hear the radio and light to see where we are going. Not all of the fuel is used usefully, some is 'wasted.' This means the energy goes into the atmosphere, we say it has **dissipated**. We can calculate how efficient an appliance is through a calculation. The higher the efficiency the better an object is at using energy and not 'wasting' it.

$$\text{Efficiency (\%)} = \frac{\text{useful energy output} \times 100}{\text{energy input}}$$

Topics Covered**Physics – Sound**

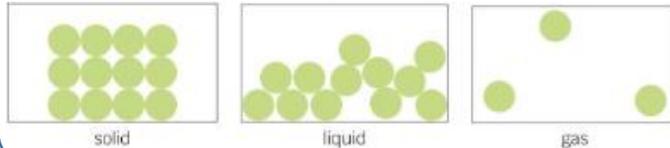
- 4.1.1 Sound waves and speed
- 4.1.2 Loudness and amplitude
- 4.1.3 Frequency and pitch
- 4.1.4 The ear and hearing

Physics – Light

- 4.2.1 Light
- 4.2.2 Reflection
- 4.2.3 Refraction
- 4.2.4 The eye and vision
- 4.2.5 Colour

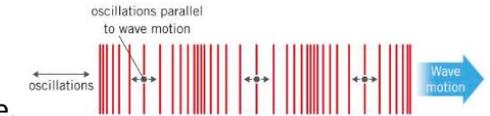
Sound: 4.1.1 Sound waves and speed

Sound is caused by **vibrations** of molecules. These molecules could be in solids, liquids and gases. We call the substance sound travels through a **medium**. If there are no molecules at all we call it a **vacuum**. Sound travels fastest in solids because the molecules are packed tightly together.

**Sound: 4.1.2 Loudness and amplitude**

Features of a wave:

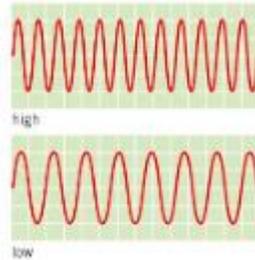
- **Amplitude** – maximum amount of vibration as measured from the middle of the wave, measured in metres.
- **Frequency** - number of waves produced in one second, measured in hertz
- **Wavelength** – distance between two corresponding points on a waves, measured in metres.
- **Peak and trough** – top and bottom of the wave



Longitudinal waves are parallel to the direction of the wave.

Sound: 4.1.3 Frequency and pitch

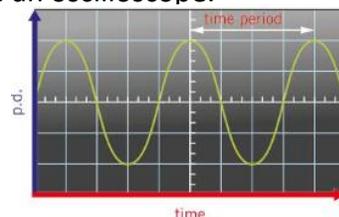
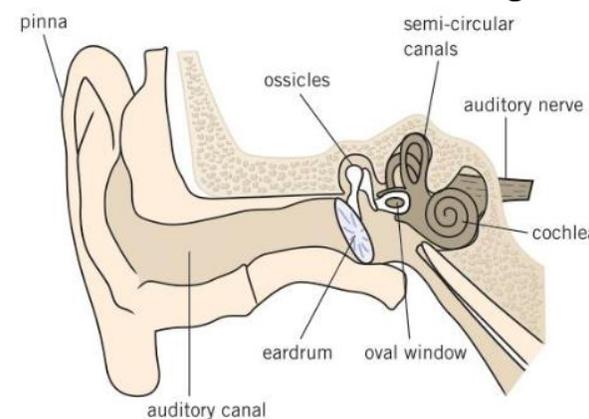
The **pitch** of a note depends on the frequency. High pitched sounds have a high frequency. Low pitched sounds have a low frequency. Frequency is measured in **hertz (Hz)** or **kilohertz (kHz)**.



Organisms can only hear a particular range of frequencies, called the **auditory range**.

To find frequency we can use an oscilloscope.

$$\text{Frequency} = 1/\text{time period}$$

**Sound: 4.1.4 The ear and hearing**

Hearing can be damaged by loud sounds or head injuries.

Age can also affect the hairs on the cochlea can be damaged and fail to grow back.

Light: 4.2.1 Light

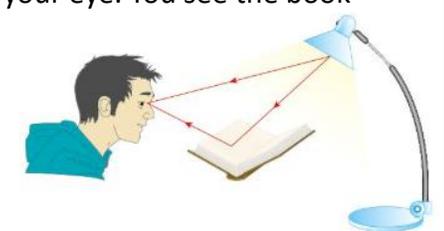
To see something a source of light, like a bulb, **emits** (gives out) light. This light **reflects** off the book and into your eye. You see the book when the light is **absorbed** in your eye.

Something that gives light out is **luminous**, most objects are **non-luminous**.

If something allows light to travel through it we call them **transparent**, e.g. glass.

Some materials like frosted glass are **translucent**. Light can travel through them but it is scattered so you cannot see clearly.

Materials that do not transmit light at all are called **opaque**.



Topics Covered**Physics – Sound**

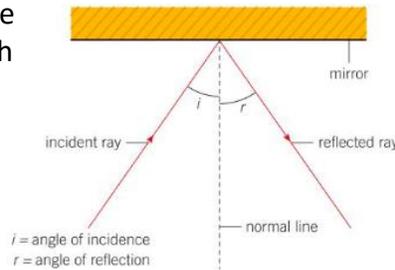
- 4.1.1 Sound waves and speed
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- 4.1.3 Frequency and pitch
- 4.1.4 The ear and hearing

Physics – Light

- 4.2.1 Light
- 4.2.2 Reflection
- 4.2.3 Refraction
- 4.2.4 The eye and vision
- 4.2.5 Colour

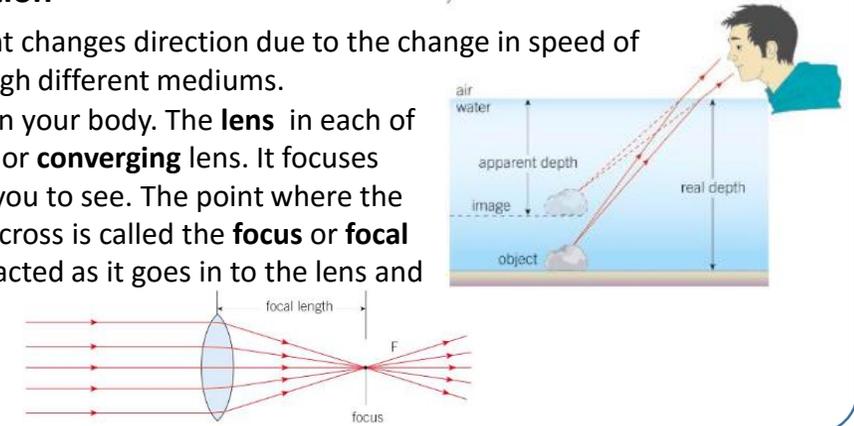
Light: 4.2.2 Reflection

When you look in a mirror, the **image** you see is a **virtual image**. A flat mirror is called a **plane mirror**. It is the same shape and size as you are. Every surface reflects some light, if the surface is rough the light is **scattered**. This means it bounces off the paper in all directions and the image is not clear or visible.

