



# KNOWLEDGE ORGANISERS

NAME: .....

**YEAR 8**  
**HALF TERM 6**



## What is a knowledge organiser?

A knowledge organiser is a place where your teachers have put all the **core knowledge** that you need to know for a particular topic. They are designed to support you to become self-regulated learners.

It is your first point of reference in lessons to check your understanding. You can use your knowledge organiser to:

- Check your understanding of key vocabulary in a lesson.
- Check your knowledge of a particular topic.
- Self-check quizzing and revision.

A knowledge organiser is **not** everything you are going to learn about a topic; this information will come from your lessons.

## How to use your knowledge organiser

### In lesson



Unless told otherwise, have your knowledge organiser on the desk, open at the subject you are currently in. This will make it simpler for you to check your understanding of key vocabulary.

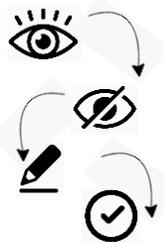


If you are struggling with a knowledge question, refer to your knowledge organiser before asking your teacher. This will also develop your research skills.



When planning your written answers in lessons, refer to your knowledge organiser for that subject to ensure you have correct and detailed knowledge.

### As revision



#### **Look-Cover-Write-Check**

1. Choose one section of your knowledge organiser.
2. Study it carefully. I find that reading it out works to embed it into memory.
3. Cover the section with a paper, or turn the KO over.
4. Write the sentence/information out from memory.
5. Check it against your KO.



#### **Timeline/diagrams**

Use the information from your knowledge organiser and transform it into something else. This can be a timeline, storyboard or diagram.



#### **Self-quizzing**

Choose a section of the knowledge organiser you want to learn. Create a set of questions to test yourself with. These can be on flashcards, or even Quizlet. Use the sections of your KO to chunk the knowledge together and make it manageable.

KEY VOCABULARY	
Bitmap/Raster Graphics	These images are based on pixels. Each pixel contains information about its colour.
Vector Graphics	These are very smooth images that cannot become pixelated.. They are based on mathematical formulas.
DPI	Dots per Inch
File formats	The different types of files used (for example JPEG)
White space	The area of the graphic within the final graphic that is blank.
Styles	This is related to the genre of the work and should be consistent with what would be expected.
Composition	The layout of the combined images and text to create the final graphic
Canvas	The area of the image that is the 'artwork'
Target Audience	Who the graphic is for (ie, male or female)
Assets	The images or text that you are importing into your image
Sources table	A record of where you sources the images you will use from. It should include if it is copyrighted
Copyright	The image has been created and owned by someone else.

## Graphic Design

### Knowledge

*For print use you will need 300 DPI (Dots per inch). For a webpage you will only need 72 DPI (Dots per Inch).*

*The higher the DPI, the more memory the image will take.*

*Use of colour: colour can stimulate different moods in the viewer. For example: blues and yellows are bright and energetic colours and red is a colour that symbolizes danger.*

*If you want to use a copyrighted image, you will need to ask permission from the owner of that image – they may charge you to use it.*

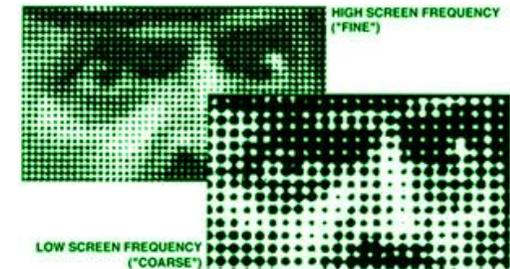
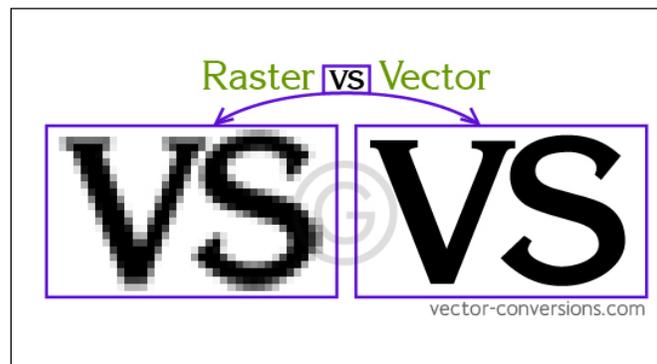
*Trademarks are used to identify organizations/company and are protected by law – logos are an example.*

*Hardware: The equipment used to create the image such as graphic pen, tablet, computer.*

*Software: The image-editing applications used to create the image (for example, Fireworks and Photoshop)*

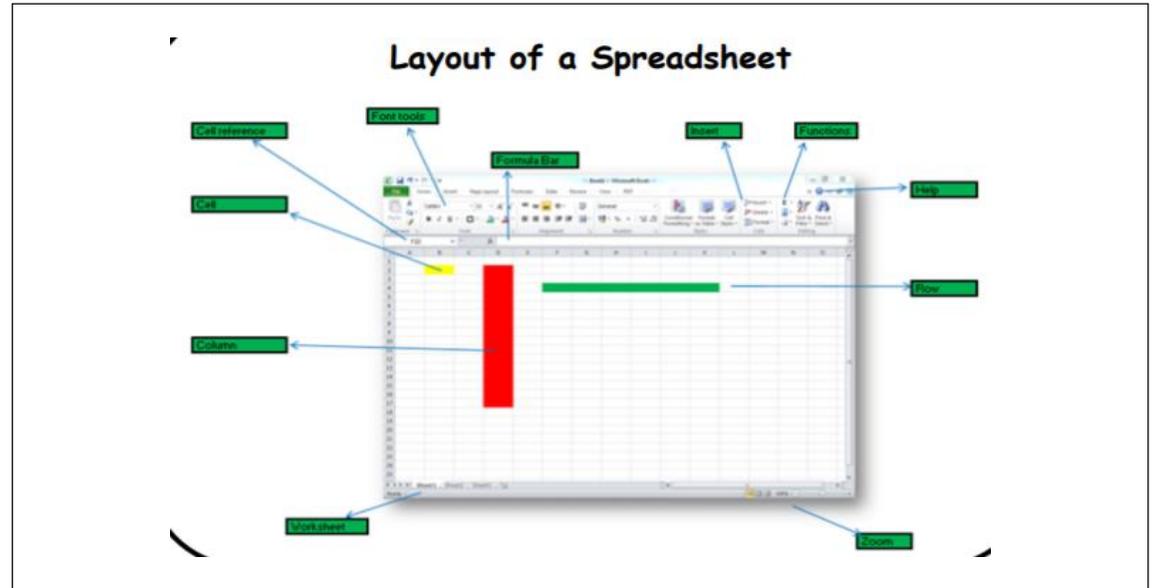
*Imaging devices: This is the hardware that you will need to transpose the image from where it is to your work area. These types of devices include scanners and digital cameras.*

*Version control means that you only use filenames that are suitable and that, whenever you create a new version, that your name includes V1,V2 to show what version it is that you have created. This will help if you want to retrace your steps to a previous version.*



KEY VOCABULARY	
<b>Cell</b>	A box in which you can enter a single piece of data.
<b>Cell Reference</b>	The name given to a cell to uniquely identify it. E.g. A1
<b>Formula</b>	An expression which calculates the value of a cell
<b>Formatting</b>	To change the appearance, layout or organisation of a spreadsheet.
<b>Borders</b>	Form an edge along or beside
<b>Rows</b>	The range of cells that go across (horizontal) the spreadsheet/ worksheet.
<b>Columns</b>	A vertical series of cells in a chart, table, or spreadsheet.
<b>IF statement</b>	The Excel IF Statement tests a given condition and returns one value for a TRUE result and another value for a FALSE result

