

Seaford Head School

Year 8 Revision Guide



Achieving Excellence Together

Seaford Head School

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English Revision

There are 2 sections in your exam; you will have to write about a poem and an extract from the novella 'Of Mice and Men'.

Poetry

This poem describes how precious water is to poor people in a hot climate, where thirst is ever-present and there is dangerous shortage.

Blessing by Imtiaz Dharker

The skin cracks like a pod.
There never is enough water.

Imagine the drip of it,
the small splash, echo
in a tin mug,
the voice of a kindly god.

Sometimes, the sudden rush
of fortune. The municipal pipe bursts,
silver crashes to the ground
and the flow has found
a roar of tongues. From the huts,
a congregation: every man woman
child for streets around
butts in, with pots,
brass, copper, aluminium,
plastic buckets,
frantic hands,

and naked children
screaming in the liquid sun,
their highlights polished to perfection,
flashing light,
as the blessing sings
over their small bones.

Writing about a Poem

1. Read the poem.
2. Read the poem a 2nd time and highlight and annotate anything that links to the question.
3. Try and find 5 different quotations that you can write about.
4. Write an overview to start – saying what the poem is about – refer to context.
5. Track through the poem, trying to write about your 5 quotations.
6. Cover the whole poem – if you're nearly out of time, write about a quotation from the end of the poem.

Sentence Starters:

- The poem 'Blessing' by Imtiaz Dharker is about...
- Dharker wrote the poem to highlight issues about...
- At the beginning of the poem, Dharker uses...
- Dharker compares the water to a blessing from God because...
- Later in the poem...
- At the end of the poem...

Context:

Dharker is a documentary filmmaker, as well as a poet, who was born in Pakistan and raised in Scotland, but lives in Mumbai, a city full of contrasts and contradictions.

Blessing is based on the poverty experienced by the people who live in the slums in Mumbai, India.

Of Mice and Men

You will be given an extract from *Of Mice and Men* and you will need to look for the methods Steinbeck has used to make the extract tense and dramatic. These methods include; repetition, ellipses, varied sentence lengths (long/short), varied punctuation (exclamation marks, question marks), use of the senses, dialogue and interesting vocabulary (adjectives, verbs)

In this extract from Chapter 5, after Lennie has murdered Curley's Wife, Candy and George discuss how they will no longer get the ranch together. Candy is devastated which reminds the audience how he is isolated on the ranch because he is old and disabled; Candy's dreams have gone.

How does Steinbeck create drama and tension in this extract?

Now Candy spoke his greatest fear. "You an' me can get that little place, can't we, George? You an' me can go there an' live nice, can't we, George? Can't we?"

Before George answered, Candy dropped his head and looked down at the hay. He knew...

George said softly, "—I think I knowed from the very first. I think I know'd we'd never do her. He usta like to hear about it so much I got to thinking maybe we would."

"Then — it's all off?" Candy asked sulkily.

George didn't answer his question. George said, "I'll work my month an' I'll take my fifty bucks and stay in some poolroom till ever'body goes home. An' then I'll come back an' work another month an' I'll have fifty bucks more."

Candy said, "He's such a nice fella. I didn' think he'd do nothing like this."

George still stared at Curley's wife. "Lennie never done it in meanness. Now listen. We gotta tell the guys. They got to bring him in, I guess. They ain't no way out. Maybe they won't hurt 'im." He said sharply, "I ain't gonna let 'em hurt Lennie. Now you listen. The guys might think I was in on it. I'm gonna go in the bunk house. Then in a minute you come out and tell the guys about her, and I'll come along and make like I never seen her. Will you do that? So the guys won't think I was in on it?"

Candy said, "Sure, George. Sure I'll do that."

"O.K. Give me a couple minutes then, and you come runnin' out an' tell like you jus' found her. I'm going now." George turned and went quickly out of the barn.

Old Candy watched him go. He looked helplessly back at Curley's wife, and gradually his sorrow and his anger grew into words. "You God damn tramp", he said viciously. "You done it, di'n't you? I s'pose you're glad. Ever'body knowed you'd mess things up. You wasn't no good. You ain't no good now, you lousy tart." He snivelled, and his voice shook. "I could of hoed in the garden and washed dishes for them guys." He paused, and then went on in a singsong. And he repeated the old words: "If they was a circus or a baseball game.... we would of went to her.... jus' said 'ta hell with work,' an' went to her. Never ast nobody's say so. An' they'd of been a pig and chickens.... an' in the winter.... the little fat stove.... an' the rain comin'.... an' us jes' settin' there." His eyes blinded with tears and he turned and went weakly out of the barn, and he rubbed his bristly whiskers with his wrist stump.

Writing about an extract

1. Read the extract all the way through.
2. Read the extract a 2nd time and highlight and annotate anything that makes the extract feel tense and dramatic. Try and find 5 different quotations that you can write about.
3. Write an overview to start – saying what is happening in the extract – refer to context.
4. Track through the extract, trying to write about your 5 quotations.
5. Cover the whole extract – if you're nearly out of time, write about a quotation from the end of the poem.

Sentence Starters:

- The extract is from the novella 'Of Mice and Men' by John Steinbeck and shows...
- Steinbeck wrote the novella to highlight issues about...
- At the beginning of the extract, Steinbeck uses...
- It is dramatic when...
- At the end of the extract, the audience is reminded about Candy's disability...

Mathematics Revision

Multiplying non-unit fractions

Shade in 3 parts

Repeat it on this many rows

This many columns

This many rows

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

Parts shaded

Total number of parts in the diagram

Modelled:

Ratio as a fraction

Trees: Flowers

3 : 7

Ratio

Fraction of trees

Number of parts of in group: 3

Total number of parts: 10

Fraction

Tree parts 3 + Flower parts 7 = 10

Direct Proportion

As one variable changes the other changes at the same rate.

This is a multiplicative change

4 cans of pop = £2.40

4 cans of pop = £2.40

12 cans of pop = £7.20

2 cans of pop = £1.20

50 x

50 x

This multiplier is the same in the same way that this would be for ratio

Sometimes this is easiest if you work out how much one unit is worth first e.g. 1 can of pop = £0.60

Lines parallel to the axes

All the points on this line have a x coordinate of 10

Lines parallel to the y axis take the form $x = a$ and are vertical

Lines parallel to the x axis take the form $y = a$ and are horizontal

All the points on this line have a y coordinate of -2

e.g. (3, -2) (7, -2) (-2, -2) all lay on this line because the y coordinate is -2

'a' can be ANY positive or negative value including 0

Order is Important

"For every dog there are 2 cats"

Dogs: Cats

1:2

The ratio has to be written in the same order as the information is given

e.g. 2:1 would represent 2 dogs for every 1 cat X

Coordinates in four quadrants

Coordinate (x, y) (6, 4)

From the origin this coordinate is 6 places along the positive x axis and 4 places up the positive y axis

(0, a) Will be always be a point on the y axis (a can be any number)

(a, 0) Will be always be a point on the x axis (a can be any number)

Always the position on the x axis first

Always the position on the y axis second

Sample space - for single events

- A sample space represents a possible outcome from an event
- They can be interpreted in a variety of ways because they do not tell you the probability

A sample space for rolling a six-sided die is $S = \{1, 2, 3, 4, 5, 6\}$

A sample space for this spinner is $S = \{\text{Pink, Blue, Yellow}\}$

You only need to write each element once in a sample space diagram

Identify and represent sets

The universal set has this symbol ξ - this means EVERYTHING in the Venn diagram is in this set

A set is a collection of things - you write sets inside curly brackets { }

$\xi = \{\text{the numbers between 1 and 50 inclusive}\}$

My sets can include every number between 1 and 50 including those numbers

$A = \{\text{Square numbers}\}$

$A = \{1, 4, 9, 16, 25, 36, 49\}$

All the numbers in set A are square number and between 1 and 50

Interpret and create Venn diagrams

Mutually exclusive sets

The two sets have nothing in common No overlap

Union of sets

The two sets have some elements in common - they are placed in the intersection

Subset

All of set B is also in Set A so the ellipse fits inside the set.