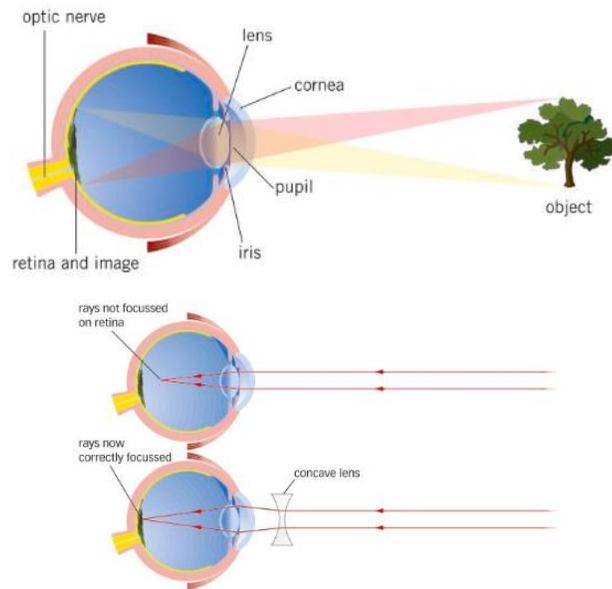
**Light: 4.2.3 Refraction**

Refraction is when light changes direction due to the change in speed of light as it travels through different mediums.

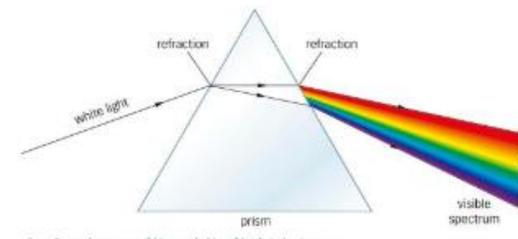
There are two lenses in your body. The **lens** in each of your eyes is a **convex** or **converging** lens. It focuses the light and enables you to see. The point where the rays in a ray diagrams cross is called the **focus** or **focal point**. The light is refracted as it goes in to the lens and as it comes back out.

**Light: 4.2.4 The eye and vision**

When you look at your friend, an image of your friend is formed on the **retina** of your eye. Light reflected from your friend goes through the **pupil** of your eye. The **iris** is a muscle that controls the size of the pupil. The **cornea** and the lens focus the light onto the retina. This forms an image. The image is **inverted** but your brain sorts it out so you see an image of your friend that is the right way up. Lenses can be used to help correct vision. E.g. Short sighted →

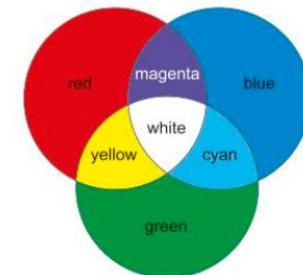
**Light: 4.2.5 Colour**

You can use a **prism** to split white light into a **spectrum**. This is called **dispersion**. The spectrum of light is **continuous**. There are no gaps.



You can make all the colours of light from just three colours: red, green and blue. These are the primary colours. When you mix two primary colours you get secondary colours.

Dispersion happens because different colours of light are refracted different amounts dependent on their frequency. Violet has the highest frequency and red light has the lowest frequency.



Topics Covered**Chemistry – Reactions, acids and alkalis**

- 6.1.1 Chemical reactions
- 6.1.2 Acids and Alkalis
- 6.1.3 Indicators and pH
- 6.1.4 Acid strength
- 6.1.5 Neutralisation
- 6.1.6 Making salts

Reactions: 6.1.1 Chemical reactions

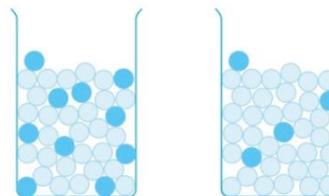
A chemical reaction is a change in which atoms are rearranged to make new substances. The atoms are joined together in one way before the reaction and in another after the reaction. This is why they aren't easily **reversible**.

How can you tell a reaction has happened? You would see sparks, smell, change in temperature or fizzing.

Reactions: 6.1.2 Acids and alkalis

Acids and alkalis are opposites. Acids are sour and are in things like lemons, alkalis are in things like soap and toothpaste. Both are normally safe but sometime are **corrosive**, they could burn your skin or eyes. Some are also **irritants**, they cause itching and swelling.

We can describe these solution as **concentrated** or **dilute**. The beaker on the right is more concentrated as it has more acid particles (dark blue) than on the left.

**Reactions: 6.1.3 Indicators and pH**

An **indicator** can tell us if a solution is acidic or alkaline. **Litmus** is a paper indicator. Red litmus turns blue on adding an alkali, and blue litmus paper turns red on adding acid.

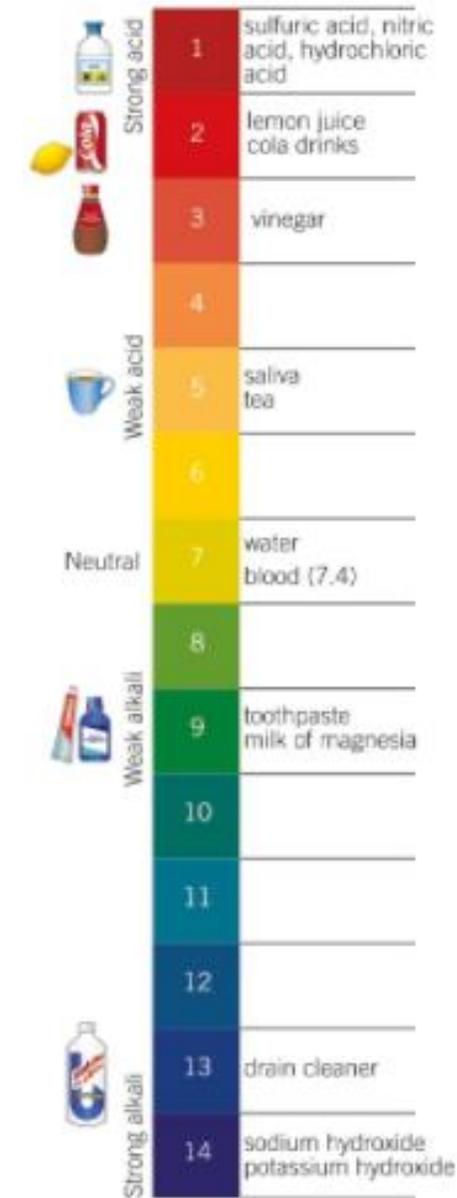
To tell how acidic or alkaline a solution is you can use **universal indicator**. It tells us where on the **pH scale** a solution would fall.

Something red is a pH 1 and is strongly acidic.

Something purple is a pH 14 and is strongly alkaline.

Something green is a pH 7 and is described as **neutral**.

Effect of universal indicator on different solutions →

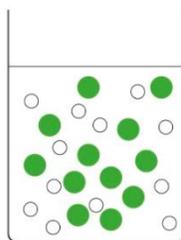


Topics Covered**Chemistry – Reactions, acids and alkalis**

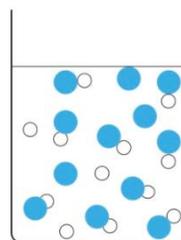
- 6.1.1 Chemical reactions
- 6.1.2 Acids and Alkalis
- 6.1.3 Indicators and pH
- 6.1.4 Acid strength
- 6.1.5 Neutralisation
- 6.1.6 Making salts

Reactions: 6.1.4 Acid Strength

A strong acid is formed because all the particles split up and move around by themselves when they are dissolved. In a weak acid they stay together.