## Spreadsheets



**Why do we use spreadsheets?** Spreadsheets are used to store information and data. Once we have our information in a spreadsheet, we can run powerful calculations, make graphs and charts and analyse patterns

**To make graphs:** Highlight your data, click the insert tab at the top of Excel and then pick the chart you need.

**Autofill:** Click on the cell you want to duplicate, grab the black cross in the bottom right-hand corner and drag it down to the remaining cells. This also works if you want to copy the formulas down as well

# Drama



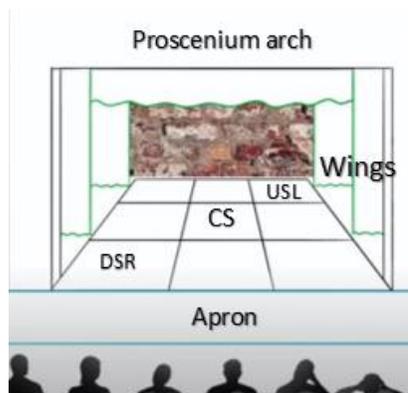
## Features of writing:

- Setting
- Characters
- Plot
- Conflict
- Protagonist
- Antagonist
- Prequel
- Sequel
- Duologue
- Dialogue

## Acting skills

- Vocal**
- Pace
- Pause
- Tone
- Volume
- Diction
- Projection
- Physical**
- Facial expression
- Eye contact
- Posture
- Movement/stillness
- Gesture
- Proxemics
- Levels

## The Proscenium Arch:



## Sound:

- Diegetic:** a sound from within the world of the play
- Directional:** where the sound comes from
- Distortion:** altering the sound
- Underscore:** music played in the background
- Recorded sound:** sound that has been recorded before the performance
- Live sound:** sound that is performed on the night of the show
- Volume:** how loud the sound is

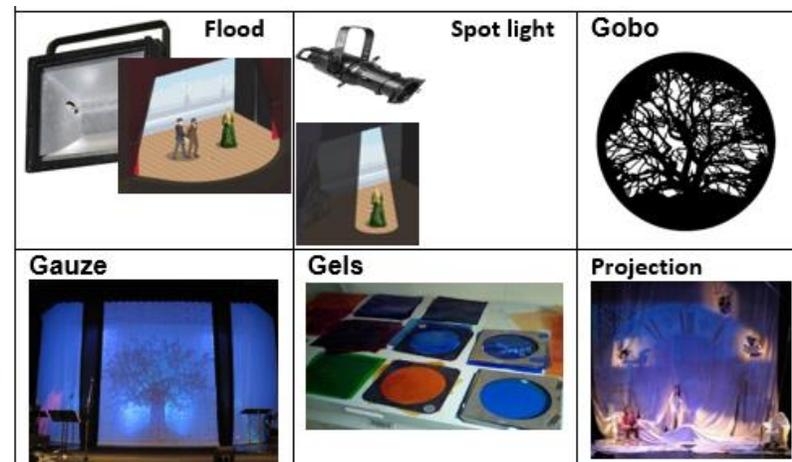
## Features of an effective poster:

Name of the production  
Appropriate design to establish genre



Where the performance is shown  
When the performance is shown  
Ticket information

## Lighting:



## Context

**Pre-1964** (before the setting of the novel)  
**1865** – slavery abolished in the USA  
 From late **19<sup>th</sup> Century, until 1964** racial segregation and the infamous **“Jim Crow”** laws that disenfranchise and remove political and economic gains made by black people, following the abolition of slavery.  
**1963** – assassination of JF Kennedy

**1964** The novel is set in South Carolina (USA) in the immediate aftermath of the Civil Rights Movement  
**Civil Rights Act of 1964**, was intended to provide protection for black men from discrimination based upon race and was expanded to protect women from discrimination as well. Abolition of the ‘Jim Crow’ laws.

**Racial prejudice** - many whites were angered by **Civil Rights Act** and continued to treat African-Americans cruelly. racial tensions mounted. Racism persists as a deep root in American society, despite political movements and social change.

**American politics in 1960s** the escalation of and subsequent protests against the Vietnam War; the continuation of the Cold War with Russia; the race to conquer space; and the changes in popular culture: see below...

**Social change and popular culture in 1960s USA**- rock and roll, the sexual revolution and the overall antiestablishment atmosphere— contributed to this volatile period.

## Plot: please add notes as we read

*The Secret Life of Bees* is the story of Lily Owens, a girl who has shaped her life around one devastating memory—the afternoon her mother died when Lily was four. Besides her harsh and unfeeling father, Lily’s only real companion is Rosaleen, a tender, but fierce-hearted black woman who cooks, cleans and acts as her "stand-in mother."

Set in 1964 in South Carolina, a place and time of seething racial divides, violence explodes one summer afternoon, and Rosaleen is arrested. Lily is desperate, not only to save Rosaleen, but to flee from a life she can no longer endure. Calling upon her lively personality and youthful daring, she breaks Rosaleen out of jail and the two escape, into what quickly becomes Lily’s quest for the truth about her mother’s life.

## Characters:

<b>Lily Owens</b>	The flawed, relatable protagonist who runs away from home primarily to discover the hidden past of her late mother, but also to escape her abusive father and help her surrogate mother Rosaleen evade racial persecution.
<b>Rosaleen</b>	Rosaleen becomes the Owens family’s housekeeper after Lily’s mother dies. She is a large, African-American woman who is not certain of her age. Rosaleen becomes like a mother to Lily.
<b>August Boatwright</b>	August is a beekeeper who lives in a bright pink house in Tiburon, SC. She is an African-American woman and sells Black Madonna Honey. She and her sisters, May and June, let Lily and Rosaleen stay with them.
<b>May Boatwright</b>	May is August’s very emotional sister. May’s twin sister, April, killed herself when she was fifteen years old. Since then, May is prone to emotional break-downs and spends a lot of time at her “wailing wall.”
<b>June Boatwright</b>	June is August’s other sister. She is a teacher who is not entirely happy Lily staying in their house. June is often rude to Lily.
<b>Zach</b>	Zach works for August. He is young African American man and Lily develops a crush on him.

### Key Vocabulary:

Abolition  
 Alienation  
 Catholicism  
 Blasphemy  
 Discrimination  
 Disenfranchise  
 Empowerment  
 Hierarchy  
 Incrimination  
 Persecution  
 Prejudice  
 Racism  
 Redemption  
 Segregation

### Themes: create a tally chart for each time these themes occur

Community  
 Secrets  
 Appearance and reality  
 Identity  
 Class  
 Gender  
 The role of women  
 Race  
 Age  
 Prejudice  
 Family

Forgiveness

### Some Literary Techniques and narrative methods used:

**Simile** – comparing two things using like or as.  
**Metaphor** – stating one thing as though it is something else.  
**Personification** - Giving human features/characteristics to a non-human object.  
**Repetition** – where an idea is repeated multiple times throughout a text often to strengthen the idea presented.  
**Unreliable narrator** – a sense that the narrator is not telling/is not able to tell the whole truth.