The box

Around the outside of every Venn diagram will be a box if an element is not part of any set it is placed outside an ellipse but inside the box

Intersection of sets

Elements in the intersection are in set A AND set B

The notation for this is $A \cap B$

$\xi = \{\text{the numbers between 1 and 15 inclusive}\}$

$A = \{\text{Multiples of 5}\}$ $B = \{\text{Multiples of 3}\}$

The element in $A \cap B$ is 15

In this example there is only one number that is both a multiple of 3 and a multiple of 5 between 1 and 15

Fraction of a given amount

The bar represents the whole amount

Find $\frac{2}{3}$ of £205

Use bar models for comparisons

$\frac{1}{3}$ of 90 = 30

$\frac{2}{3}$ of 45 = 30

$\therefore \frac{1}{3}$ of 90 = $\frac{2}{3}$ of 45

£205

£41

£205 ÷ 5 = £41

Each part of the bar model represents £41

2 out of the 5 equal parts

2 x £41 = £82

Collecting like terms \equiv symbol

The \equiv symbol means equivalent to
It is used to identify equivalent expressions

Collecting like terms

Only like terms can be combined

$$4x + 5b - 2x + 10b$$

$$\begin{matrix} \textcircled{4x} & \textcircled{+5b} & \textcircled{-2x} & \textcircled{+10b} \\ \downarrow & \downarrow & \downarrow & \downarrow \\ & & & \end{matrix}$$

$$2x + 15b$$

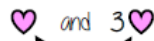
Common misconceptions



$$2x + 3x^2 + 4x \equiv 6x + 3x^2$$

Although they both have the x variable x^2 and x terms are unlike terms so can not be collected

Like and unlike terms

Like terms are those whose variables are the same

 and $3 \times$  are like terms
the variable is the same

 and $3 \times$  are unlike terms
the variables are NOT the same

Examples and non-examples

Like terms

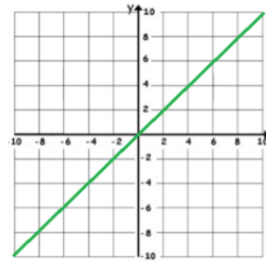
y, 7y
 $2x^2, x^2$
ab, 10ba
5, -2

Un-like terms

y, 7x
 $2x^2, 2a^2$
ab, 10a
5, -2t

Note here ab and ba are commutative operations, so are still like terms

Recognise and use the line $y=x$



This means the x and the y coordinate have the same value

Examples of coordinates on this line: (0, 0) (-3, -3) (8, 8)

The axes scale is important – if the scale is the same $y = x$ will be a straight line at 45°

Conversion between currencies

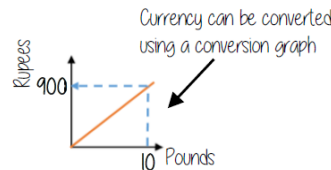


£1 = 90 Rupees

Currency is directly proportional

For every £1 I have 90 Rupees

$$\begin{matrix} \text{£1} = 90 \text{ Rupees} \\ \times 10 \\ \text{£10} = 900 \text{ Rupees} \end{matrix}$$



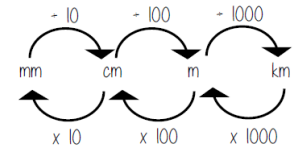
Currency can be converted using a conversion graph

Convert 630 Rupees into Pounds

$$\begin{matrix} \text{£1} = 90 \text{ Rupees} \\ \times 7 \\ \text{£7} = 630 \text{ Rupees} \end{matrix}$$

$630 \div 90 = 7$

Interpret maps with scale factors



1 cm : 250 m

Ratios need to be in the same units

1 cm : 250m

1 cm : 25000cm

$$250 \times 100 = 25000$$

For every 1cm on my map is 25000cm in real life



Probability of a single event



Probability = $\frac{\text{number of times event happens}}{\text{total number of possible outcomes}}$

$P(\text{Blue}) = \frac{4}{10}$ ← There are 4 blue sectors
← There are 10 sectors overall

Probability notation
 $P(\text{event})$

$$= \frac{2}{5}$$

Probability can be a fraction, decimal or percentage value

$$\frac{4}{10} = \frac{40}{100} = 0.40 = 40\%$$

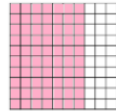
Probability is always a value between 0 and 1

Convert FDP

$$\frac{70}{100}$$

This also means
 $70 \div 100$

70 out of 100 squares
70 "hundredths"
= 7 "tenths"
0.7



70 hundredths
= 70%

Using a calculator



S=D Convert to a decimal

This will give you the answer in the simplest form

$\times 100$ converts to a percentage

Be careful of recurring decimals

$$\text{e.g. } \frac{1}{3} = 0.3333333$$

$$\frac{1}{3} = 0.\dot{3}$$

The dot above the 3

Round to 1 significant figure

370 to 1 significant figure is 400

37 to 1 significant figure is 40

3.7 to 1 significant figure is 4

0.37 to 1 significant figure is 0.4

0.00000037 to 1 significant figure is 0.0000004

Round to the first non zero number

Science Revision

Use the grid below to help you to plan your revision.

Topic	I can...	All good ☺	Not quite sure	Need to revise ☹
Reproduction	Name the male and female gametes (sex cells) and state where they are found			
	Describe what happens during fertilisation and where it takes place			
	State how long a human pregnancy lasts			
	Describe what happens to the uterus wall during birth			
	Describe what happens during the menstrual cycle and predict when key events such as ovulation will occur			
	Describe the role of ciliated cells in the reproductive system			
	Explain how genetic information is shared between parents and offspring			
	identify variations as either environmental or inherited			
	Identify the different parts of a flower and their role in the process of fertilisation			
Chemical reactions	Identify the different ways in which we can tell that a chemical reaction has taken place			
	Describe the difference between a chemical reaction and a physical change			
	Interpret data on acids and alkalis			
	Recall the colours of acids, alkalis and neutral solutions in universal indicator			
	Describe what happens during neutralisation			
	Explain the difference between complete and incomplete combustion			
	Complete a word equation for combustion			
	State the names of the elements found in a hydrocarbon			
	Recall the different states of matter			

History Revision

Living conditions in the 19th century - <https://www.bbc.co.uk/bitesize/guides/zb8n8xs/revision/1>

Living Conditions – Why was reform needed?	Improvements
<ul style="list-style-type: none"> • Overcrowding -Families lived in single rooms and often in basements • Disease – cholera, TB, Typhoid were common • Low life expectancy – 1840 1/3 children died before 5. Leeds life expectancy was 19. • Crime – due to poverty and heavy drinking. Also no police until 1850. • Mass migration from countryside for work in the factories • Housing built quickly and cheaply and were crammed together (back-to-backs) • Laissez-faire attitude by government (politicians didn't think it was their responsibility help poorest people). • Very few laws on public health for much of the century. • Lack of sewage system and no indoor plumbing. Human/animal waste polluted drinking water • Lack of knowledge about germs 	<ul style="list-style-type: none"> • During the 19th century there were some improvements made to public health • Boards of Health were set up to investigate outbreaks of cholera in some towns • Edwin Chadwick wrote an important report in 1842 which made the link between poverty, filthy conditions and illness. This led to the Public Health Act which allowed local councils to spend money on cleaning up the streets (wasn't enforced everywhere though) • John Snow was the first person to realise Cholera was a water-borne disease • Bazalgette built the first sewers after the Great Stink of 1858 • Life expectancy did improve to 50 by 1900 (from 30 in 1800) • New medical improvements like antiseptic and anaesthetics helped

Working conditions in the 19th century - <https://www.bbc.co.uk/bitesize/guides/zkxryc/revision/1>