Strong acid



Weak acid

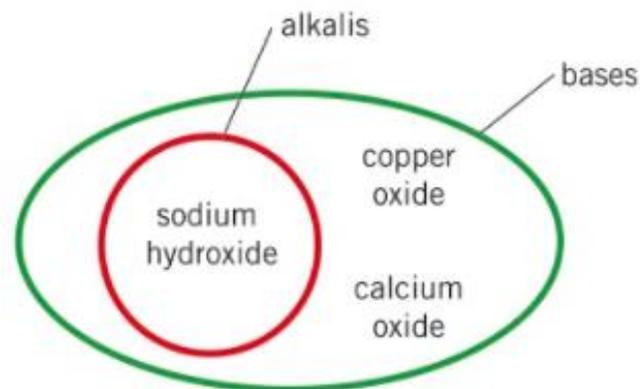
Strength and concentration are not the same thing.

- **Concentration** – is the amount of acid dissolved in water, the amount of particles in a given volume.
- **Strength** – is a measure of the number of acid particles that are split up.

Reactions: 6.1.5 Neutralisation

Neutralisation is a chemical reaction where an acidic substance is made to be closer to a pH 7.

A **base** is used to neutralise an acid:



Neutralisation can be used to make soil less acidic or alkaline so that crops and food could grow.

It can also be used to change the pH of lakes. This is so that animals and plants can live safely in them.

Reactions: 6.1.6 Making salts

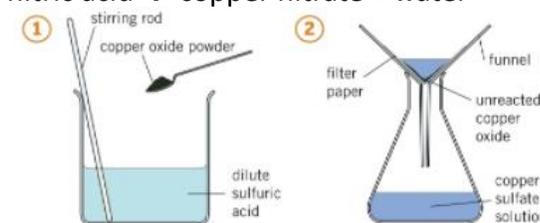
A **salt** is a substance that forms in the chemical reaction of an acid with a metal, or in a reaction of an acid with a compound that contains a metal.

Acids and metals

- Magnesium + hydrochloric acid → Magnesium chloride + hydrogen
- Zinc + sulphuric acid → Zinc sulphate + hydrogen

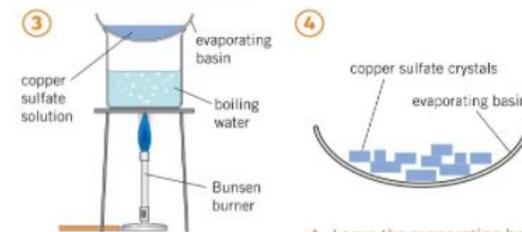
Acids and bases

- Sodium hydroxide + hydrochloric acid → sodium chloride + water
- Copper oxide + nitric acid → copper nitrate + water



▲ Add copper oxide powder (a base) to dilute sulfuric acid. Keep adding until some copper oxide is left over. All the acid has now reacted.

▲ Filter to remove the copper oxide that has not reacted.



▲ Heat the copper sulfate solution in an evaporating basin until most of the water evaporates.

▲ Leave the evaporating basin in a warm place. The rest of the water evaporates. Copper sulfate crystals remain.

So; hydrochloric acid makes chloride salts
sulphuric acid makes sulphate salts
nitric acid makes nitrate salts

Reactions: 6.2.1 More about elements

An **element** is one type of atom and all elements are listed on the **periodic table**. It shows their symbol, atomic weight and atomic mass.

The periodic table has two halves **metals** and **non-metals**.



Reactions: 6.2.2 Chemical reactions of metals and non-metals

Physical properties are things like malleable, shiny, brittle, dull, melting point, boiling point and electrical conductivity. They describe things you can observe and measure without changing the material.

Chemical properties describe chemical reactions.

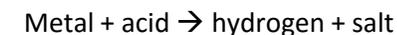
If a metal or non-metal reacts with oxygen the new substance is called an **oxide**.

Word equations are used to describe chemical reactions in a simple way.

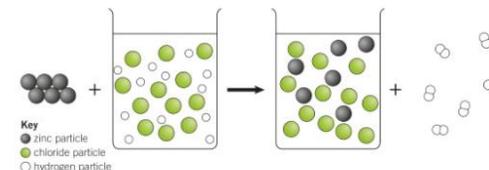
The starting substances are called **reactants** and substances made are called **products**.

Reactions: 6.2.3 Metals and acids

Whenever a metal reacts with an acid two products are made. These are always **hydrogen** and a **salt**.

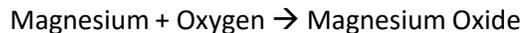


E.g.



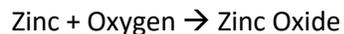
▲ The reaction of zinc with hydrochloric acid makes zinc chloride solution and hydrogen gas. Water particles in the solution are not shown. *Not to scale.*

Reactions: 6.2.4 Metals and Oxygen

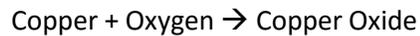


Magnesium reacts with oxygen even when you do not heat it. The reaction of any metal with oxygen, in which the substance combines with oxygen, is an **oxidation** reaction. When a metal reacts with oxygen the product is an oxide, but there are differences in the reactions of metals with oxygen.

Zinc powder into a Bunsen flame, you see bright-white sparks:



Copper doesn't burn in a Bunsen flame instead it forms black copper oxide:



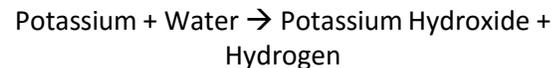
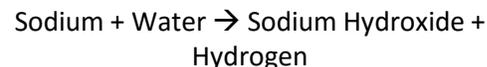
Whereas Gold does not react with oxygen at all so it stays shiny.

Reactions: 6.2.5 Metals and Water



Group 1 metals react vigorously with water, there is a flame when potassium reacts with water, and sodium and lithium react less vigorously.

But the pattern in equation and reaction are always the same:



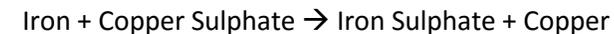
The amount a metal will react depends on its position in the **reactivity series**. The higher up in the series the more reactive a metal is:

reactive
 potassium
 sodium
 lithium
 calcium
 magnesium
 aluminium
 zinc
 iron
 lead
 copper
 silver
 gold
unreactive

Reactions: 6.2.6 Metal displacement reactions

When a metal and a metal compound are reacted together the more reactive metal can take the place of or **displace** a less reactive metal. This reaction is a **displacement reaction**.

For example, Iron is more reactive than copper:



The Iron is more reactive so can take the Sulphate from the copper.

Topics Covered**Chemistry – Universe**

- 7.2.1 The Night Sky
- 7.2.2 The Solar system
- 7.2.3 The Earth
- 7.2.4 The Moon and changing ideas

Chemistry – Earth Structure

- 7.1.1 The structure of the Earth
- 7.1.2 Sedimentary rocks
- 7.1.3 Igneous and metamorphic rocks
- 7.1.4 The rock cycle
- 7.1..5 Ceramics

Universe: 7.2.1 The Night Sky

The nearest object that you can see without a telescope are **artificial** (man made) **satellites**. These **orbit** the **Earth**. The **moon** is a **natural satellite**. You can see 5 planets with the naked eye: Mercury, Venus, Mars, Jupiter and Saturn. All of these orbit the **Sun**. Us and the other planets form our **Solar System**.

**Universe: 7.2.2 The Solar System**

Starting from the Sun and moving out, the Solar system contains 4 inner planets and 4 outer planets. They all orbit the sun due to the Sun's gravity.