**Imperative Verb** – a command verb such as ‘put’ or ‘don’t’.  
**Pathetic fallacy** - a type of personification where emotions are given to a setting, an object or the weather.  
**Onomatopoeia** – words that sound a little like they mean.  
**Emotive Language** – language intended to create an emotional response  
**Bildungsroman** - coming of age narrative  
**Symbolism** – using images, ideas etc. to represent something else (see symbolism box)

### Symbolism: (add explanations to these key symbols as we read.)

Bees  
 The beehive  
 Our lady in chains  
 The whale pin

### Key terms

**God/G-D:** Some Jews prefer not to write the name of God, so they leave out the 'o'

**Yahweh:** The Hebrew name for God

**Adonai:** Some Jews prefer to use this term, meaning 'my Lord'

**Monotheism:** The belief in ONE indivisible God

**Covenant:** An agreement with conditions on both sides

**Promised Land:** Jews believe that Israel is the land given to them by God

**Omnipresent:** present everywhere at all times

**Shema:** a Jewish prayer, affirming belief in the one God, found in the Torah

**Torah:** The 5 books of Moses (Genesis, Exodus, Leviticus, Numbers, Deuteronomy) which make up the first part of the Tenakh

**Talmud:** an explanation of the Tenakh by Rabbis

**Tenakh:** the 24 books which make up the Jewish scriptures/bible

**Orthodox Jews:** Strict Jews who try to follow all the laws as they came straight from God to Moses

**Ultra-Orthodox Jews:** Very strict Jews. One type is Hasidic Jews

**Reform Jews:** Jews who believe that the laws and guidance can be adapted for modern times

**Shabbat:** The weekly holy day, starting at sunset on Friday and lasting until nighttime of Saturday

**Ten Commandments:** 10 laws given to Moses by God over 3000 years ago

**Mitzvot:** Jewish rules – there are 613 of these

**Pikuach Nefesh:** The obligation to save a life, even if doing so breaks a commandment

**Shekinah:** The divine (holy) presence of God

**Rabbi:** A Jewish religious leader and teacher

**Messiah:** 'The anointed one' – a leader of the Jews who is expected to live on earth at some time in the future

**Minyan:** a group of 10 adults; the minimum required to hold a religious service

**Menorah:** a candlestick holding either 7 or 9 candles

**Magen David:** a symbol of Judaism; represents the shield of King David who ruled Israel in the 10<sup>th</sup> C BC

**Tallit:** a prayer shawl. Ultra Orthodox Jews wear them under their clothes at all times. Others wear them for worship

**Brit Millah:** The Jewish birth ceremony

**Bar/Bat Mitzvah:** The Jewish coming-of-age ceremony, which means 'son/daughter of the commandment'

**Kosher:** food that meet the requirements of Jewish law.

### Key teachings

#### The Nature of God

The words of the Shema, a key prayer, sum up the Jewish idea of what God is like. For Jews, God is a single, whole and indivisible entity. He is infinite, eternal, and beyond the full understanding of humankind. This makes him the only being worthy of praise.

#### Covenant

The Jews believe they have an ongoing covenant (agreement) with God. God will look after them as long as they obey God's rules. Jews show their allegiance to God through circumcision and through following the commandments. They remember their covenant with God in their worship and at every festival.

#### Rules for Life

God gave Moses the 10 Commandments. These are the basic rules that all Jews should follow. However, in total, there are 613 mitzvot (laws) in the Torah. Jews should try to follow these to show respect to God. As well as the laws, there are key principles which Judaism says are most important. These are justice, healing the world, the sanctity of life (the belief that life is holy and belongs to God) and free will. Free will comes from God and means that all Jews have to make their own minds up to follow God's laws.

#### The Synagogue and Worship

The synagogue is the building for worship. As well as worship, it provides a place of study, so that Jews are able to learn more about their religion. The synagogue is usually key to a Jewish community and is used for religious and non-religious events. Most synagogues offer three services a day. These services will comprise prayers, blessings, thanks to God, reading from the Torah and a sermon to explain the reading and explain its link to Jews today.

#### Ceremony and Ritual

The Jewish calendar has many festivals. Two of these are Passover and Yom Kippur. At Yom Kippur, Jews seek atonement for their sins and they fast, pray and give to charity. At Passover, a ritual meal retells the story of Moses and how he freed the Israelites from slavery, leading them back to the Promised Land. The weekly festival of Shabbat reminds Jews of their duty to God, and they celebrate in the home and in the synagogue. There are complex rules about what can and can't be done on this day as it is a day of rest, commanded by God. Shabbat starts on Friday evening and lasts until Saturday night.

### Key Quotes

#### Scholars

*'Everything that exists depends on G-d, and He does not depend on anything'*  
Maimonides

*'Once one has decided to cleanse himself from thinking about sinning and other evil thoughts... G-d in His mercy will cleanse him'* Maimonides

*'Doing mitzvahs with joy and loving G-d, who gave them to us, is a great form of Divine service.'* Maimonides

#### Religious/ holy texts.

*'Hear, O Israel! The Lord our God, the Lord is one. You shall love the Lord your God with all your heart, with all your soul and with all your might.'* The Shema – Deuteronomy 6: 4-5

*'You shall not boil the kid in its mother's milk'* Exodus 23:19

*'Blessed are you LORD our God, King of the Universe, who brings forth bread from the earth'* Challah blessing

*'you shall practice self-denial... for on this day atonement shall be made for you... you shall be clean before the Lord'*  
Leviticus 16:29-31

*'Remember the Sabbath day and keep it holy'* Exodus 20:8

**Terminology**

Hygiene  
 Cross-Contamination  
 Food Poisoning  
 Core temperature  
 Function  
 Fermentation  
 Nutrition  
 Nutrient  
 Structure  
 Micro Nutrient  
 Macro Nutrient  
 Health

**Meat handling**

- Wash hands before and after handling raw meat.
- Use separate colour-coded equipment for meat preparation.
- Keep raw meat separate from other ingredients.
- Store raw meat between 0 – 5 degrees Celsius in the fridge.
- Ensure the core temperature of cooked meat reaches 75 degrees.
- Sanitise work surfaces after meat preparation.

**Eatwell guide**

Government guidance on how to eat well and be healthy based on the major food groups



**Function of bread ingredients**

Strong Flour	Provides the structure of bread, source of nutrients.
Water	Binds the ingredients together, activates the yeast.
Yeast	Using fermentation gives off CO2 allowing the bread to rise during proving and baking
Salt	Flavours the bread dough
Sugar	Encourages fermentation with the yeast

**Nutrition**

The study of the key nutrients in food, how they are vital for good health and how they work together.  
 Macro Nutrients – fat, protein and carbohydrate  
 Micro Nutrients – vitamins and minerals

**Pastry Making – Key points for shortcrust pastry**

- Keep ingredients cold.
- Use the correct ratio.
- Do not over handle.
- Using the rubbing in method.
- Chill the pastry before using.

## Year 8: Africa

### Physical World of Africa

<b>Mount Kilimanjaro</b>	A dormant (sleeping) volcano in Tanzania, East Africa. It is the highest mountain in Africa, at 5895m tall.
<b>Namib</b>	A coastal desert in Namibia, West Africa. It is 2000km long.
<b>Serengeti National Park</b>	A protected region of Northern Tanzania, through which thousands of wild animals, such as zebra and wild cats, pass each year.
<b>Sahara</b>	The world's largest hot desert, which covers 11 different countries in Africa.
<b>Big Game</b>	Game are land mammals and birds. The 'Big 5' are the lion, leopard, rhino, elephant and buffalo.
<b>Endangered</b>	A species that is at serious risk of extinction.
<b>Conservation</b>	Protecting plants and animals from harm.

### People in Africa

<b>Kalenjin</b>	A tribe from the Rift Valley in Kenya, East Africa. They are well known for their excellent running ability.
<b>Colonisation</b>	Taking control of another country, its people and resources.
<b>Apartheid</b>	A law which separated white people and black people in the country of South Africa.
<b>Nelson Mandela</b>	Former president of South Africa. Famous for ending apartheid.
<b>HIC</b>	High Income Country
<b>LIC</b>	Low Income Country
<b>Development</b>	Using economic growth (money) and technology to improve quality of life.