Working conditions – why was reform needed?	Improvements
<p>Poor Working Conditions: Factories were often poorly ventilated, overcrowded, and lacked basic sanitation facilities. Workers toiled in cramped spaces, often without adequate lighting or ventilation.</p> <p>Long Hours and Exploitation: The standard workday was typically 12-16 hours, six days a week, and workers, including children, were often subjected to harsh treatment and low wages. This led to widespread exploitation.</p> <p>Child Labour: Children as young as 5 or 6 were commonly employed in factories, performing dangerous tasks. They were paid significantly less than adults and often subjected to harsh discipline.</p> <p>Lack of Safety Measures: Safety regulations were virtually non-existent. Workers faced hazards like exposed machinery, dangerous chemicals, and unsafe working conditions, leading to frequent accidents and injuries.</p> <p>Health Issues: Factory work often led to health problems due to prolonged exposure to dust, pollutants, and hazardous materials. Respiratory issues, injuries, and various illnesses were common among industrial workers.</p> <p>Low Wages and Poverty: Wages were typically meagre, and many workers and their families struggled to make ends meet. Poverty and inequality were widespread.</p> <p>Lack of Education and Training: Many workers, especially children, received little to no education or training, limiting their opportunities for personal and professional development.</p>	<p>Factory Act of 1833: This landmark legislation, also known as Lord Althorp's Act, was one of the earliest attempts to regulate factory conditions. It included provisions such as limiting the working hours for children and young people, and stipulating minimum age requirements for factory work.</p> <p>Ten Hours Act of 1847: Championed by Lord Shaftesbury, this act limited the working hours of women and children in textile mills to ten hours per day. This marked a significant reduction from the long hours previously endured.</p> <p>Mines Act of 1842: Also driven by Lord Shaftesbury, this act prohibited the employment of women and children under the age of 10 from working underground in mines. It was a crucial step towards ensuring safer conditions for mine workers.</p> <p>Public Health Act of 1848: This act, also known as the Nuisances Removal and Contagious Diseases Act, was aimed at improving public health and sanitation. It empowered local authorities to take measures to address unsanitary conditions and prevent the spread of diseases.</p> <p>Trade Union Act of 1871: This legislation legalized trade unions and provided them with certain legal rights and protections. It marked an important milestone in the recognition of workers' collective bargaining power.</p> <p>Employers' Liability Act of 1880: This act held employers liable for injuries suffered by their employees due to unsafe working conditions. It provided a legal framework for workers to seek compensation for workplace accidents.</p> <p>Workmen's Compensation Act of 1897: This act established a system of compensation for workers who were injured or disabled on the job. It was a significant step towards ensuring financial support for injured workers.</p> <p>Education Act of 1870: Also known as the Forster Act, this legislation introduced compulsory elementary education for children aged 5 to 13. It aimed to improve literacy rates and provide children with basic education.</p>

Justice and Policing in the 19th century - <https://www.bbc.co.uk/bitesize/guides/z9f4srd/revision/3>

Justice and policing – why was reform needed?	Improvements
<p>Rising Crime Rates: The rapid urbanization and industrialization of the period led to an increase in crime rates, particularly in urban areas. The existing justice system was ill-equipped to handle the scale and complexity of these new challenges. Policing in the early 19th century was largely informal. There was no centralized police force, and law enforcement was primarily carried out by local constables, watchmen, and parish constables, often part-time and with limited training.</p> <p>Harsh and Inhumane Punishments: Punishments for crimes in the 19th century often included public executions, corporal punishment, and harsh penal sentences for even relatively minor offenses. These practices were increasingly viewed as inhumane and ineffective in deterring crime.</p> <p>Overcrowded Prisons and Poor Conditions: The prison system was overcrowded and characterized by harsh living conditions. Many prisons lacked proper sanitation, healthcare, and basic amenities, contributing to high mortality rates among inmates.</p> <p>Changing Attitudes Towards Rehabilitation: There was a growing recognition that punishment alone was insufficient in reforming offenders. The emerging concept of rehabilitation emphasized providing education, skills, and support to help individuals reintegrate into society.</p>	<p>The Metropolitan Police Act of 1829: Often referred to as the founding legislation of modern policing, this act established the Metropolitan Police Force in London, headed by Sir Robert Peel. It introduced the principles of community-oriented policing, emphasizing crime prevention and public cooperation.</p> <p>The County Police Act of 1839: This legislation allowed counties in England and Wales to establish their own police forces. It extended the model of professional policing beyond London and contributed to the spread of modern police forces throughout the country.</p> <p>Reform Movements and Advocacy: The 19th century was marked by various reform movements, including the prison reform movement led by figures like Elizabeth Fry and John Howard. These activists advocated for more humane treatment of prisoners and improvements in the penal system.</p> <p>The Prison Act of 1835: This act introduced a centralized system for prison management under the authority of the Home Office. It established a more uniform and standardized approach to prison administration across the country.</p> <p>The Separate System: Inspired by the Auburn System in the United States, some prisons in the UK adopted the Separate System, which involved isolating prisoners in individual cells to prevent them from interacting with each other. This was seen as a means to encourage reflection and reform.</p> <p>The Silent System: In conjunction with the Separate System, some prisons implemented the Silent System, which required prisoners to work in isolation and maintain strict silence. This was intended to foster reflection and remorse.</p> <p>The 1842 Prison Act: This act introduced further reforms, including the appointment of paid, professional prison inspectors to oversee conditions and practices within prisons. It also emphasized the importance of education and work for prisoners.</p> <p>The Reformation of Juvenile Offenders: Early efforts were made to address the rehabilitation of juvenile offenders. The Youthful Offenders Act of 1854 introduced separate facilities and treatment for young offenders, acknowledging their need for specialized care and rehabilitation.</p>

Political reform in the 19th century - <https://www.bbc.co.uk/bitesize/guides/z6c6cqt/revision/1>

Political Reform – why was reform needed?	Improvements
<p>Unfairness In 1830 most of the British population was still excluded from voting, so they had no influence over members of Parliament (MPs) making the laws that affected their lives.</p> <p>Corruption MPs were from Britain's richest families and represented towns and boroughs where they had major control. Bribery was rife. Voting took place publicly so even those with the vote could be bullied into voting in a certain way. Working-class people worked for and often lived in property owned by their MP, but still had no say.</p> <p>Distribution of power There were too many constituencies in rural areas and not enough in industrial towns and cities where more people lived.</p> <p>Revolution By 1832 people from the middle and working classes had started to form political groups in most of the major industrial areas. Working-class people were unhappy because of their working conditions and low wages. MPs became scared that a revolution might occur in Britain (as it had in France) and that the working class would execute the nobility. Giving people the vote was seen as a way to prevent revolution.</p>	<p>The 1832 Reform Act Elections remained corrupt and the country was still run by the rich. MPs in the countryside continued to have more power than those in industrial towns.</p> <p>Second Reform Act, 1867 The most important change was the granting of the vote to occupiers in the boroughs (people who rented properties rather than owning them) and as a result the electorate in some of the newer towns in England and Scotland increased dramatically. However, the Act did not alter the balance of political power in Britain. The middle classes still dominated the electorate in both towns and boroughs.</p> <p>Third Reform Act, 1884 It enfranchised a significant number of voters approximately two in three men now had the vote - almost 18 per cent of the total population however, plural voting was permitted (whereby a man could have more than one vote in certain circumstances) Women still did not have the vote MPS were still not given a salary. This made it difficult for men without independent means to become an MP</p>

Revision

Self-quizzing

Lesson 1: What does 'development' mean?
Development is progress or change for the better.

How can we measure development?	
Gross Domestic Product (GDP)	The total value of all goods and services produced in a country
Gross National Product (GNP)	GDP plus earnings from foreign investment
Life expectancy	The average number of years a person is expected to live in a particular place.
Infant mortality rate	The number of children who die before the age of one.
Literacy rate	Percentage of people who can read and write.
Birth rate	Births per 1000 per year
Death rate	Deaths per 1000 per year
Human development index (HDI)	Measures a combination of life expectancy, GDP and literacy rate.

'Factfulness' by Hans Rosling has shown chimps are more likely to score more on a quiz about development than humans.

1. Define development.
2. What does the birth rate measure?
3. What measurements are used to calculate the HDI?
4. What does 'GDP' stand for?
5. Who wrote the book we are studying 'Factfulness'?