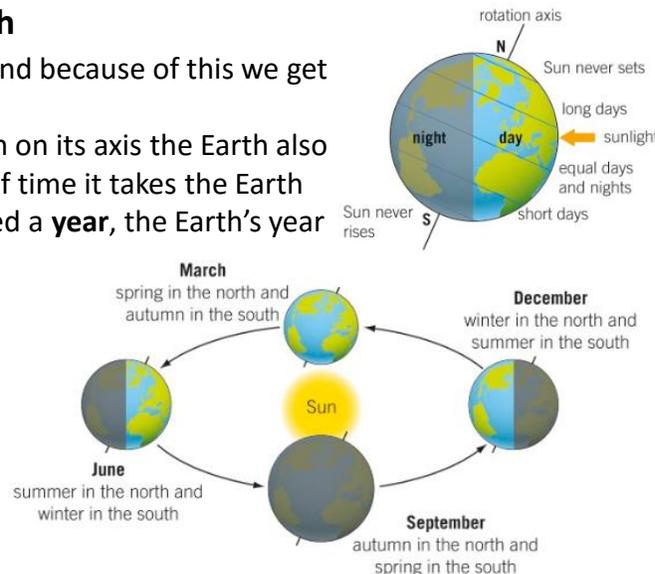
Planet	Diameter (km)	Distance from Sun (million km)	Distance from Sun	Temperature (°C)
Sun	1 391 000	–	–	–
Mercury	4 879	58	3.2 light minutes	–180 to 430
Venus	12 104	108	6.0 light minutes	465
Earth	12 756	150	8.3 light minutes	–89 to 58
Mars	6 787	228	12.7 light minutes	–82 to 0
Jupiter	142 800	778	43.3 light minutes	–150
Saturn	120 660	1427	1 light hour 19 light minutes	–170
Uranus	51 118	2871	2 light hours 39 light minutes	–200
Neptune	49 528	4498	4 light hours 10 light minutes	–210

Universe: 7.2.3 The Earth

The Earth spins on an **axis** and because of this we get day and night.

Not only does the Earth spin on its axis the Earth also **orbits** the Sun. The length of time it takes the Earth to go around the sun is called a **year**, the Earth's year is 365.2422 days.

Over the year the temperature changes and so do the height of the Sun in the sky, hence we have the **seasons**.

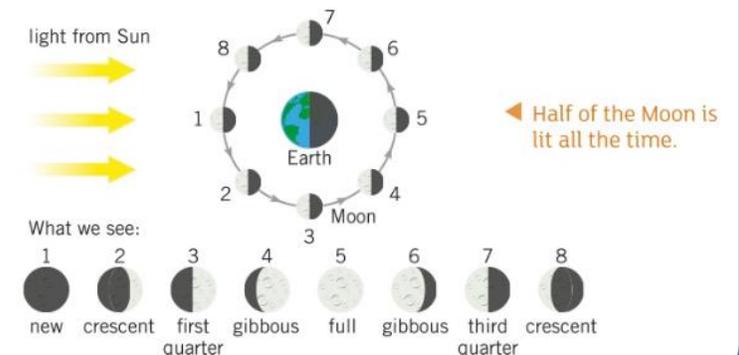
**Universe: 7.2.4 The Moon and changing ideas**

The Moon takes 27 days and 7 hours to orbit the Earth once.

Half of the Sun is always lit up by the Sun at all times. As the Moon moves around the Earth it looks different from the Earth. The changing shapes we see are called the **phases of the Moon**.

We can make models to show the structure of the Universe. Early models were **Geocentric**, this means people thought the Earth did not move and the sun moved around us.

The model we now use is a **heliocentric** model, where the Sun is in the centre of the planets and the planets orbit around it.



Topics Covered**Chemistry – Universe**

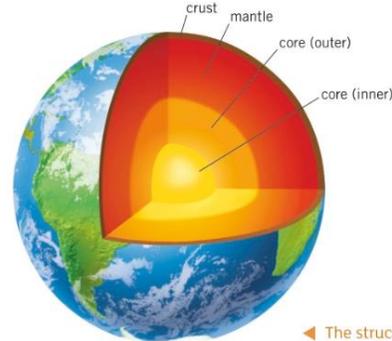
- 7.2.1 The Night Sky
- 7.2.2 The Solar system
- 7.2.3 The Earth
- 7.2.4 The Moon and changing ideas

Chemistry – Earth Structure

- 7.1.1 The structure of the Earth
- 7.1.2 Sedimentary rocks
- 7.1.3 Igneous and metamorphic rocks
- 7.1.4 The rock cycle
- 7.1.5 Ceramics

Universe: 7.1.1 The Structure of the Earth

The structure of the Earth is shown below.



◀ The structure of the Earth.

In the crust, there are **minerals**. These minerals are used for building or as energy resources.

Universe: 7.1.2 Sedimentary rocks

Sedimentary (sed-i-men-tary) rocks are rocks we find in the ground. They are normally **porous** rocks, which means they have gaps between the grains. Sedimentary rocks are rocks like limestone and sand stone.

Unfortunately, sedimentary rocks are easily weathered and can break down.

Sedimentary rocks are made from rocks being broken into small particles through erosion due to wind or water. Eventually the particles stop moving and settle in one place. This is called **deposition**.



▲ Sandstone is a strong building material.

Universe: 7.1.3 The Igneous and metamorphic rocks

Igneous (ig-knee-us) rocks are mainly made up of crystals, for example granite. They are durable and hard.

Most igneous rocks are formed from **magma**, magma is given out by volcanoes. AS the magma cools slowly and freezes the crystals form a rock.



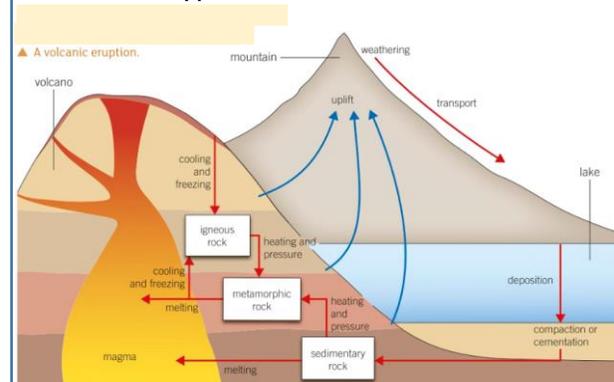
▲ Schist.

Metamorphic (met-a-mor-fic) rocks form over millions of years when heat, high pressure, or both change existing rock. Metamorphic rocks are things like marble or slate.

Metamorphic rocks can be used for kitchen surfaces and roof tiling.

**Universe: 7.1.4 The rock cycle**

The rock cycle is the process that changes one rock type into another.

**Universe: 7.1.5 Ceramics**

Pottery is an example of a **ceramic** material. Ceramic materials, are compounds; they include metal oxide, metal carbides and metal nitrides.

Ceramics are hard, brittle, stiff, solid at room temperature, strong, easy to break when stretched and electrical insulators.



▲ Ceramics are brittle.

▲ Toilets are made from pottery, which is a ceramic.

▲ Bricks are made by heating clay. This hardens the clay. A brick is a block of ceramic material.