### Resources in Africa

<b>Water Crisis</b>	Millions of people in Africa lack safe drinking water. Crops may fail and people get sick from drinking dirty water.
<b>Surplus</b>	Having more than enough of something.
<b>Deficit</b>	Not having enough of something.
<b>Famine</b>	Extreme lack of food, causing lots of people to starve.
<b>LHWP</b>	Lesotho Highlands Water Project





## Key people

### Influential writers

#### Thomas Paine

Revolutionary writer and philosopher who wrote 'The Rights of Man' following the French Revolution. His belief in greater suffrage was concerning for the ruling classes in England.

#### Mary Wollstonecraft

Arguably one of the first feminist writers, she wrote 'A Vindication for the Rights of Women' arguing that women, alongside men, deserved greater rights.

### Radicals

#### Henry Hunt

Radical political reformer who gained the nickname "Orator" Hunt for his speechmaking. He advocated universal suffrage and is remembered as a pioneer of the working class, and influential in the case for reform

#### William Lovett

Chartist leader who believed that peaceful and rational protests were the way to gain greater political rights. He advocated petitions, pamphlets and lobbying MPs.

#### Feargus O'Connor

Chartist leader who argued that peaceful protest was not enough. He was arrested for 18 months for encouraging violence. He was elected as an MP in 1847.

## Key terms

### Democracy

Power and rule of the many, usually through democratic elections

### Monarchy

King or queen

### Rotten Borough

A constituency with a small population but representation in parliament

### Republic

State run by the will of the people, without a monarch

### Protest

A public demonstration

### Radical

Someone who believes in change

### Universal suffrage

The right of everyone to vote

### Magistrate

Local government of a town or city

### Reform

To change or adapt

### Petition

A formal written request, typically one signed by many people, appealing to authority in respect of a particular cause.

### Chartist

A protest group who campaigned for 6 demands. Split into **Moral Force** Chartists and **Physical Force** Chartists.

## Key events

### Politics in 1800s

- English politics was corrupt and unfair. The only people eligible to vote were those who owned land, which was equal to around 2% of the population.
- Rotten boroughs** were places (like Old Sarum) where there was a small population but they had a representative in Parliament.
- However, new industrial towns (like Manchester and Birmingham) with large populations had no MP to represent them in parliament.

### Protests for rights

- The Blanketeers** (1817) – a group of Lancashire weavers planned to march to London protest over the state of the textile industry.
- Peterloo Massacre** (1819) – 60,000 people from the surrounding areas of Manchester gathered to hear Henry 'the Orator' Hunt speak. It ended in death and injury when the magistrates broke it up.
- The Bristol Riots** (1831) – The people of Bristol rioted when a government official argued that the people of Bristol opposed reform to British politics.

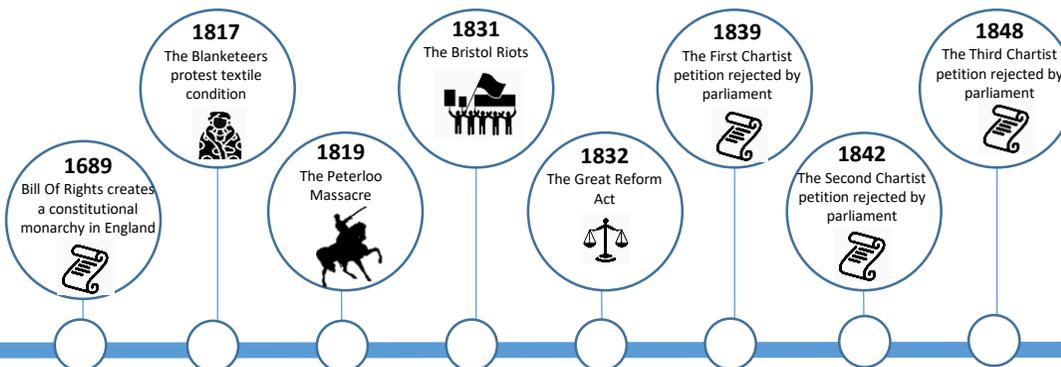
### 1832 Reform Act

- To prevent a large scale riot, the government passed the 1832 Reform Act. The changes include;
  - More people being able to vote (from 450,000 to 800,00)
  - Some big towns like Manchester and Birmingham given an MP
  - Some rotten boroughs removed
- However, this act was a long way away from democracy. It meant that the aristocracy and wealthy industrialists kept the vote away from workers.

### The Chartist Movement

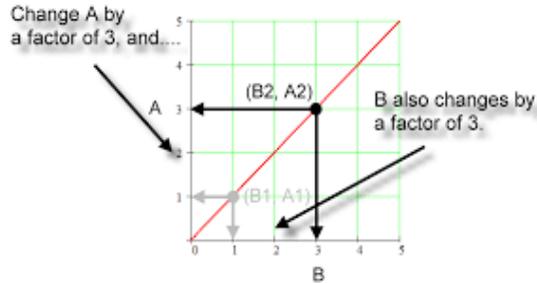
- The Chartists grew out of anger that the 1832 Reform Act didn't do enough for working class people. They had 6 demands.
- They began by presenting petitions and charters to parliament, demanding change. These charters were ignored.
- The Chartists split into **Moral Force** chartists (who believed in peaceful protests) and **Physical Force** chartists (who championed using violent means).
- By 1848 the Chartists had fizzled away.

## Timeline

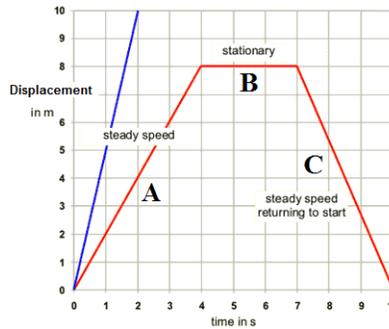


# Prior Knowledge Mathematics

**Direct Proportion** - There is a **direct proportion** between two values when one is a multiple of the other.



**Distance Time Graphs** - If an object moves along a straight line, the **distance** travelled can be represented by a **distance-time graph**. In a **distance-time graph**, the gradient of the line is equal to the speed of the object.



**Substitution** - In Algebra "Substitution" means putting numbers where the letters are.

Evaluate the expression  $2y + 7$ , for  $y = 4$

$$2y + 7 \quad (y = 4)$$

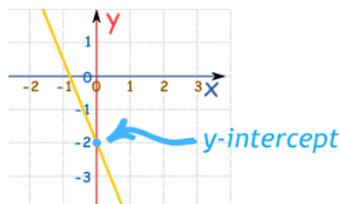
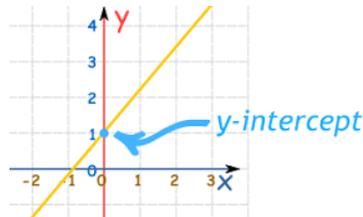
$2y$  means  $2 \times y$

$$= 2(4) + 7$$

$$= 8 + 7$$

$$= 15 \checkmark$$

**Y-intercept** - The **y-intercept** of this line is the value of **y** at the point where the **line** crosses the **y** axis.



## BIDMAS

**( )** **x<sup>y</sup>** **÷ or ×** **+ or -**

Brackets Indices Divide & Multiply Add & Subtract

Order of Operations

**Coefficient** - a number in front of a variable or term.

$$6a + 1b + 2x^2y$$

↑      ↑      ↑

6      1      2

Direct Proportion	An increase in one quantity causes a corresponding increase in the other quantity, or a decrease in one quantity results in a decrease in the other quantity.	
Gradient	Another word for "slope". The higher the gradient of a graph at a point, the steeper the line is at that point.	
Negative Gradient	A negative gradient means that the line slopes downwards.	
Linear Equation	An equation that describes a straight line on a graph.	$y = mx + c$ gradient      y-intercept
Origin	The starting point. On a number line it is 0. On a two-dimensional graph, it is where the X axis and Y axis cross.	
Line Segment	A part of a <b>line</b> that is bounded by two distinct end points.	