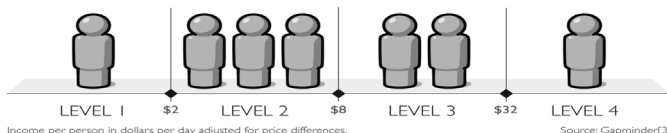
Lesson 2: Why do people have a pessimistic world-view?
Pessimistic world-views have developed due to a combination of the media, outdated information and human's dramatic instincts despite the following improvements:

60% of girls in low-income countries finish primary school.	The majority of people live in middle-income countries- 76% of the world's population.	The share of people living on less than \$1.9/a day fell from 34% in 1993 to 10.7% in 2017.
The average global life expectancy for those born in 2016 was 72.48 years. Although the UN come up with a lower estimate of 71.9 years.	Worldwide, women aged 25 to 34 have an average of 9.09 years of schooling, and men have 10.21, according to estimates from 188 countries.	In their forecasts, the UN Population division predicts that 69% of the world population growth will come from 2.5 billion more adults.
A majority of the world population, 85.3% had some access to electricity grid in their countries.	The world population in 2017 is 7.55 billion, according to UN Population Division.	88% of 1-year-old children in the world today are vaccinated against some disease, according to the World Health Organisation.
For the past 10 years, the UN Population division has published forecasts predicting that the number of children in the year 2100 will not be higher than it is today.	Tigers, giant pandas and black rhinos are not more critically endangered than they were in 1996. It is thought that populations may be slowly increasing again.	Annual deaths by natural disasters have decreased by 75% over the past 100 years. In the past 10 years, on average 80,386 people were killed by natural disasters per year.



6. Who/What influences are world-views?
7. Do the majority of people live in high, low or middle income countries?
8. What percentage of people have access to electricity?
9. What is the global life expectancy?
10. How much have annual deaths by natural disasters decreased?

Lesson 3: How do we describe the world?
The Brandt line is outdated - there is no longer a rich north and poor south which we could do in 1965. Development indicators such as infant mortality support this.

In 'Factfulness', Hans Rosling uses 4 income groups to describe the world:



11. What is the name of the line which shows a 'Rich north' and 'Poor south'?
12. When was this line realistic?
13. What evidence do we use to support our statements on development?
14. In which level do the majority of people live?
15. How many people live in extreme poverty?

Revision	Self-quizzing
<p>Lesson 4: How do we describe the world?</p>  <p>Level 1 = Extreme poverty Level 2 = Access to school, water and energy Level 3 = Fridge and water in homes, children finish high school Level 4 = Access to higher education, afford cars and holidays In exams we use LIC (Level 1), MIC (Level 2 and 3), HIC (Level 4).</p> <p>Describe means say what you can see. Explain means say why.</p>	<p>16. How many levels does Hans Rosling use for development?</p> <p>17. What is level 1 like?</p> <p>18. What is level 2 like?</p> <p>19. What is level 3 like?</p> <p>20. What does 'Explain' mean?</p>
<p>Lesson 5: What is life like on the different income levels?</p> <p>We used a website called 'Dollar street' to compare lives across the income groups.</p> <p>Level 1 = Level 2 = Level 3 = Level 4 =</p>	<p>21. What website did we use to compare the income levels?</p> <p>22. Complete the knowledge organiser for the 4 countries you compared.</p> <p>23. Name a level 1 country.</p> <p>24. Name a level 2 country.</p> <p>25. Name a level 4 country.</p>
<p>Lesson 6: What is life like for one person in Malawi?</p>  <p>This is a choropleth map - useful to identify patterns and trends.</p> <p>To describe location we use CLOCC: Continent Lines of latitude Oceans and seas Countries Compass direction</p> <p>Poverty cycle (born in poverty, lack of education, lack of job, have children in poverty) can be broken.</p>	<p>26. What do we call a colour shaded map?</p> <p>27. What does CLOCC stand for?</p> <p>28. What is the poverty cycle?</p> <p>29. Where is Malawi?</p> <p>30. How can the poverty cycle be broken?</p>

Revision

Lesson 7: Why do countries have different income levels?
 Uneven development refers to the **unequal** distribution of people, resources, and wealth

We can group these factors into physical, economic and environmental.

Population growth	Population structure	Debt crisis	Country location
Colonialism	Natural hazards	Resources	Globalisation
Politics	Violent conflict	Industrial structure	Cycle of poverty
Environmental sustainability	Infrastructure	Access to water	Being in a trade bloc
Pattern of trade	Balance of trade	Unfair trade	Health and education

Self-quizzing

31. What does 'uneven development' mean?

32. State one historic factor of uneven development.

33. State one physical factor of uneven development.

34. State one economic factor of uneven development.

35. What does 'Colonialism' mean?

Lesson 8: Is it all doom and gloom?

Media stories are often the extremes and not reflecting positive progress - there are actually lots of bad things that are decreasing!

Overpopulation: Too many people on the planet for the number of resources

Fertility rate: the average number of children born to each women, this is decreasing.

It's not all doom and gloom: 12 bad things decreasing

36. What do we often see in the media regarding development?

37. What does 'overpopulation' mean?

38. Define fertility rate.

39. Name one bad thing that is decreasing with development.

40. How is the number of children in the world changing?

Lesson 9: Is the world getting better or worse?

Essay structure:
 Introduction
 Paragraph for
 Paragraph against
 Conclusion

Use the source: Use examples (countries, people, events). Facts, Figures, References (books, websites)

Check your Spelling, punctuation and grammar (SPaG).

AO1: Knowledge and Understanding
 AO3: Analysis
 AO5: Evidence

41. How should we structure our essays/longer answers?

42. What do we need to include in your answers?

43. What references can you use?

28. What does SPaG stand for?

29. What is AO3 assessing?

Ethics Revision

<p>Ethics - GCSE Religious Studies, page 1 Christian Beliefs and Teachings God</p> <p>*There is only ONE God. God is: * omnipotent (all-powerful) * omnipresent (everywhere) * omniscient (all-knowing) * omnibenevolent (all-loving) * eternal : a being without beginning or end</p> <p>Creation in Genesis *God created the planet in 7 days * God is all-powerful, creating 'out of nothing', bringing things into being by command alone, 'Let there be light...' * Humans are created in the 'image of God' to be like him * Humans must rule over the animals and rest of creation and act as stewards or managers of the planet * God sees everything He has created is very good * He gives humans a day of rest, as He rested on the seventh day</p> <p>Jesus * The incarnation - God comes down to earth in a human form. * The Word was made flesh.</p>	<p>Jesus is a human name but he is also divine (God). * This is God's way of getting closer to His creation.</p> <p>* The crucifixion (description of what happened)- Jesus was nailed to a cross between two criminals * A crown of thorns was placed on his head by the Romans to mock him, the King of the Jews * Jesus asked God to forgive those who sentenced him * His mother and disciples gathered at the foot of the cross * He died saying, 'it is finished'; it was all part of God's plan</p> <p>* The crucifixion (what it means)- Jesus died on the cross to save people from their sins. * Jesus was a sacrifice. God gave his only son. * Jesus is the atonement; he could pay off all the sin of humanity. * As he died on the cross, it opens up the possibility for the resurrection. * It was part of the plan to bring about salvation. * It was a fulfilment of Old Testament prophecies.</p>	<p>The resurrection (description of what happened)- * on Sunday morning the women took spices to the tomb to anoint the body * The stone was rolled away, there was no sign of Jesus * Two men in gleaming clothes (angels) appear asking: why do you look for the living among the dead? * The women were reminded of Jesus's words about his death and resurrection * Jesus appeared to his disciples and 500 people</p> <p>* The resurrection (what it means) - Jesus rose on the third day to show he was the Son of God. * Through his suffering on the cross, he conquered sin and death and opened up a way back to God (he is the redeemer). * Jesus proved that God was willing to forgive people's sins. * This is proof that death is not the end; there is life after death.</p> <p>* The ascension- forty days after the resurrection, Jesus ascended (went up) into Heaven and now sits at the right hand of God the Father, a place of honour. * It shows that Jesus is everywhere at once.</p>
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Ethics Revision