Key Content 1 – ¿Qué casa prefieres? (*Which house do you prefer?*)



Discussing preferences of holiday homes

Giving opinions on houses and accommodation using the comparative

Using a range of adjectives with modifiers

Key Content 2 – ¿Qué se puede hacer...? (*What can one do...?*)

Using the modal verb 'poder' – to be able to

Saying what you can do in various places

Discussing holiday activities



Using the superlative

Key Content 3 – ¿Dónde está? (*Where is it?*)

Asking questions to gain directions

Giving and understanding directions to places in the town and attractions

Using the imperative to give instructions



Key Content 4 – En el campamento de verano (*In the summer camp*)

Discussing holiday plans



Understand plans for future holidays and descriptions of past holidays – 3 tenses together

Using opinión phrases with infinitives

Activities (*you may complete some or all of these...*)

- Listening to songs
- Giving directions in a game or role play
- Describing a day in a summer camp
- Creating an advert
- Selling houses/summer camp experiences

Websites and further reading:

Search on www.quizlet.com for 'Viva 2, M5' or 'vacaciones'

Use the third module in your textbook and on www.pearsonactivelearn.com

El verano - The summer!



Key Vocabulary (See Textbook pages 116 & 117) *For revision you need to be able to understand all the texts on the double pages*

Practise vocabulary at home and/or with a friend at school

Tick off the modules above as you complete them, and make sure you can still do these topics for the End of Unit test. Look over your learning and complete anything missing at home each week:

Look, cover, write, check...

You need: **Food & Drink** **Meals** **Adjectives for food** **Transactional Language - restaurants** **Formal & Informal address** **The verb TO GO 'IR' (present)** **Compound future** **Sequencers & Times**

High Frequency Words: *Para (for), Desayuno (breakfast), Comida/Almuerzo (Lunch), Cena (dinner), Como (I eat), Tomo (I have – food/drink), Bebo (I drink), Voy a + inf. (I am going to...)*

¡PALABRAS!



FOCUS ON THIS SIDE FOR PRODUCTION

¿Te gustaría ir al cine? Would you like to go to the cinema?

¿Te gustaría ir...?	Would you like to go...?	al parque	to the park
a la bolera	to the bowling alley	a la pista de hielo	to the ice rink
a la cafetería	to the café	al polideportivo	to the sports centre
al centro comercial	to the shopping centre	¿Te gustaría venir a mi casa?	Would you like to come to my house?
al museo	to the museum		

Reacciones Reactions

De acuerdo.	All right.	¡Ni hablar!	No way!
Vale.	OK.	¡Ni en sueños!	Not a chance!/Not in your wildest dreams!
Muy bien.	Very good.	No tengo ganas.	I don't feel like (it).
¡Genial!	Great!	¡Qué aburrido!	How boring!
Sí, me gustaría mucho.	Yes, I'd like that very much.		

¿Dónde quedamos? Where do we meet up?

al lado de la bolera	next to the bowling alley	enfrente del polideportivo	opposite the sports centre
delante de la cafetería	in front of the café	en tu casa	at your house
detrás del centro comercial	behind the shopping centre		

¿A qué hora? At what time?

a las...	at...	seis y media	half past six
seis	six o'clock	siete menos cuarto	quarter to seven
seis y cuarto	quarter past six	siete menos diez	ten to seven

Lo siento, no puedo I'm sorry, I can't

¿Quieres salir?	Do you want to go out?	pasear al perro	walk the dog
Tengo que...	I have to...	salir con mis padres	go out with my parents
cuidar a mi hermano	look after my brother	No quiero.	I don't want to.
hacer los deberes	do my homework	No tengo dinero.	I don't have any money.
lavarme el pelo	wash my hair	No puede salir.	He/She can't go out.
ordenar mi dormitorio	tidy my room		

¿Cómo te preparas? How do you get ready?

¿Cómo te preparas cuando sales de fiesta?	How do you get ready when you go to a party?	Me visto.	I get dressed.
Me baño.	I have a bath.	Me maquillo.	I put on make-up.
Me ducho.	I have a shower.	Me peino.	I comb my hair.
Me lavo la cara.	I wash my face.	Me aliso el pelo.	I straighten my hair.
Me lavo los dientes.	I brush my teeth.	Me pongo gomina.	I put gel on my hair.

FOCUS ON THIS SIDE FOR RECOGNITION



¿Qué vas a llevar? What are you going to wear?

¿Qué llevas normalmente los fines de semana?	What do you normally wear at weekends?	una gorra	a cap
Normalmente los fines de semana llevo...	At weekends I normally wear...	unos pantalones	some trousers
una camisa	a shirt	unos vaqueros	some jeans
una camiseta	a T-shirt	unas botas	some boots
un jersey	a jumper	unos zapatos	some shoes
una sudadera	a sweatshirt	unas zapatillas de deporte	some trainers
una falda	a skirt	¿Vas a salir esta noche?	Are you going to go out tonight?
un vestido	a dress	Voy a ir al/a la...	I am going to go to the...
		Voy a llevar...	I'm going to wear...



Los colores Colours

amarillo/a	yellow	naranja	orange
azul	blue	negro/a	black
blanco/a	white	rojo/a	red
gris	grey	rosa	pink
marrón	brown	verde	green
morado/a	purple	de muchos colores	multi-coloured



¡No es justo! It's not fair!

Estoy de acuerdo...	I agree...	Eres demasiado joven.	You're too young.
con tu madre/padre	with your mother/father	En mi opinión, tienes razón.	In my opinion, you're right.
con tus padres	with your parents	¿Tú qué opinas?	What do you think?
contigo	with you		



Palabras muy frecuentes High-frequency words

al/a la	to the	este/esta/estos/estas	this/these
del/de la	of the	por eso	for this reason
demasiado/a	too (much)	por supuesto	of course
demasiados/as	too many	¡Lo pasé fenomenal!	I had a fantastic time!

Estrategia 4

Finding the right word

Be careful not to choose the wrong Spanish word when you use a dictionary.

Make sure you:

- 1 Look up the correct spelling of the English word (e.g. meet/meat, pair/pear).
- 2 Look for dictionary abbreviations (vt, nm, nf, etc. - see page B6). If it's a noun you want, don't choose a verb (e.g. a watch/to watch).
- 3 Look at any example sentences given.
- 4 Double-check the Spanish word in the Spanish-English half of the dictionary.

Find the correct Spanish translations of these items of clothing in a dictionary:

- tie
- cap
- trainers
- suit
- dress

¡PALABRAS!



¿Qué casa prefieres? Which house do you prefer?

Esta casa es...	This house is...	moderno/a	modern
Este piso es...	This flat is...	pequeño/a	small
amplio/a	spacious	La casa/El piso está...	The house/The flat is...
antiguo/a	old	cerca de la playa	near the beach
bonito/a	nice	en el centro	in the centre
cómodo/a	comfortable	en la montaña	in the mountains
enorme	enormous	más... que	more... than
feo/a	ugly	menos... que	less... than
grande	big	Prefiero...	I prefer...
maravilloso/a	marvellous	porque	because



La casa The house

Tiene...	It has...	una chimenea	a fireplace
una cocina	a kitchen	un jacuzzi	a hot tub
un comedor	a dining room	un jardín	a garden
un cuarto de baño	a bathroom	una piscina	a swimming pool
un dormitorio	a bedroom	una terraza	a balcony, a terrace
un salón	a living room	vistas al mar	views of the sea



¿Qué se puede hacer en...? What can you do in...?