# Prior Knowledge

# Mathematics

$0.5$   
 $\downarrow \uparrow$   
 $\frac{5}{10}$

$0.72$   
 $\downarrow \uparrow$   
 $\frac{72}{100}$

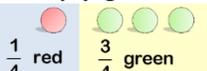
$0.638$   
 $\downarrow \uparrow$   
 $\frac{638}{1000}$

Decimals to fractions = To convert a **decimal** to a **fraction**, place the **decimal** number over its place value.

Proportion - a part, share, or number considered in comparative relation to a whole.

Fraction	Decimal	Percentage
 $\frac{1}{4}$	0.25	25%
 $\frac{1}{2}$	0.5	50%
 $\frac{3}{4}$	0.75	75%
 $\frac{1}{3}$	0.33	33 $\frac{1}{3}$ %
 $\frac{2}{3}$	0.66	66 $\frac{2}{3}$ %

1 : 3



$\frac{1}{4}$  red     $\frac{3}{4}$  green

3 : 2



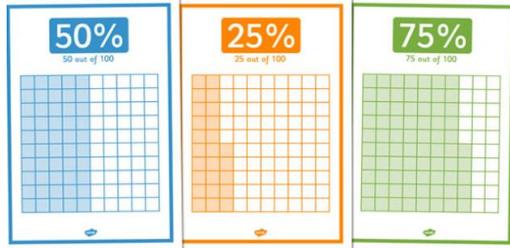
$\frac{3}{5}$  red     $\frac{2}{5}$  green

60 Seconds = 1 Minute

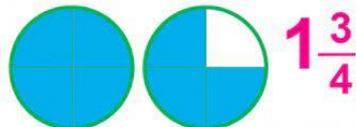
60 Minutes = 1 Hour

24 Hours = 1 Day

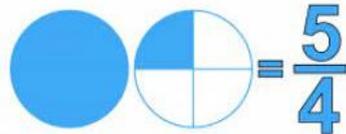
A **percentage** is a proportion that shows a number as parts per hundred. The symbol '%' means 'per cent'.



Mixed Numbers - a whole **number**, and a proper fraction represented together.



Improper fraction - a **fraction** in which the numerator (top number) is greater than or equal to the denominator (bottom number).



## Key Concepts

## Year 8 – Unit 10 – Percentages, Decimals and Fractions

Terminating Decimals	Ends after a definite number of digits.	$0.125 = \frac{1}{8}$ <i>terminating</i>
Recurring Decimals	Contains a digit or sequence of digits, which repeats itself forever.	$\frac{2}{3} \quad 2 \div 3 = 0.6666666666... = 0.\dot{6}$ $\frac{1}{6} \quad 1 \div 6 = 0.1666666666... = 0.1\dot{6}$
Numerator	Top number in a fraction.	$\frac{3}{5}$ ← <b>numerator</b>
Denominator	Bottom number in a fraction.	$\frac{3}{5}$ ← <b>denominator</b>
Increase by a percentage	Work out the percentage and add to the original amount.	Increase \$800 by 60%. 10% of 800 is 80. Multiply that by 6. 60% of 800 is 480. That's 60% of 800. This is what we have to add to 800 to increase 800 by 60%. Increase \$800 by 60% → $800 + 480 = \$1280$
Decrease by a percentage	Work out the percentage and subtract from the original amount.	Example: Decrease 50 by 30% • Step 1 - 10% of 50 = 5. So, 30% of 50 = 15 • Step 2 - $50 - 15 = 35$ • Therefore 50 decreased by 30% = 35
Percentage multiplier	Add or subtract the amount from 100 then change to a decimal (divide by 100)	Increase 310 by 22% $100\% = 1.0$ $22\% = 0.22$ $122\% = 1.22$
Unitary method	Work out 1% and then multiply to the required amount.	$20\% = £40$ $1\% = £2$ $100\% = £200$

Stave Notation - Treble Clef

E G B D F

Every Green Bus Drives Fast

F A C E

FACE in the spaces

Terminology

- Bar & bar lines
- Score
- Notation
- Stave
- Articulation
- Accuracy
- Fluency
- Expression
- Tempo
- Style
- Genre
- Ensemble
- Solo
- Instrumentation
- Melody
- Phrasing
- Rhythm
- Time signature

Notation – Rhythms

	ta		ti-ka-ti
	ti ti		tika tika
	ta-a		Rest
	Tum ti		Syn – co – pa

Film Music Composers

**John Williams:** Star Wars, Jaws, Harry Potter, ET, Jurassic Park, Indiana Jones.

**Danny Elfman:** Edward Scissorhands, The Simpsons, Alice in Wonderland.

**Hans Zimmer:** Pirates of the Caribbean, Gladiator, The Lion King.

**Components of fitness**

Speed                      Cardiovascular endurance                      Power                      Reaction time

Coordination

**Sprinting**

**Start**



**During**

- Hold your torso straight and vertical
- Hold head still, facing forward
- Bend elbows at 90 degrees
- Pump your arms so hands travel from hips to lips, keep shoulders steady
- Opposite arm to leg
- With each stride lift front knee high

**Rules**

- A false start is called when the feet of a runner leave the starting blocks before the starter's gun

**Long distance**

**Start:**

- Standing

**During**

- Hold your torso straight and vertical
- Bend elbows at 90 degrees
- Pump your arms so hands travel from hips to lips, keep shoulders steady
- Opposite arm to leg

**Pace is very important during a long distance race**

**Rules**

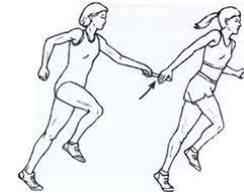
- During an 800m race, athletes run the first curve in separate lanes, then break after 100m.

**Relay (4x100m)**

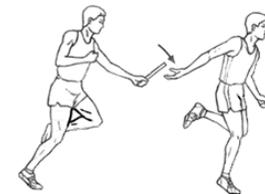
!! Same technique as sprinting !!

**Baton change over:**

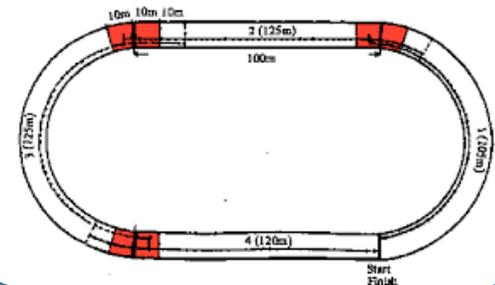
- UP sweep exchange



- DOWN sweep exchange



**The exchange must happen in the red areas marked below**



**Burnley Athletics Club**  
 Barden Athletics track  
 New Hall St  
 Burnley  
 BB10 1JH

**Exit routes:**

**Todmorden Harriers**  
<https://www.todharriers.co.uk/>

### Components of fitness

Muscular strength

Speed

Flexibility  
Power

Balance

Agility

### Long jump

#### Run up

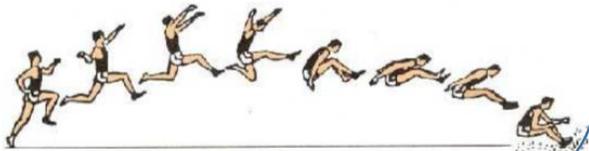
- Athlete accelerates onto the take off board, aiming to be close to maximum speed at take off.

#### Take off

- Take off on one leg as close to the line as possible.
- Maintain this take off position for as long as possible.
- As the athlete comes into land, bring both legs in front of body.