<p>Ethics- GCSE Religious Studies, page 2</p> <ul style="list-style-type: none">* From Heaven, Jesus is able to send the power of the Holy Spirit to guide people.* Jesus is able to fulfil his promise and be with everyone until the end of time. <p>Sin</p> <ul style="list-style-type: none">* sin – to turn from God, go against God* The traditional view is that original sin has been inherited from Adam and Eve like genes; Adam and Eve were punished when they cast out of Eden (paradise)* The modern view is that Adam and Eve are symbols for humanity, humans face negative influences in the world and when they give into temptation, they suffer as a result <p>Adam and Eve and original sin</p> <ul style="list-style-type: none">* Humans lost paradise when Adam and Eve ate the forbidden fruit in the Garden of Eden.* They were tempted by the serpent* Humans have free will to behave immorally, that is why there is moral evil.* God cannot intervene or it would mean humans are not free* After the sin, Adam and Eve were thrown out of the Garden of Eden; Adam had to	<p>work for them to survive; having children would be painful for Eve; they would be they would be mortals; the serpent lost its legs and had to crawl on its belly</p> <p>Salvation</p> <ul style="list-style-type: none">* Turning back to God and away from sin* God will forgive the sinner who repents (says sorry)* Jesus died to bring people back to God (redemption), he brings salvation, he is the saviour, saver* Salvation is when the believer has been saved and is at peace God* Baptism is a sign that sins have been washed away; it is the first step on the path to salvation* Believers must confess their sins, repent (say sorry), take Holy Communion, live a good moral life and have faith to be saved* Salvation means reaching Heaven for eternity <p>Suffering and Evil</p> <ul style="list-style-type: none">* Moral evil: suffering caused by humans.* Natural suffering: suffering due to non-human agents, due to nature itself* If God is all-powerful, all-loving and all-knowing; why does God let evil and suffering happen? (Key Question)	<ul style="list-style-type: none">* Surely God would have the power to stop evil and suffering, would want to stop it as he loves everyone* Atheists conclude that as there is evil and suffering in the world, there is no god <p>Responses to evil and suffering</p> <ul style="list-style-type: none">* Evil and suffering is the result of free will, God gave humans freedom* Pain is a punishment from God (this says there is a reason but is suffering always deserved?)* Pain is a test of faith in God (this gives it a reason but may question if God is good)* Pain is education for the soul (suffering helps us to grow and become better people)* There has to be badness to appreciate goodness (we need to know when something is good)
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French Revision

Key words and vocabulary

Module 1

J'habite- I live
 en Angleterre - in England
 en Écosse - in/to Scotland
 en Irlande - in/to Ireland
 en Irlande du Nord - in/to Northern Ireland
 au Pays de Galles - in/to Wales
 J'ai - I have
 on a - we have/one has
 une semaine - a week
 deux semaines - two weeks
 en janvier - in January
 en février - in February
 à Noël - at Christmas
 à Pâques - at Easter
 Je suis - I am
 Nous sommes - We are
 au bord de la mer - by the seaside
 à la montagne - in the mountains
 à la campagne - in the countryside
 en colo (colonie de vacances) - at a holiday camp
 chez mes grands-parents - at my grandparents' house
 c'est - it is
 assez - quite
 très - very
 trop - too
 un peu - a bit
 complètement - completely
 nul - rubbish
 sympa - nice
 ennuyeux - boring
 intéressant - interesting
 triste - sad
 marrant - funny
 Tu as passé de bonnes vacances? - Did you have a good holiday?
 j'ai joué au tennis - I played tennis
 j'ai mangé des glaces - I ate ice creams
 j'ai retrouvé mes amis - I met up with my friends
 J'ai écouté de la musique - I listened to music
 j'ai acheté des baskets - I bought some trainers
 j'ai regardé des clips vidéo - I watched video clips
 j'ai nagé dans la mer - I swam in the sea
 j'ai traîné à la maison - I hung around the house
 Qu'est-ce que tu as fait pendant les vacances? - What did you do during the holidays?
 j'ai visité un parc d'attractions - I visited a theme park
 j'ai bu un coca au café - I drank a coke at the café
 J'ai pris beaucoup de photos. - I took lots of photos
 J'ai vu un spectacle - I saw a show
 j'ai fait une balade en bateau - I went on a boat ride
 j'ai vu mes personnages préférés - I saw my favourite characters
 j'ai fait tous les manèges - I went on all the rides

d'abord - first of all
 ensuite/puis - next, then
 après - afterwards, after
 finalement - finally
 c'était - it was
 fantastique - fantastic
 génial - great
 super - brilliant
 amusant - fun
 Ce n'était pas mal - It wasn't bad

Module 2

le premier avril - the first of April
 le deux / trois / dix avril - the second / third / tenth of April
 Quelle est ta fête préférée? - What's your favourite festival?
 J'adore ... - I love ...
 J'aime ... - I like ...
 Je préfère ... - I prefer ...
 Je n'aime pas ... - I don't like ...
 Je déteste ... - I hate ...
 Noël. - Christmas.
 Pâques. - Easter.
 le 14 juillet. - Bastille Day.
 le Nouvel An. - New Year.
 la Chandeleur. - Pancake Day.
 la Saint-Valentin. - Valentine's Day.
 l'Aïd. - Eid.
 mon anniversaire. - my birthday.
 manger du chocolat. - to eat / eating chocolate.
 acheter des cadeaux. - to buy / buying presents.
 danser. - to dance / dancing.
 faire une soirée pyjama. - to have / having a sleepover.
 aller chez mes cousins. - to go / going to my cousins' house.
 C'est amusant. - It is fun.
 C'est commercial. - It is commercialised.
 C'est nul. - It is rubbish.
 C'est sympa. - It is nice.
 Ma fête préférée, c'est le carnaval. - My favourite festival is carnival.
 Je retrouve mes copains. - I meet my friends.
 Je porte un masque et un déguisement - I wear a mask and a costume.
 Je regarde la parade. - I watch the parade.
 J'écoute la musique. - I listen to the music.
 Je mange une crêpe. - I eat a pancake
 Je partage des photos. - I share photos.
 Il / Elle est dans un parc. - He / She is in a park.
 Il / Elle danse. - He/ She is dancing.
 Il / Elle regarde la parade. - He / She is watching the parade.
 Il / Elle mange une glace. - He / She is eating an ice cream.
 Il / Elle chante. - He / She is singing.
 Il / Elle porte un déguisement. - He / She is wearing a costume.
 Il / Elle porte un masque. - He / She is wearing a mask.

¡PALABRAS!



De vacaciones On holiday

¿Adónde fuiste de vacaciones?	Where did you go on holiday?
el año pasado	last year
el verano pasado	last summer
Fui a...	I went to...
Escocia	Scotland
España	Spain
Francia	France
Gales	Wales
Grecia	Greece
Inglaterra	England
Irlanda	Ireland
Italia	Italy
¿Con quién fuiste?	Who did you go with?

Fui con...	I went with...
mis amigos/as	my friends
mi clase	my class
mi familia	my family
mis padres	my parents
¿Cómo fuiste?	How did you get there?
Fui/Fuimos en...	I/We went by...
autocar	coach
avión	plane
barco	boat/ferry
coche	car
tren	train
No fui de vacaciones.	I didn't go on holiday.

Exclamaciones Exclamations

¡Qué bien!	How great!
¡Qué bonito!	How nice!
¡Qué divertido!	What fun!/How funny!
¡Qué guay!	How cool!
¡Qué rico!	How tasty!
¡Qué suerte!	What luck!/How lucky!

¡Qué aburrido!	How boring!
¡Qué horror!	How dreadful!
¡Qué lástima!	What a shame!
¡Qué mal!	How bad!
¡Qué rollo!	How annoying!

¿Qué hiciste? What did you do?

¿Qué hiciste en tus vacaciones de verano?	What did you do on your summer holiday?
Bailé.	I danced.
Compré una camiseta.	I bought a T-shirt.
Descansé en la playa.	I relaxed on the beach.
Mandé SMS.	I sent texts.
Monté en bicicleta.	I rode my bike.
Nadé en el mar.	I swam in the sea.
Saqué fotos.	I took photos.
Tomé el sol.	I sunbathed.
Visité monumentos.	I visited monuments.

No nadé en el mar.	I didn't swim in the sea.
El último día de tus vacaciones, ¿qué hiciste?	What did you do on the last day of your holiday?
Bebí una limonada.	I drank a lemonade.
Comí paella.	I ate paella.
Conocí a un chico/a guapo/a.	I met a cute boy/girl.
Escribí SMS.	I wrote texts.
Salí con mi hermano/a.	I went out with my brother/sister.
Vi un castillo interesante.	I saw an interesting castle.

¿Cuándo? When?

luego	then
más tarde	later
después	afterwards
el primer día	on the first day

el último día	on the last day
otro día	another day
por la mañana	in the morning
por la tarde	in the afternoon



¿Cómo te fue? How was it?