Se puede(n)...	You can...	ir de paseo en bicicleta	go on a bike ride
hacer senderismo	go hiking	ir a la playa	go to the beach
hacer actividades náuticas	do water sports	ir al restaurante	go to the restaurant
hacer artes marciales	do martial arts	jugar al golf	play golf
ir a la bolera	go bowling	jugar al voleibol	play volleyball
ir al cine	go to the cinema	jugar al tenis	play tennis
ir de compras	go shopping	ver la catedral	see the cathedral
		visitar un castillo	visit a castle



¿Dónde está...? Where is...?

la catedral	the cathedral	Dobla a la izquierda.	Turn left.
la estación de tren	the railway station	Toma la primera a la derecha.	Take the first on the right.
el minigolf	the minigolf	Toma la segunda a la izquierda.	Take the second on the left.
el parque de atracciones	the theme park	Cruza la plaza.	Cross the square.
el parque acuático	the water park	Está a la derecha.	It's on the right.
la pista de karting	the go-kart track	Está a la izquierda.	It's on the left.
el zoo	the zoo		
Sigue todo recto.	Keep straight on.		
Dobla a la derecha.	Turn right.		



Opiniones

Me gusta...
Me encanta...

Opinions

I like...
I love...

Me gustaría mucho...
Me encantaría...

I would really like...
I would love...



Expresiones de tiempo Time expressions

ayer	yesterday	hoy	today
el fin de semana pasado	last weekend	mañana	tomorrow
el verano pasado	last summer	este fin de semana	this weekend
el año pasado	last year	el verano que viene	next summer
hace dos años	two years ago	el año que viene	next year



Palabras muy frecuentes High-frequency words

bastante	quite	está	it is
donde	where	muy	very
esta/este	this	también	also, too

Estrategia 5

Building your vocabulary

Try to collect words so that you can use them again. Here are some ideas:

- Note down words in different categories:
 - verbs
 - adjectives
 - nouns
 - cognates
- Note down words under different topic headings:
 - houses
 - holidays
 - places and directions
 - time expressions
 - opinions
- Note down words as pairs of opposites:
 - moderno/a - antiguo/a
- If you find a word difficult to remember, write out a sentence using it:
 - grande** → big
 - Mi castillo es muy **grande** y tiene muchos dormitorios.

Subject: French- 8D

Term: 5/6

Topic: Studio 2; Module 2 – Paris!



WOOTTON PARK

'Ipsum quod faciendum est diutius durat'

Key Content 1 – Une visite a Paris (A visit to Paris)

Describing what there is in Paris

Giving preferences and saying hat you visited

Using sequencers

Describing a day out



Using the past tense

Key Content 2 – C'était comment? (What was it like?)

Saying what you did and what it was like

Narrating and describing



Using past (perfect) and present tense

Forming the past (perfect) tense with **avoir** and **être**

Key Content 3 – Qu'est-ce que tu peux faire? (What can you do?)

Asking for tourist information

Using transactional language



Asking questions and understanding responses

Key Content 4 –Comment était le voyage? (What was the trip like?)

Describing a journey

Modes of transport



Giving opinions and description in past



Key Content 5 – Qui a vole la Joconde?(Who stole the Mona Lisa?)

Asking questions

Cultural knowledge



Describing, sequencing and narrating events

Activities (you may complete some or all of these...)

Create a city map/plan/tourist leaflet

Writing a postcard home

Creating dialogues in a toruist office/giving tourist advice

Taking part in an 'investigation' of who stole Mona Lisa

Websites and further reading:

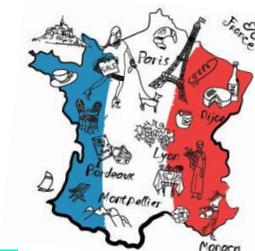
Search on www.quizlet.com for 'Studio 2, M2'

Use the third module in your textbook and on

www.pearsonactivelearn.com

Use www.French-games.net to practise and play language games

Use www.languagesonline.org and go to the French Grammar section to practise the present tense of ER (and other) verbs including AVOIR/ ETRE/ FAIRE



Paris!

Key Vocabulary (See Textbook pages 46 & 47) For revision you need to be able to understand all the texts on the double pages

Practise vocabulary at home and/or with a friend at school

Tick off the points above as you complete them, and make sure you can still do these topics for the Assessment Point. Look over your learning and complete anything missing at home each week:

Look, cover, write, check...

You need: **Free time activities** **Question words** **Paris monuments** **Froming the past (perfect) tense** **Transport** **Tourist questions** **The verbs ETRE and AVOIR**

High Frequency Words: *Il y a...* (There is/are), *Il n'y a pas* (There is not...), *J'ai visté* (I visited), *J'ai vu* (I saw), *C'était* (It was), *J'ai voyage* (I travelled), *Comment* (How), *Où* (Where)



À Paris • In Paris

J'ai gagné un concours. *I won a competition.*
 J'ai passé une semaine à Paris. *I spent a week in Paris.*
 J'ai visité la tour Eiffel. *I visited the Eiffel Tower.*
 J'ai mangé au restaurant. *I ate in a restaurant.*
 J'ai admiré la Pyramide du Louvre. *I admired the Louvre Pyramid.*
 J'ai regardé le feu d'artifice. *I watched the fireworks.*
 J'ai acheté des souvenirs. *I bought some souvenirs.*
 J'ai rencontré un beau garçon/une jolie fille. *I met a good-looking boy/a pretty girl.*
 J'ai envoyé des cartes postales. *I sent some postcards.*
 J'ai pris des photos. *I took some photos.*
 J'ai vu la Joconde. *I saw the Mona Lisa.*
 J'ai attendu le bus. *I waited for the bus.*
 J'ai très bien dormi. *I slept very well.*
 Je n'ai pas visité Notre-Dame. *I didn't visit Notre-Dame.*
 On a fait les magasins. *We went shopping.*
 On a bu un coca. *We drank a cola.*
 On a fait un tour de la ville en segway. *We did a tour of the town by segway.*
 On a fait une balade en bateau-mouche. *We went on a boat trip.*

Quand? • When?

aujourd'hui *today*
 hier *yesterday*
 avant-hier *the day before yesterday*
 (mardi) dernier *last (Tuesday)*



C'était comment? • What was it like?

C'était ... *It was ...*
 J'ai trouvé ça ... *I found it ...*
 bien *good*
 bizarre *weird*
 cool *cool*
 cher *expensive*
 effrayant *scary*
 ennuyeux *boring*
 fabuleux *wonderful/fantastic*
 génial *great*
 horrible *horrible/terrible*
 intéressant *interesting*
 marrant *funny/a laugh*
 nul *rubbish*
 Ce n'était pas mal. *It wasn't bad.*



Des informations touristiques • Tourist information

horaires d'ouverture *opening times*
 ouvert du (mardi) au (dimanche) *open from (Tuesday) to (Sunday)*
 de 10h00 à 17h00 *from 10 a.m. to 5 p.m.*
 fermé (le lundi et les jours fériés) *closed (on Mondays and bank holidays)*
 tarifs d'entrée *admission prices*
 plein tarif *full price*
 tarif jeune *price for young people*
 gratuit (pour les enfants jusqu'à 13 ans) *free (for children up to 13 years old)*
 visites guidées *guided tours*
 (pas de) toilettes *(no) toilets*

Tu as voyagé comment? • How did you travel?

en avion *by plane*
 en bus *by bus*
 en car *by coach*
 en métro *by underground*
 en train *by train*
 en voiture *by car*
 à vélo *by bicycle*
 à pied *on foot*



Un voyage • A journey

Je suis allé(e) (à Paris). *I went (to Paris).*
 Je suis parti(e)/arrivé(e) à (dix heures). *I left/arrived at (ten o'clock).*
 Le train est parti/arrivé à (huit heures). *The train left/arrived at (eight o'clock).*
 Je suis sorti(e). *I went out.*
 Je suis resté(e) (chez moi). *I stayed (at home).*
 Je suis rentré(e) (chez moi). *I went/got home.*
 Je suis monté(e). *I went up.*



Qui a volé la Joconde? • Who stole the Mona Lisa?