#### Rules

- No part of the athlete's foot should cross the front edge of the foul line.



### Shot putt

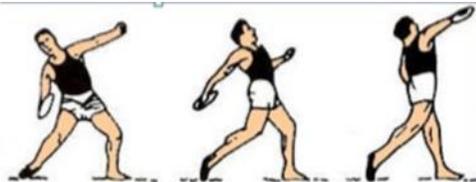
- Rest the shot on your **palm** and push into your neck
- Ensure your chin, knee and toe are in line
- Punch shot away from the neck
- Keep elbow high

#### Rules:

The shot must be released above the height of the shoulder with one hand

### Discus

- Your throwing hand (including the thumb) is on top of the discus with your fingers evenly spread.
- The top knuckle of your four fingers (not the thumb) should touch the rim, with your fingertips over the sides
- Ensure your chin, knee and toe are in line
- Shift your weight forward as you pivot your hips.
- The discus should leave your hand smoothly off the index finger with your hand at about shoulder height.
- Follow through, rotating to your left to remain in the ring and avoid fouling (if right handed).



### High jump

#### Run up

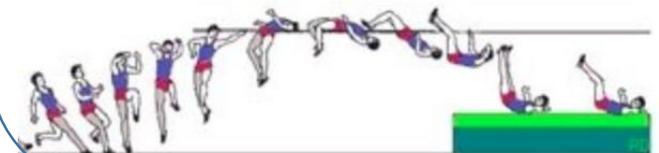
- Run on a curve leaning away from the bar.
- Use approximately 6-12 steps on approach.

#### Take off (Fosbury flop)

- On take off, point foot towards the far corner of the landing area.
- Drive knees upwards on the leg closest to the bar.
- Rotate hips so you are facing away from the bar.
- Reach arm up and over.
- Arch back and bring legs together.
- Lift feet over and land on back, tucking chin to chest.

#### Rules

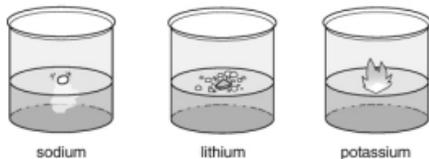
- Take off on one foot only.
- Do not touch the bar.





## Science: Year 8G Metals and their Uses

Key Concepts.	Definition
Oxidation	The reaction of metals with oxygen form metal oxides: metal + oxygen → metal oxide calcium + oxygen → calcium oxide $2Ca + O_2 \rightarrow 2CaO$
Reactivity series	The reactions of metals with oxygen, water and acids allows us to put the metals in order of reactivity. Potassium is the most reactive, sodium less so. Gold is the least reactive.
Metal and acid reactions	When metals react with acids, they produce a salt and hydrogen. The name of the salt formed depends on the name of the acid. E.g. magnesium + hydrochloric acid → magnesium chloride + hydrogen. $Mg + 2HCl \rightarrow MgCl_2 + H_2$
Uses of metals based on their properties	Metals have many uses depending on their different properties. For example, copper is used in electrical wires as it is flexible and a good conductor of electricity. It is also used for roof sheets as it is malleable and doesn't react quickly with water.
Rusting	The corrosion of iron is called rusting. Water and oxygen must be present for iron to rust. iron + water + oxygen → iron hydroxide Coating the iron with paint, plastic, etc. acts as a barrier to oxygen and water and stops iron rusting.
Key word	Definition
Alloy	A metal with one or more other elements added to improve its properties.
Catalyst	A substance that speeds up a reaction, without itself being used up.
Corrosion	When something, such as stone or metal, reacts with chemicals in the air or water and gets worn away.
Malleable	Able to be beaten and bent into shape.

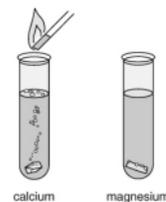
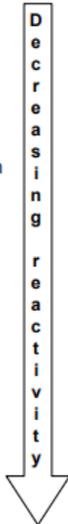


Some metals are very reactive with water. Potassium is very reactive and will explode into flames. Sodium is less reactive and fizzes a little.  
potassium + water → potassium hydroxide + hydrogen

### Reactivity series

The reactions of metals with oxygen, water and acids allows us to put the metals in order of reactivity:

Potassium  
Sodium  
Lithium  
Calcium  
Magnesium  
Aluminium  
Zinc  
Iron  
Tin  
Lead  
Copper  
Mercury  
Silver  
Gold



When metals react with acid, hydrogen is released. We can use the squeaky pop test to find out if hydrogen is present.

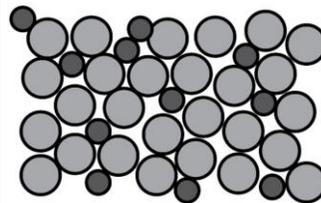
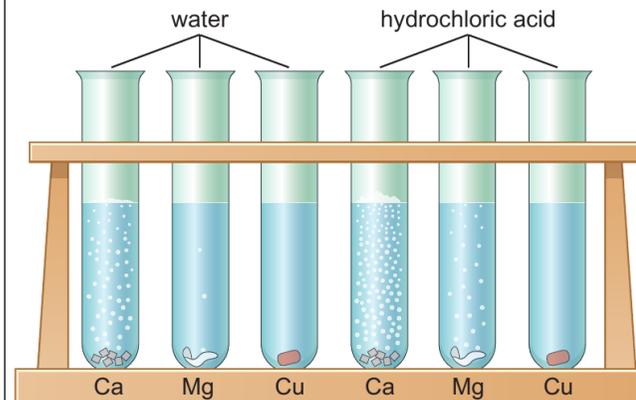


Diagram of an alloy with 2 different elements. This can increase its strength.

Properties of Metals.	Properties of Non-metals
Good conductors of heat.	Poor conductors of heat.
Good conductors of electricity.	Poor conductors of electricity.
High melting point.	Low melting point.
Malleable	Brittle.

Alloy	Main metal	Added elements	Improved properties
solder	lead	tin	lower melting point than lead
duralumin	aluminium	copper and magnesium	lighter and stronger than aluminium
stainless steel	iron	carbon, chromium, nickel, etc.	stronger and more resistant to corrosion than iron

### Core practical



This experiment shows that metals react faster with acids than water.



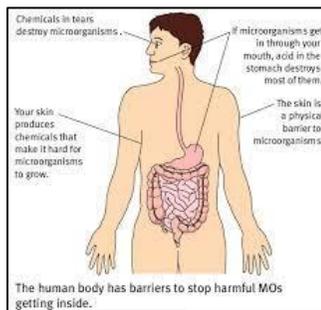
# Todmorden High Science K.O. Year 8 Topic Microbes and Disease



Key term	Definition
Unicellular	An organism made of one cell.
Multicellular	An organism made of many cells
Bacterium	A type of prokaryote organism. Plural is bacteria.
Fungus	A member of the fungus kingdom. A fungus can be multicellular or unicellular but does not make its own food. Plural is fungi.
Virus	A non-living particle that can change how a living cell functions when it enters a cell. Inside a cell, a virus often causes the cell to make copies of the virus
Vaccine	A dead or altered form of a disease which brings about an immune response and immunity to the disease.
Microorganism	An organism too small to be seen with the naked eye.
Antibiotic	A medicine (such as penicillin or its derivatives) that inhibits the growth of or destroys microorganisms. Originally derived from microscopic fungi.
Anaerobic Respiration	A type of respiration that does not need oxygen.
Fermentation	Anaerobic respiration occurring in microorganisms.
Aseptic	To avoid contaminating with microbes