Fue divertido.	It was fun/funny.	Me gustó.	I liked (it).
Fue estupendo.	It was brilliant.	Me encantó.	I loved (it).
Fue fenomenal.	It was fantastic.	¿Por qué?	Why?
Fue flipante.	It was awesome.	porque	because
Fue genial.	It was great.	Hizo buen tiempo.	The weather was good.
Fue guay.	It was cool.	Comí algo malo y vomité.	I ate something bad and vomited.
Fue regular.	It was OK.	Llovió.	It rained.
Fue un desastre.	It was a disaster.	Perdí mi pasaporte/ mi móvil.	I lost my passport/ my mobile.
Fue horrible.	It was horrible.		
Fue horroroso.	It was terrible.		
Fue raro.	It was weird.		



Palabras muy frecuentes High-frequency words

a/al/a la	to (the)	¿Dónde...?	Where...?
en	by	¿Adónde...?	Where... to?
con	with	¿Qué...!	How...!
mi/mis	my	además	also, in addition
¿Cómo...?	How...?	pero	but

Estrategia 1

Looking up new words

Dictionaries can tell you a lot about new words. Most of them use these abbreviations: *nm*, *nf*, *adj*, *vt*, *prep*, *adv*. For example, *nm* tells you a word is a masculine noun; *vt* tells you it's a verb. What do you think the others tell you?

Look up the words below in a dictionary. (They are all used in Module 1.) Note down what each word means and what sort of word it is.

Example: espada → sword (noun)

- espada
- descansar
- rico
- salir
- sombrero
- solamente
- ganar
- chocolatina

Music Revision

YEAR 8 REVISION LESSON

The music exam is a practical listening test. You only need to revise the facts on this sheet. It would be useful to listen to some blues tracks and some remixes whilst thinking about the questions on this page.

Today's Task – do one of the following to revise.

- A mind map of the information on here.
- Make up your own quiz that covers the information here.

THE BLUES

Common Blues Instruments



Guitar



Piano



Drum kit



Saxophone



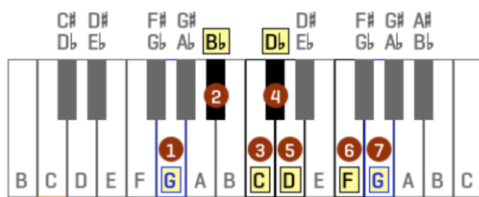
Trumpet



Double Bass

Notes of the Blues Scale in G

G blues scale



G blues scale



The Blues Chord Pattern

G = GBD (Chord 1)	G = GBD (Chord 1)	G = GBD (Chord 1)	G = GBD (Chord 1)
C = CEG (Chord 4)	C = CEG (Chord 4)	G = GBD (Chord 1)	G = GBD (Chord 1)
D = DF#A (Chord 5)	C = CEG (Chord 4)	G = GBD (Chord 1)	G = GBD (Chord 1)

Improvisation

Improvisation is another word for when you create music on the spot. A good improviser will respond to other people playing in a group and will make their improvisation sound like the style of music being performed.

Features of good Blues improvisations

- Swung rhythms (dumpty dumpty)
- Good use of the Blues scale
- An awareness of the main notes in the chords being played underneath.
- Includes Blues riffs (common patterns that are used by Blues musicians when they improvise).

REMIXES

Remix definition

A remix is a piece of music which has been created by taking an original song and changing it to make an original version.

Common things that might be changed in a remix

- Some parts of the song are removed and new parts are added.
- The tempo (speed) of the music.
- The style – the original might be a pop song, but the remix might be in a hip hop style.
- The instrumentation – the original song might contain vocals, electric guitar and keyboard whereas the remix might have vocals, synthesizers and a drum machine.
- The key – the original song might be in a major key (this will give it a happy/upbeat mood) and it could be changed to a minor key (giving it a sad/reflective mood).

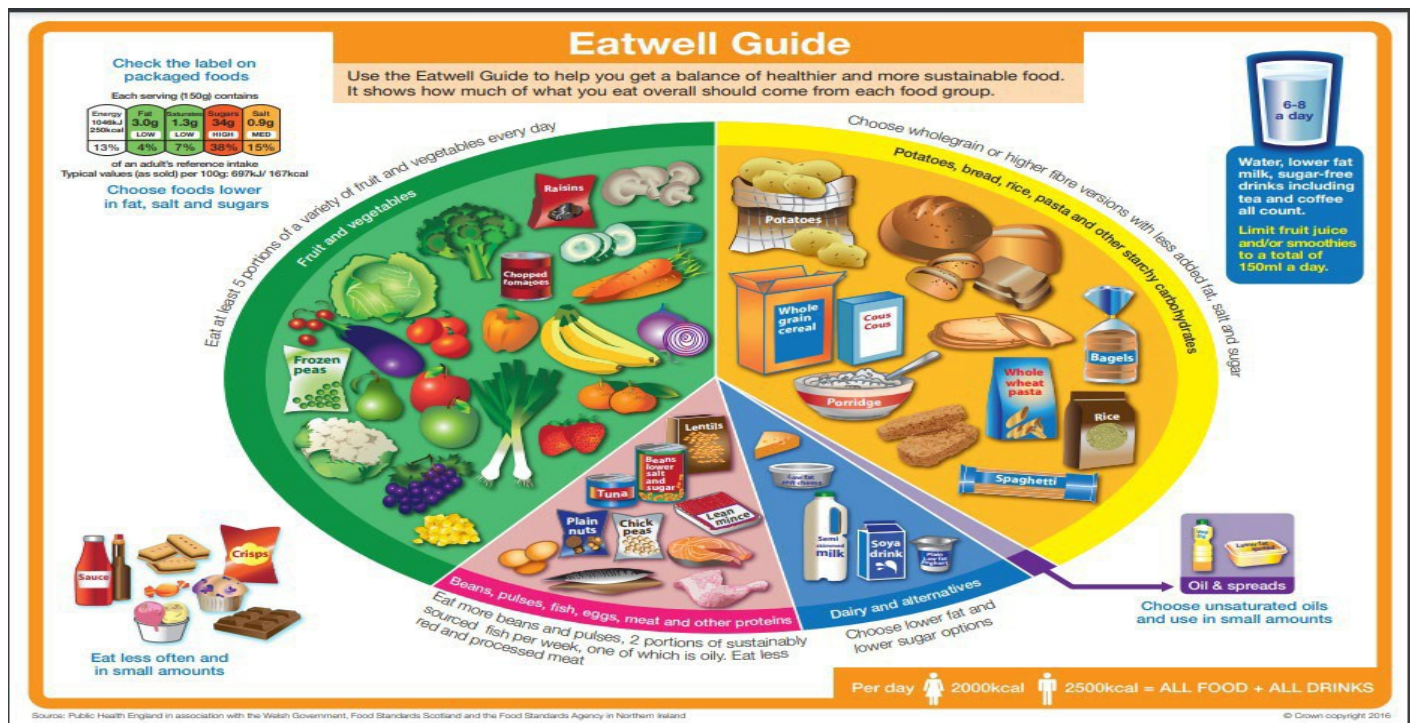
Tempo

This is the speed of the music. This can also be mentioned in beats per minute. A second hand on a clock is 60 BPM. Here is a guide to the speed of different tempos.

- Slow – 80 BPM and below
- Moderate – 100 to 120 BPM
- Fast – 120 to 140 BPM
- Very fast – 140 BPM and above

Food and Nutrition Revision

Make sure you know and understand all about the guidelines of The Eat Well Guide



Make sure you know about the following topics:

Vegetarian Proteins e.g.; - Beans, Soya products, tofu, eggs, cheese, nuts etc.

Meat storage and fridge temperatures - At bottom of fridge to prevent drips and between 2-4 degrees






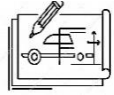



How to avoid cross-contamination when preparing raw chicken; - Prepare chicken on a red chopping board / prepare vegetables on a green/ wipe up all meat juices / wash hands after handling raw meat / use separate knives etc.