Tu as visité le Louvre quand? *When did you visit the Louvre?*
 Tu es allé(e) avec qui? *Who did you go with?*
 Tu es allé(e) comment? *How did you get there?*
 Tu es arrivé(e)/parti(e) à quelle heure? *At what time did you arrive/leave?*
 Après, tu es allé(e) où? *Afterwards, where did you go?*
 Tu es resté(e) combien de temps? *How long did you stay?*
 Qu'est-ce que tu as fait? *What did you do?*
 Est-ce que tu as volé la Joconde? *Did you steal the Mona Lisa?*



Les mots essentiels • High-frequency words

à quelle heure? *at what time?*
 quand? *when?*
 combien? *how much/how many?*
 combien de temps? *how long?*
 comment? *how?*
 où? *where?*
 qui? *who?*
 avec qui? *who with?*
 alors *so, therefore*
 donc *so, therefore*
 car *because*
 parce que *because*
 dernier/dernière *last*
 beaucoup (de) *a lot (of)*
 d'abord *first of all*
 ensuite *next*
 après *afterwards*
 finalement *finally*



Regular -er, -ir, -re verbs

Infinitive	Present tense				Perfect tense
regarder to watch	je tu il/elle/on	regarde regardes regarde	nous vous ils/elles	regardons regardez regardent	j' ai regardé
finir to finish	je tu il/elle/on	finis finis finit	nous vous ils/elles	finissons finissez finissent	j' ai fini
vendre to sell	je tu il/elle/on	vends vends vend	nous vous ils/elles	vendons vendez vendent	j' ai vendu

Key irregular verbs

Infinitive	Present tense				Perfect tense
aller to go	je tu il/elle/on	vais vas va	nous vous ils/elles	allons allez vont	je suis allé(e)
avoir to have	j' tu il/elle/on	ai as a	nous vous ils/elles	avons avez ont	j' ai eu
boire to drink	je tu il/elle/on	bois bois boit	nous vous ils/elles	buvons buvez boivent	j' ai bu
être to be	je tu il/elle/on	suis es est	nous vous ils/elles	sommes êtes sont	j' ai été
faire to do/make	je tu il/elle/on	fais fais fait	nous vous ils/elles	faisons faites font	j' ai fait



Year 8 – Key Vocab
 – Term 5&6

Key question: What is the United Kingdom?
The United Kingdom is made up of four geographic and historical parts:

- England
- Scotland
- Wales
- Northern Ireland

The capital is London, which is among the world's leading commercial, financial, and cultural centers. The UK is governed by the Prime Minister, Theresa May and Queen Elizabeth II is the head of state. It has a population of approximately **66,573,504** people.



Key question: What is the Physical Environment of the UK like?

Natural Features:

- Rivers
- Mountains
- Coastlines
- Hills
- Valleys
- Forests
- Seas



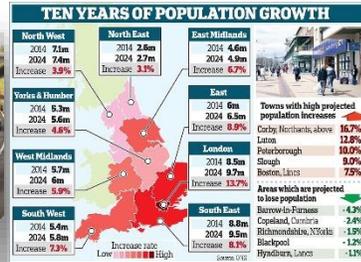
Weather and climate:

- Wind direction
- Rainfall / precipitation
- Location

Key question : What is the Human Environment of the UK like?

Human Features

- Population
- Cities/Urban environments
- Tourism
- Migration
- Congestion
- Pollution



The population of the UK is growing What does this mean for the future?

Websites and further reading:

- <http://www.geographyinthenews.org.uk/issues/issue-25/the-united-kingdom/ks3/>
- <https://www.bbc.com/education/subjects/zrw76sg>
- http://www.bbc.co.uk/bitesize/ks3/geography/interdependence/population_migration/revision/3/
- <https://www.bbc.com/education/guides/zjk7hyc/revision>



Key vocabulary to define and learn:

United Kingdom

London

Government Population

Politics

Human Landscape

Rural

Urban

Physical Landscape

Migration

Brexit

Relief

Weather

Climate

Tourism

Key question 1: Changes over time

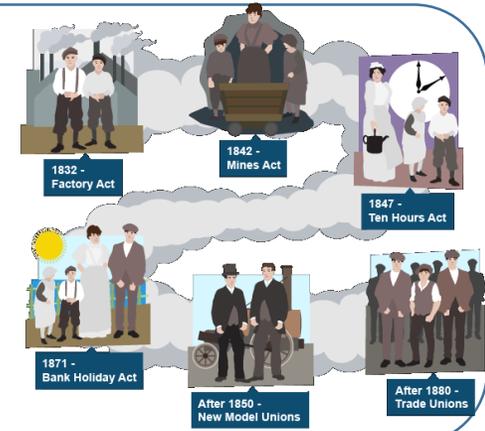
This period in time is represented by massive social and cultural changes. People started moving away from rural life and turned to life in the big cities. New machinery changed manufacturing processes and many people were scared they would lose their jobs. However many new jobs were created. New methods of transport meant people and goods could travel further than ever before. The invention of the steam engine changed England forever.

**Key question 3: Life in the Industrial Period**

Class mattered more than earnings and a new 'middle class' appeared of newly rich and well off people. Housing conditions worsened for the poor and diseases such as Cholera became epidemics. Women began to campaign for more of a voice in parliament and the Suffragettes were founded. WWI and the threat of a mechanised war drew closer and the impact of an industrial revolution on the loss of life was immense. Life was changed forever in these years and we are still feeling the impact today.

**Key question 2: Work in the Industrial Period**

Many new types of jobs appeared during the industrial revolution. Not all of them were pleasant! Many young children were expected to work long hours in the noisy and dangerous factories. Children as young as 5 were sent to work in the mines. Jobs for adults could be just as bad, a Night-Soils man collected human waste and a Resurrectionist dug up dead bodies for medical students. However, many changes were made to working conditions towards the end of the period. Work laws were passed to make sure children went to school and bank holidays were introduced.

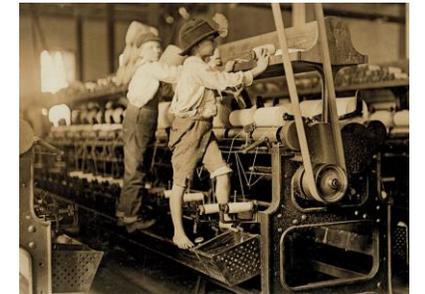
**Websites and further reading:**

<https://www.bbc.com/education/guides/z3x39j6/revision>

<https://www.history.com/topics/industrial-revolution>

<https://www.bl.uk/georgian-britain/articles/the-industrial-revolution>

<https://www.bbc.co.uk/education/topics/zjd82hv>



Key vocabulary to define and learn:

Cholera Middle Class Revolution Invention Suffragettes Golden Age Capitalism
Technology Industrialisation Imperialism Education Population Rural Urban

Key concept 1: American people and the Boom**1. The Boom**

- Mass production – Ford
- Benefits of the Boom
- Inequalities in Wealth

2. Social and Cultural Developments

- Entertainment
- Women and flapper culture

3. Divided Society

- Organised Crime and Prohibition
- Causes of racial tension
- Immigration
- KKK
- Red Scare