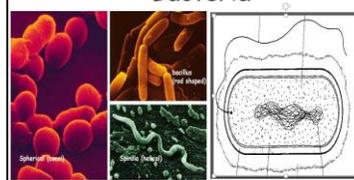
## The Big Ideas and Must Know Facts

### The body's protection

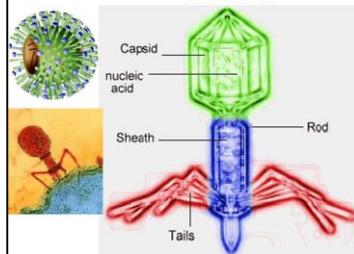


### 3 types of microbes

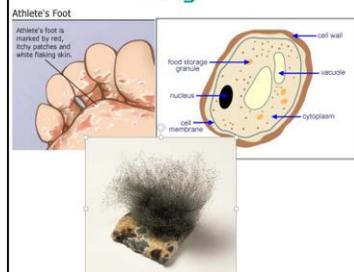
#### Bacteria



#### Viruses



#### Fungi

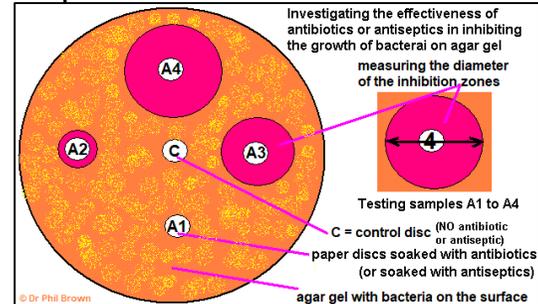


### Vaccines

One means of assisting our immune system is through **vaccinations**. Vaccines are used to prevent, NOT treat infection. A **vaccine** is usually made from weak or inactive versions of the same microbes that make us ill. In some cases, the vaccines are made from cells which are similar to, but not exact copies of, the microbe cells that make us ill.

When the vaccine is introduced into the body the immune system attacks it as if harmful microbes were attacking the body. The **white blood cells** create lots of **antibodies** to attach to the **antigens** on the surface of the vaccine. Because the vaccine is an extremely weakened version of the microbe the WBC successfully eliminate all the microbial cells in the vaccine and the vaccine will not make you ill.

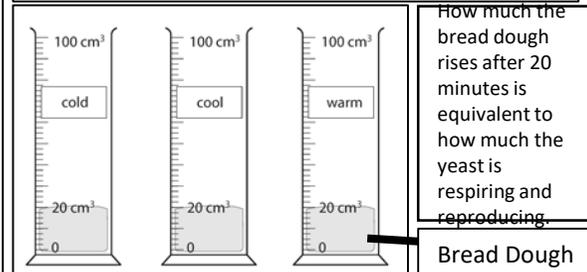
## Required Practicals.



The majority of the time the immune system defeats any harmful microbes entering the body, however, in some cases the immune system needs help. **Antibiotics** are special medicines used by doctors to kill harmful **bacteria**. Some antibiotics stop the bacteria reproducing and others kill the bacteria. Antibiotics treat infectious diseases caused by bacteria, such as meningitis, tuberculosis and pneumonia. They do **not** harm viruses, so antibiotics cannot treat diseases such as colds and flu, which are caused by viruses. Examples of antibiotics are penicillin, erythromycin and tetracycline.

### What variables affect the speed at which dough rises?

Bread dough can be made by mixing together 5g of sugar, 3.5g of yeast, 100g of bread flour and 65cm<sup>3</sup> of water. When kept in a warm place, the bread dough rises.



**1. ¿Tiene una habitación libre? / En el hotel**

Do you have a room available? / In the hotel



**Quiero –**  
I want

**Me gustaría / Quisiera reservar –**  
I would like to reserve



**una habitación doble –** a double room

**una habitación individual –** a single room



**con baño –** with a bath  
**con ducha –** with a shower  
**con balcón –** with a balcony  
**con aire acondicionado –** with air conditioning  
**con pensión completa –** with full board  
**con media pensión –** with half board  
**con vistas al mar –** with sea views  
**con cama de matrimonio –** with a double bed  
**con dos camas –** with two beds  
**con conexión a internet –** with internet connection

**para una\* noche –** for a/one night  
**para una\* semana –** for a/one week  
**para quince días –** for a fortnight



**para dos\* personas –** for two people  
**para una familia de... –** for a family of...

**¡ESCUCHA! - SCAN ME FOR PRONUNCIATION.**



SCAN ME

*\*¡OJO! – Use a different number to change the people/time.*

**2. ¿Adónde vas de vacaciones normalmente?**

Where do you usually go on holiday?



**Suelo ir... –**  
I usually go...

**Solemos ir... –**  
We usually go...

**Normalmente voy... –**  
I normally go

**Vamos... –**  
We go...

a - to

**España –** Spain  
**Gales –** Wales  
**Francia –** France  
**Escocia –** Scotland  
**Italia –** Italy  
**Irlanda –** Ireland  
**Grecia –** Greece  
**los Estados Unidos –** USA  
**Portugal –** Portugal  
**Alemania –** Germany  
**Turquía –** Turkey



**con mi familia –** with my family  
**con mis padres –** with my parents  
**con mis amigos –** with my friends  
**solo/sola –** by myself



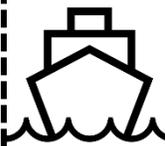
y - and

**viajo en... –**  
I travel by...

**viajamos en... –**  
we travel by...



**avión –** plane  
**autocar –** coach  
**tren –** train  
**coche –** car  
**barco –** boat  
**moto –** motorbike



**3. ¿Qué te gusta hacer durante las vacaciones?**

What do you like to do on holiday?



**Quando estoy de vacaciones, me gusta...** –  
When I am on holiday, I like...

**Quando estoy de vacaciones, suelo...** –  
When I am on holiday, I usually...

**visitar monumentos** – visit monuments  
**nadar** – to swim  
**sacar fotos** – to take photos  
**esquiar** – to ski  
**ir de excursión** – to go on a day trip  
**tomar el sol** – to sunbathe  
**montar en bicicleta** – to go on a bike ride  
**descansar** – to relax  
**ver lugares de interés** – see places of interest  
**ir al parque temático** – to go to a theme park  
**ir al parque acuático** – to go to a water park  
**hacer deportes acuáticos** – to do watersports



**dado que** – because

**porque** – because

**visto que** – because

**es** – it is

**divertido** – fun  
**entretenido** – entertaining  
**relajante** – relaxing  
**activo** – active  
**interesante** – interesting



**4. ¿Adónde fuiste de vacaciones el año pasado?**

Where did you go on holiday last year?



**El año pasado** – Last year

**El verano pasado** – Last summer

**El invierno pasado** – Last winter

**Hace seis meses\*** – Six months ago

**fui a/en...** – I went to/by

**fuimos a/en...** – We went to/by

**me alojé en...** – I stayed in..

**nos alojamos en...** – we stayed in

**y** – and

**visité monumentos** – I visited monuments

**bailé** – I danced

**fui de excursión** – I went on a trip

**jugué al voleibol en la playa** – I played volleyball on the beach

**nadé en el mar/ en la piscina** –

I swam in the sea/ in the pool

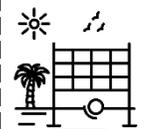
**descansé** – I relaxed

**esquíé** – I skied

**saqué fotos** – I took photos

**tomé el sol** – I sunbathed

**Lo pasé...** – It was/I had a...time...-



**bien** – good  
**regular** – okay/nothing special  
**fenomenal** – phenomenal/wonderful  
**genial** – great  
**bastante bien** – quite good  
**mal** – rubbish  
**aburrido** – boring

*\*¡OJO!* – Use a different time amount and quantity to change the meaning.