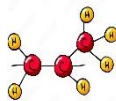




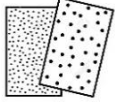

Why people choose locally sourced organic food and free range chicken and eggs:

- Because locally produced food has a lower Carbon Footprint
- Lower 'food miles' as it has not far to go from grower to shop
- Better for the environment or soil
- No use of pesticides or herbicides
- No use of harmful chemicals on crops /fruit /vegetables
- No harmful chemicals left on fruit or vegetables
- Kinder to animals / no animal cruelty/ hens have room to move and behave naturally
- No drugs or growth hormones used on hens

Design and Technology Revision

Key Vocabulary and meanings

Design Key Terms	Picture of Term	Meaning
Design Brief		A brief explanation of what you need to do for a project.
Design Specification		A more detail / specific explanation of what you need to do for a project.
Product		Something that a Designer makes and is used by people.
Function		What a product does.
User		The person that uses the product.
Design		To produce a visual idea of what you could make.
Biomimicry		Creating designs using nature as inspiration.
CAD		Computer Aided Design Using a computer to help create a design.
2D Design		The CAD Software you are using in Yr 8.

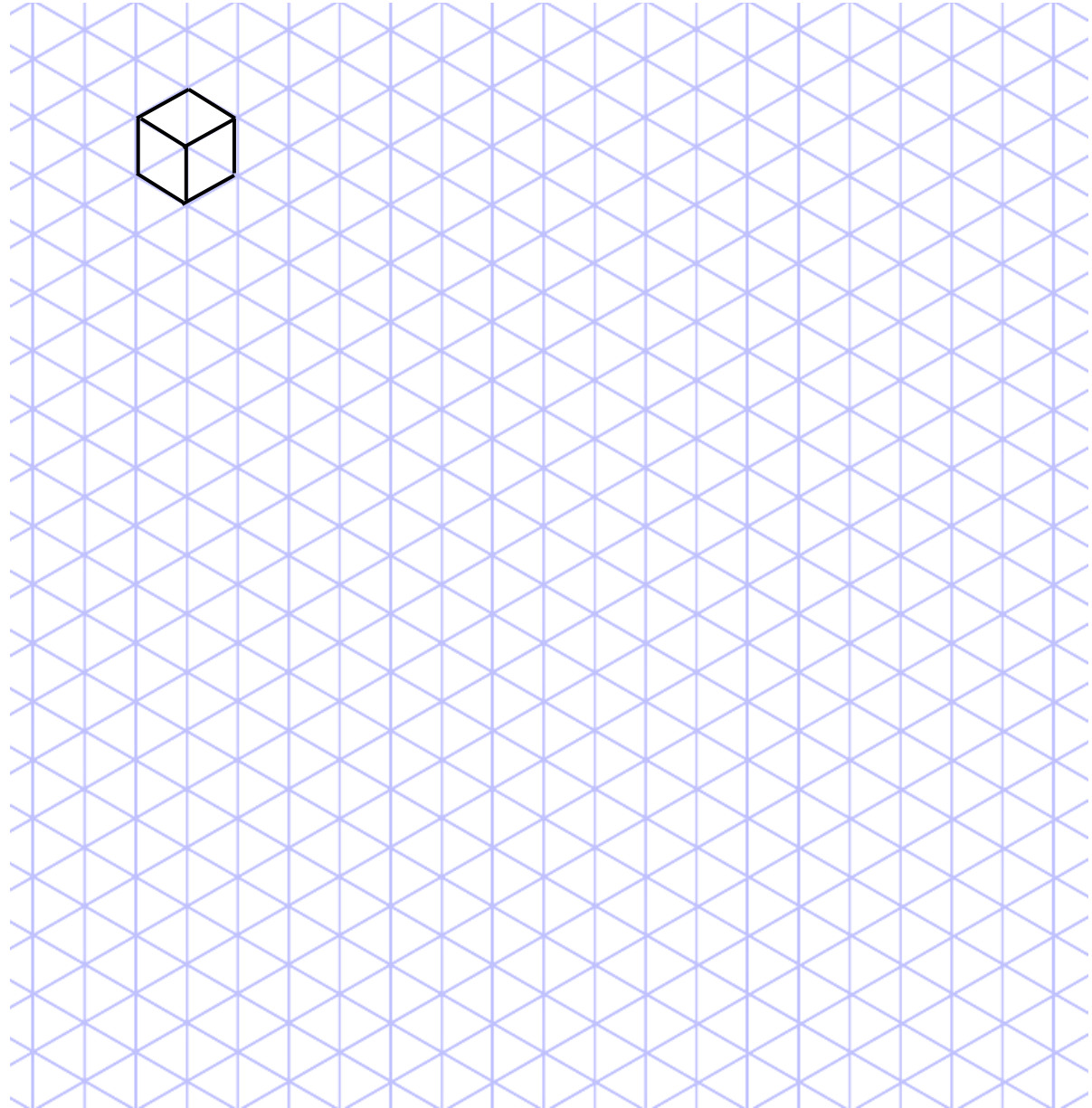
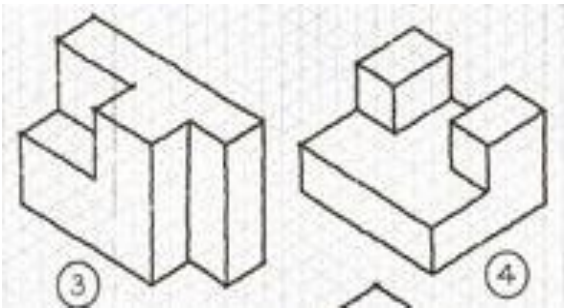
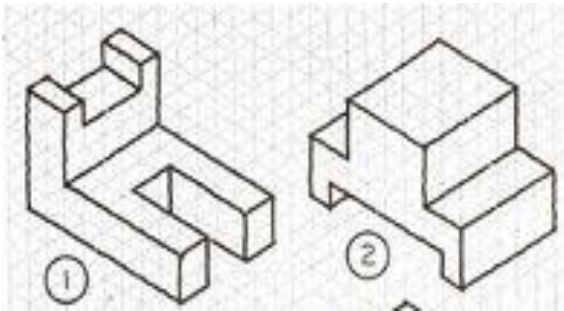
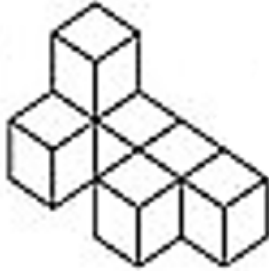
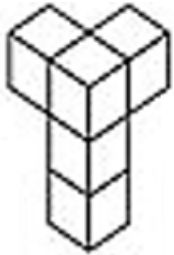
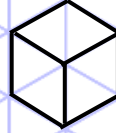
Manufacturing Key Term	Picture of Term	Meaning
Softwood		Wood that comes from trees that do not lose their leaves.
Pine Wood		The softwood that you are using for the wooden base.
Polymer		The chemical construction of plastic.
Thermo-plastic		The type of plastic that can be reheated again and again and can be recycled.
Acrylic Plastic		The Thermo-plastic / polymer you are using for the plastic back of your desk tidy.
Scroll Saw		Machine saw best used to cut shapes and curves. Mainly used for wood.
Pillar Drill		A drill that is standing upright on a Pillar. Can be used to drill through wood, plastic, metal.
Sandpaper		Grains of a rough material that is glued onto paper and used to shape and smooth wood.
Sanding Block		A block normally made from cork to wrap sand paper around to help with sanding shapes.

The rules of 3D Isometric drawing are that your drawn lines must follow the lines on the paper. Lines go at diagonals and verticals.

But NEVER horizontal.

To Revise - Practice drawing cubes, cuboids and shapes on the isometric paper. First one has been drawn for you.

Y8 DT Exam Revision Isometric Drawing



Knowledge Organiser Digital Literacy

Unit: Term 1 – Computer Crime & Cyber Security

Year: 8

Purpose of Unit:

- **Understand** a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; recognise inappropriate content, contact and conduct and know how to report concerns

Key Learning/Knowledge:

Cybercrime can be committed against individuals, companies, organisations & governments.

How to spot a **Phishing Email** -

- Greeting (they don't know your name)
- Spelling mistakes
- Check sender address
- Requesting personal information
- Sense of urgency

Bad Software that can cause harm and damage your computer. Hackers can often code some bad software to damage your computer.

- Slow it down
- Damage Files
- Lock your computer / files
- Steal your data (files)
- Spy on you (watch what you type)

Why do people **hack**?

- Pure mischief
- Challenge
- To steal money
- To steal or modify information
- For political reasons/revenge

The Data Protection Act:

The principals include:

- Data must be accurate and up to date
- You have a right to see what data is held about you
- The data must be protected from unauthorised access

Ways can we keep your data safe?