**Key concept 3: Post-War America****1. Post-War American society and economy**

- Consumerism and causes of prosperity
- The American Dream
- McCarthyism
- Rock and Roll and Television

2. Racial Tension and developments in the Civil Rights campaigns in 1950s and 60s

- Segregation laws
- Martin Luther King Jr (Peaceful Protest)
- Malcom X (Black Power Movement)
- Civil Rights Acts 1964/68

3. America and the 'Great Society'

- Social policy (Kennedy and Johnson)
- Women's Movement (fight for equality)

**Key concept 2: Bust – Americans' experience of the Depression and New Deal****1. American society during the Depression**

- Unemployment for farmers and businessmen
- Hoover's responses and unpopularity
- Roosevelt's election

2. The effectiveness of the New Deal on different groups in society

- Successes/Limitations of the New Deal
- Opposition from supreme court
- Republicans and Radicals
- Roosevelt's contribution as president
- Popular culture

3. Impact of the Second World War

- Economic recovery
- Social Development (African Americans and Women)

**Websites and further reading:**

http://www.bbc.co.uk/schools/gcsebitesize/history/tch_wjec/usa19101929/2ris_eandfall1.shtml

<https://www.bbc.com/bitesize/topics/zq2mn39/resources/1>

AQA (1-9) Revision Guide America Opportunity and Inequality

AQA (1-9) Student book America Opportunity and Inequality

<https://www.history.com/topics/great-depression/new-deal>

**Key vocabulary to define and learn:**

Boom Bust Mass Production Social Development Flapper Organised Crime Prohibition Immigration Red Scare Ku Klux Klan Communism Prosperity McCarthyism Segregation American Dream Civil Rights Depression Republican Democrat Economy Okies Hobo Consumerism Black Power Bible Belt Supreme Court Congress

Key topic 5: Access databases

5.1 Introduction to databases

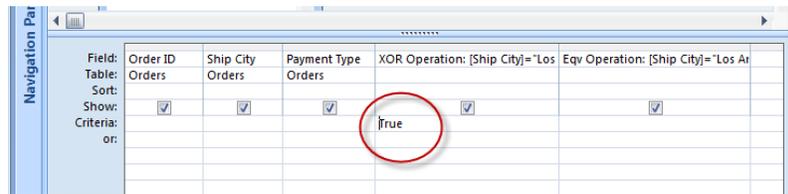
- 5.1.1 Using Microsoft Access
- 5.1.2 Database uses, advantages and disadvantages over other data storage
- 5.1.3 Explaining the difference between data, information and knowledge

5.2 Making a database

- 5.2.1 Storing data in tables
- 5.2.2 Creating a database, data types and primary keys

5.3 Using features of a database

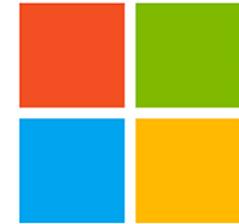
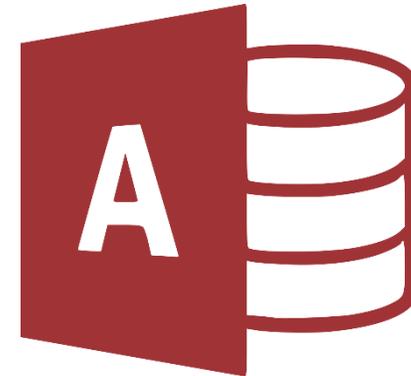
- 5.3.1 Searching a database using Boolean operators (and, or, not) and arithmetic operators (=, <, <=, >, >= <>) Using these skills to search a database to aid police with an investigation



- 5.3.2 Using validation rules
- 5.3.3 Running queries, introduction to SQL.
- 5.3.4 Using forms and reports to present data for specific business problems.

Key vocabulary and acronyms to define and learn:

Ascending, descending, database, data type, field, field name, form, primary key, query, record, report, sort, table



Microsoft



Websites and further reading:

Microsoft Access for beginners: <https://www.youtube.com/watch?v=LDUr3Fse908>
BBC bitesize database revision: <https://www.bbc.com/bitesize/topics/zp8jmp3>

Key topic 6: Computer theory

6.1 Online safety

- 6.1.1 Malware, phishing and cyber security.
- 6.1.2 Understanding how to stay safe from malware, phishing and cyber attacks.
- 6.1.3 Understanding how technology can be used to bully and harass
- 6.1.4 Understanding how to stay safe from bullying and harassment

6.2 Computers and the law

- 6.2.1 Computer Misuse Act
- 6.2.2 Copyright, Designs and Patents Act
- 6.2.3 GDPR / Data Protection Act

6.3 The impact of ICT on society

- 6.3.1 ICT in the workplace
- 6.3.2 Working from home
- 6.3.3 Shopping online
- 6.3.4 Collecting information about customers
- 6.3.5 New ways to access entertainment
- 6.3.6 Employment and the environment in the IT industry
- 6.3.7 Health and safety: getting comfortable and avoiding hazards and IT safety in the workplace.



Key vocabulary and acronyms to define and learn:

For a full list of glossary terms please visit:

<https://www.bbc.com/bitesize/guides/z9p9kqt/revision/1>

Websites and further reading:

BBC bitesize computers and the law revision: <https://www.bbc.com/bitesize/topics/z67ncdm>

BBC bitesize online safety: <https://www.bbc.com/bitesize/guides/z9p9kqt/revision/1>

BBC bitesize impact of IT: <https://www.bbc.com/bitesize/guides/zbxbkqt/revision/1>

Key question 1: What is Art Photography?

A photograph captures a moment in time as it is. A painting or drawing is, no matter how realistic, an artists view of what they see.

So can a photograph ever be Art? Is there a difference between everyday picture taking and photography that is considered artistic?

Discuss the similarities differences in these photographs in terms of composition, lighting, colour, texture, subject matter, message or meaning and function?

Is it these considerations which make one Art and one a Photograph?



Key question 2: How to use a DSLR?

You will be using DSLR's in your photography lessons. To familiarize yourself with some of the functions and their uses, match the terms with their control and the effect they are responsible for.



Aperture ISO



Focus
Shutter Speed



Key question 3: Photoshop Manipulation

This photograph is from the collection entitled "Genetic Portraits" by Ulric Collette.

The photograph to below is entitled "Cosmetic Surgery" by Alma Haser.

Can you identify the processes taken to create this image? What steps are involved? What tools have been used? How are these works similar/ different?



Websites and further reading:

BBC Bitesize:

<http://www.bbc.co.uk/schools/gcsebitesize/art/practicalities/usingphotography1.shtml>

Pinterest: Search "portrait photography"

Artists/ Photographers to consider: Platon, Steve McCurry, Mike Larremore

Netflix: "Tales by Light" and "Abstract: The Art of Design"

Youtube: Photoshop Tutorials – PHLEARN https://www.youtube.com/watch?v=qZ_xWcqOFlo

Key vocabulary to define and learn

- | | |
|---------------|----------------|
| Aperture | Depth of Field |
| Exposure | Filters |
| ISO | Composition |
| Shutter Speed | Layers |
| Lighting | |

30 Day Photography Challenge:

Follow the link below to a daily photographic task and submit all thirty images via email to Miss Garrett at the end of term one. Winner will have work displayed and win a photography related prize.

<https://www.pinterest.co.uk/pin/478507529131108702/>