**5. ¿Adónde te gustaría ir este año?**

Where would you like to go this year?

**Este verano** – this summer

**En julio\*** –

In July

*\*¡OJO!* – Change the month or season.



**espero...** – I hope to...  
**me gustaría** – I would like to...

**quiero** – I want to...

**tengo la intención de** – I intend to...

**voy a** – I'm going to...



**ir a** – to go to  
**ir con** – to go go with

**quedarme en** – to stay in

+ Activities from the list in Section 3

+Locations and people from Section 2

**un hotel de lujo** – a luxury hotel  
**un albergue** – a hostel  
**una pensión** – a B+B  
**un parador** – a parador

# Year 8 Art

## Key Vocabulary

Term	Definition
Sketch	A rough or unfinished drawing or painting, often made to assist in making a more finished picture
Proportion	Comparative relation between things or magnitudes as to size, quantity, number
Refine	To add the finishing touches to something or to improve something before it is completely finished.
Composition	The considered layout of a piece of work
Hybrid	The offspring resulting from combining the qualities of two organisms of different breeds, varieties, species or genera through sexual reproduction.
Surrealism	20th-century avant-garde movement in art and literature which sought to release the creative potential of the unconscious mind.
Hatching	Shading with closely drawn parallel lines
Colour gradient	Also known as colour transitions, are a gradual blending from one colour to another colour

## Overview

During this project students will learn about artist Redmer Hoekstra and how he is able to create such highly imaginative hybrids of animals, humans and objects. Students will discuss the meaning of hybrids and how this principle has been used in modern science and the implications this could have on our future. They will create, first, a copy of Hoekstra's work concentrating on proportion and detail. Students will then add tone and shade using pencil and pen wash. During this study students will make informed and meaningful connections to the purpose behind the religious significance of hybrids, looking at Indian gods and goddesses. Students will then create their own hybrid using collage and then draw this collage as their final piece. They will add colour to this final piece using acrylic paint which will then be refined with pen. The finer details and textures of their hybrids will be added in order to make the piece seem more realistic and highlight the student's refining skills.

## Hybrids

The idea of creating hybrids in modern science is about blending specific parts of different things together to create a new organism. This is useful when we are trying to engineer something of use to modern society like an animal that will prove useful in medical science or to help breed out recessive genes or characteristics. You can also look at selective breeding for information on this. This idea also links in with Indian Gods and Goddesses. These were animal and human hybrids which symbolise ideal characteristics from both the animal world and the human world as a way of showing the strongest aspects

## How To Create An Accurate Drawing

1. Work out the proportions of your drawing - where is the halfway point on your image?
2. Section of your page so you can keep the proportions of your drawing correct.
3. Lightly sketch out the outline of your hybrid, making sure to get the features the correct size.
4. Start to add in your inner details of the hybrid such as textures to the animal or object.
5. Looking at your image, start to add in your darkest areas of shadow first, then work into mid tones and finally white highlights.
6. Refine your drawing.

## Artist Information

Redmer Hoekstra (1982) graduated from the Art Academy in Zwolle as a visual artist and illustrator in 2009. "I've always loved alienation and fantasizing, daydreaming. I play with form, meaning and function, while new combinations arise. Often surprising, strange and funny but also with a strange kind of logic, a fantastic and surreal world." Hoekstra creates detailed illustrations using pencil and pen of surrealist hybrid animals and human beings. His work shows combinations of animals, human beings and inanimate objects. His work shows such high levels of detail and tone, to the point where his fantasies could almost be real beings.

# KS3 DT

## Health and safety

Apron	Keep clean and reduce impact of something coming into you.
Goggles	Protect your eyes when using machines.
Hazard lines	Only one person to be in front of these yellow lines when operating the machine.
Ear defenders	Protect your hearing from using loud machines.
Bags in the rack	To avoid others tripping over them.
Ties and jewellery tucked away	Ensuring they don't get caught in tools.
Long hair in a hair band	Avoid it getting caught in machines.
No running	Avoid trips and falls and maintain a calm environment.
Question	Ask before using machines. Any questions, if in doubt – DON'T

## Marking and measuring out tools

Sharp pencil	To make a mark.
Metal rule	Used to measure.
Tri square	Producing parallel lines.

## Key steps in the design process design process

## Definition

Design brief	What the purpose of your project is, in brief
Specification	The specific details that your end product must adhere to
Quality control	The process of checking the quality of the work as you progress through the project

Word	Definition
<b>Colour</b>	The property possessed by an object which produces different sensations on the eye as a result of the way it reflects or emits light.
<b>Materials</b>	The matter from which a product is or can be made.
<b>Texture</b>	The feel, appearance, or consistency of a surface or a substance.
<b>Components</b>	A part or element of a larger product, especially as part of a machine or vehicle.
<b>Target Market</b>	A particular group of consumers at which a product or service is aimed.
<b>Aesthetics</b>	The look, taste, feel, and smell of a product or material.
<b>Form</b>	The visible shape of a product.
<b>Function</b>	The purpose and use of a product.
<b>Ergonomics</b>	Ergonomics is about how easy a product is to use. It should be comfortable to use and the person should like using the product.
<b>Anthropometrics</b>	Anthropometrics is used to make sure that the product is the correct size and proportions to suit the needs of the user.

# ACCESS FM

**A**  
AESTHETICS

WHERE DID THE DESIGNER GET THEIR INSPIRATION? COULD THE PRODUCT LOOK BETTER?

DO YOU THINK IT LOOKS ATTRACTIVE OR UGLY, WHY?

WHAT DOES THE PRODUCT LOOK LIKE? THINK SHAPE, FORM, MATERIALS, SIZE, BEAUTY, UGLINESS



**C**  
COST

IS IT AFFORDABLE TO YOUR CUSTOMER? WILL IT MAKE A PROFIT?

IS IT VALUE FOR MONEY?

HOW MUCH DOES IT COST?



**C**  
CUSTOMER

WHAT IMPACT WOULD IT HAVE ON A CUSTOMERS LIFE?

WHY WOULD A CUSTOMER BUY IT? WHAT MAKES IT SUITABLE FOR THEM?

WHO WOULD BUY IT? WHO WOULD USE IT?



**E**  
ENVIRONMENT

WHAT IS THE PRODUCTS IMPACT ON THE ENVIRONMENT? THINK BATTERIES, RETHINK, REFUSE, REDUCE, REUSE, RECYCLE, LIFE-CYCLE

HOW WOULD THE PRODUCT BE DISPOSED OF?

IS THE PRODUCT NEEDED OR WANTED? HOW LONG WILL IT LAST?



**S**  
SAFETY

IS THE PRODUCT HIGH QUALITY? DOES IT MEET SAFETY STANDARDS?

HOW HAS THE DESIGNER CONSIDERED SAFETY?

COULD THE PRODUCT HURT ANYONE? ARE THERE ANY SHARP EDGES?



**S**  
SIZE

IS IT AN APPROPRIATE SIZE? WOULD IT WORK BETTER IF IT WAS BIGGER OR SMALLER?

DOES IT COME IN DIFFERENT SIZES?

HOW BIG IS IT?



**F**  
FUNCTION

DOES THE PRODUCT WORK? COULD THE PRODUCT WORK BETTER?

HOW DOES THE PRODUCT WORK? WHY IS THE PRODUCT NEEDED?

WHAT DOES THE PRODUCT DO? IS IT EASY TO USE?



**M**  
MATERIALS

WHAT IMPACT COULD THE DESIGNER'S CHOICE OF MATERIAL HAVE ON THE ENVIRONMENT?

WOULD A DIFFERENT MATERIAL MAKE IT BETTER?

WHAT MATERIAL HAS IT BEEN MADE FROM?