- Usernames & passwords
- Encryption
- Locks on doors
- Bars on windows
- Alarms
- Security cameras

Key Vocabulary and meanings:

Phishing – An email that tricks you into handing over personal / sensitive information (often pretending to be a legitimate company)

Malware – Malicious Software designed to cause harm to your computer or the user.

Hacking – is illegally accessing or modifying computer files without permission (Computer Misuse Act 1998)

Virus – Modify, damage or delete files on a computer

Ransomware – Encrypts & locks files until the user pays a ransom.

Computer Misuse Act – Law making it illegal to delete, copy or modify anyone else's computer files without permission.

Data Protection Act - (General Data Protection Regulation) - Law in place to protect personal data.

Data Centres / Server Farms – Large storage facilities (like warehouses) full of large computer servers to store personal data for companies & organisations.

TM



Attribution = Giving credit to the artist

Copyright law:

Copyright law protects the owner of a creative work from having it illegally copied

When you see the symbol and text, e.g.

© Copyright David Morris

This means that you are not allowed to copy or redistribute this work

Possible **Health & Safety Concerns** when using a computer / technology:

- Bad Posture, Back Aches, Neck and Shoulder Strain
- Pain in Wrists — Carpal Tunnel Syndrome
- Eye Strain
- UV Blue light
- Headaches
- Physical Fatigue
- Poor Sleep Patterns
- Obesity

Health and Safety regulations:

The law states that an employer must provide:

- tiltable screens
- adjustable chairs
- foot supports
- lighting is suitable
- Tidy un-cramped workstations
- Frequent breaks
- (pay for) appropriate eye and eyesight tests by an optician

Key Skills:

- to be familiar with key laws surrounding the use of technology
- Be aware of common cyber-crime & scams

Royalties - are payments that buy the right to use someone else's property, including copyrighted works.

Plagiarism – Presenting someone else's work as your own.

Health & Safety at work Act – A law the must be followed by employers to keep workers safe at work (with focus on technology)

Ergonomic - Designed for comfort in the working environment



RSI – Repetitive Strain Injury (doing the same movement over and over can cause injury)

E-Waste – Electronic waste (toxic material that comes from electronic devices that can damage the environment)

**Links to prior knowledge/learning:**

Use of Office 365 helpful

No prior knowledge or learning needed for this unit

Cross Curricular link/ World Issues

Safe use of technology in business

Music and Media cross-over with 'copyright' issues

Royalties within the music industry

Knowledge Organiser Computer Science

Unit: Term 2 – Python

Year: 8

Purpose of Unit:

- **Understand...** why coding is important in everyday life
- **To know...** the basic programming commands and syntax in Python
- **To be able to...** code using 'sequence, selection & iteration code'

Key Learning/Knowledge:

Algorithms can be displayed a number of different ways...

- Plain English
- Flowcharts
- Pseudocode
- Programming Language

Key Vocabulary & meanings:

Algorithm – step-by-step instructions to perform a task (solve a problem)

Flowchart – a way of displaying an algorithm

Pseudocode – false code. Used to plan before coding for real. Using keywords (see below).

Input – how data enters the system (keyboard command, motion sensor, button etc.)

Process – calculations with data (doing something with input data like calculating time, or a total cost)

Output – information provided by the system (printed out on the screen as text)

Decision – allowing two options (Boolean option):
Example:

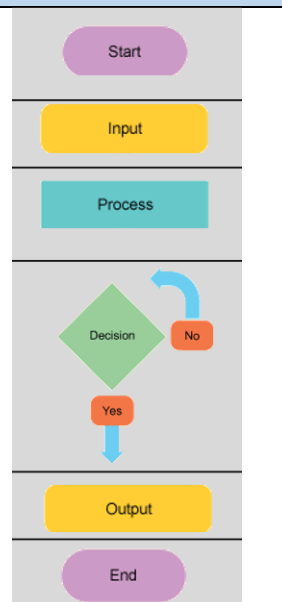
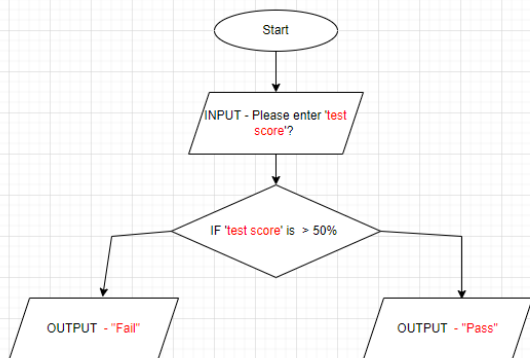
- Yes or No
- True or False
- On or Off
- 1 or 0

FOR – Loop for a certain number of times.

WHILE – Loop while a condition is true.

Example of an algorithm displayed using a 'Flowchart'

Common Flowchart symbols used when creating a flowchart for an algorithm.



Examples of key **Pseudocode** command words when writing out instructions using Pseudocode.

PSEUDOCODE:

INPUT –user will be inputting something

OUTPUT –outputs that might appear

WHILE – a loop while a certain condition is met

FOR – a counting loop (how long)

REPEAT – UNTIL

IF – THEN – ELSE – a decision (selection) a choice



Python Programming Language:
 "A programming language is a vocabulary and set of grammatical rules for instructing a computer to perform specific tasks"

What is computer Programming?

It is the process of **writing, testing, debugging/troubleshooting,** and maintaining the source code of computer programs. This source code is written in a programming language.

Programming Language:

"A programming language is a vocabulary and set of grammatical rules for instructing a computer to perform specific tasks"
 "A set of **rules symbols** and **special words** used to construct a computer program."

Text Editor: Where we WRITE our code.	Shell: Where we RUN our code.

Print Function:

The 'print' function is **an output command** used to display information on the screen.

```
File Edit Format Run Options Window Help
print ("Hello")
```

Syntax error:

In computer science, the syntax error is a **mistake in the code** that must be correct in order for the code to run properly.
 These are often highlighted in the Python shell.

Variable:

A variable is something that **can change. (and stored)**
 This means we can collect different information in the code as an input and then use this information later when needed.

Name of the Variable (This will store the INPUT typed in)

You can then recall that stored name later in your code.

```
File Edit Format Run Options Window Help
FirstName = input("Please enter your name?")
print ("Hello", FirstName)
```

Iteration– technical term for when code is repeated. (a loop)

Python– Name of the programming language

Sequence– When code is displayed line-by-line (in order)

Variable – data that can change (and be stored for later use)

Syntax Error – Error in the code (typically missing speech marks or brackets)

String – string of text or words in your code

Integer– Whole number used for calculations. Is a data type.

DATA:	DATA TYPE:
Dog	String
18	Integer
Kelly18	String

Arithmetic Operators –

- + Addition
- Subtraction
- * Multiplication
- / Division

Selection Code– Use to select a specific line of code to run based on a 'true' or 'false' decision.

Arithmetic Operators can be used to perform **calculations** in code.

```
File Edit Format Run Options Window
print (5*5)
print (5/5)
print (5+5)
print (5-5)
```

Assigning Integer Variables – in order to collect variables and perform calculations with them, you must assign them as integers as seen below.

```
File Edit Format Run Options Window Help
number1=int(input("Please enter a number:"))
number2=int(input("Please another number:"))

print (number1+number2)
```

Selection Code – this type of code allows use to perform a boolean check (**True or False**). It can be **used to make decisions** in code.

You can see it is checking if the 'Password' (entered and stored above as a variable) is the same as "Letmein123"

```
Password = input("Please enter your password:")
if Password == "Letmein123":
    True Option → print ("Welcome to the system")
else:
    False Option → print ("incorrect password")
```

Note: The two indented lines for if the check is 'True' or 'False'

Key Skills:

- To understand the term algorithm.
- To be able to use, print commands, variables and selection (IF, ELSE) code.
- Be able to identify syntax errors.
- Be aware of common terminology used

Links to prior knowledge/learning:

Use of Office 365 helpful

Knowledge or algorithm steps and scratch can help structure code.

Some basic knowledge of basic input-output components (helps)

Cross Curricular link/ World Issues

Programming used in real world situations / careers and industry

Embedded computer systems making life easier for different groups of people

Numeracy with numbers (calculations, mathematical operators)

Problem solving to produce a solution in code.

