



KNOWLEDGE ORGANISERS



CONTENTS

A Guide to Using your Knowledge Organisers

What is a knowledge organiser?

have thought about the most important key vocabulary, diagrams, information, and ideas that you need to know to understand each topic and have summarised them on one A4 sheet of paper for you. The organiser easy to use and to understand. information has been organised into clear tables, diagrams or key points to make the knowledge In this booklet you will find knowledge organisers for every subject you study at Madani. Your teachers

How will Knowledge organisers help you?

each lesson. This means that you are thinking about these key ideas many times as you study the topic you are studying, so that you can think about how these ideas are linked to what you are learning in other ideas within a topic. People remember what they have learned by thinking about it often, and by linking key knowledge to This will make it easier to remember what you have learned and add new knowledge each lesson Your knowledge organisers include the key information and ideas for the topic

up with the activities you need to complete independently. include the key ideas from the lesson you missed. This will make it much easier to understand and catch Your knowledge organisers are also useful if you have been absent because the knowledge organiser will

Ho₩ can you use your knowledge organisers?

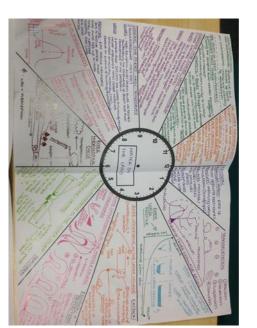
explained below: There are many activities that you can do using your knowledge organisers. Try some of the ones

Homework: Your teachers may assign homework linked to your knowledge organisers to help you understand the new information more clearly understand key terms and ideas from the topic. This will help you prepare for your next lesson and

Independent Research: You could do your own research to learn more about the key ideas included in your booklet

Creating more revision and learning tools: You can use the information on your knowledge organiser to sections for information – just like a clock) by starting with the main ideas from your knowledge organiser and adding all the specific detail you remember from your lessons to the different sections organiser and creating your mind-map or Round the Clock sheet (like the one shown below with 12 of your mind-map or Round the Clock Diagram. create mind-maps or revision clocks. You can do this by taking the key ideas from the knowledge





They are great for revision and testing your level of knowledge:

Test yourself: Because knowledge organisers include the key information and ideas for each topic, you knowledge organiser and see if you were correct. can use them to help you revise for tests. You can self-quiz by covering sections of the knowledge organiser and testing yourself to see what you remember. Then uncover the information on your

See how well you know the topic: Turn your knowledge organiser over and create a mind-map or write ganiser and check to see if your information is correct of if there is anything that you missed. Revise and make sure you will remember more the next time. everything you know about the topic on a blank piece of paper. Then turn over the knowledge or-

Create your own quizzes: Use the knowledge organiser to write your own set of questions based on the you will be able to next time. Try to answer the questions each week and see if you are able to reif you can remember the answers. Make sure you revise anything that you couldn't answer so that member more each time. information included. Once you have a set of questions, turn the knowledge organiser over and see

Create your own flashcards. For example, you could write the key terms from your knowledge organiser on one side of the card and the definition on the other. Then use the cards to quiz yourself.

Many of the key ideas you need to know for exams are on the mind-map. If it is included on the tested on an exam in some way. knowledge organiser your teacher thinks it is important for you to know it and you can expect it to be

It is important to remember that knowledge organisers don't include all the information that you need to know — only the main ideas. You can use them to help you remember the detail from your lessons.

How can your parents/carers use knowledge organisers to help you learn?

Read through the organiser with someone in your family and explain the information included in the know helps you to understand the key ideas more clearly and helps you remember them more easily and then answer any questions your family member might have. knowledge organiser to them. Make sure you use examples and provide as much detail as you can, Teaching someone else what you

Ask your family to test or quizyou on the information included in the knowledge organiser. You to do this regularly and keep track of what you remember to see if you improve each time. You should try

your family to read out sections of the knowledge organiser to you, but to miss out key words or piec es of information and see if you can fill in the key terms or knowledge.

Ask your family to test you regularly on the spellings of key words until they are perfect. Make a note the ones that you spell incorrectly to make sure that you know them next time.









SCIENCE

Key Terms

Absorbed - When a substance is taken in by something or moved across a barrier such as a cell membrane.

Bacteria - Single-celled microorganisms, some of which are pathogenic.

Bile - A substance produced in the liver which aids digestion.

Capillary - Tiny blood vessels with walls one-cell thick where exchange of materials occurs.

Catalyst - a substance that increases the rate of a chemical reaction without itself undergoing any permanent chemical change.

Insoluble - Unable to dissolve in a particular solvent. For example, sand is insoluble in water.

Soluble - Able to dissolve in solvent. For example, sugar is soluble in water because it dissolves to form sugar solution.

Villi - Finger-like projections in the small intestine that provide a large surface area for the absorption of food.

Biological Molecules

A **nutrient** is a substance which is needed for growth, repair and **metabolism**. The three main nutrients are:

Carbohydrates

Carbohydrates are digested in

the **mouth**, **stomach** and **small intestine**. Carbohydrase enzymes break down starch into sugars.

The saliva in your mouth contains amylase, which is another starch digesting enzyme. If you chew a piece of bread for long enough, the starch it contains is digested to sugar, and it begins to taste sweet.

Proteins

Proteins are digested in the **stomach** and **small intestine**. Protease enzymes break down proteins into amino acids. Digestion of proteins in the stomach is helped by **stomach acid**, which is strong hydrochloric acid. This also kills harmful **microorganisms** that may be in the food.

Lipids (fats and oils)

Lipase enzymes break down fat into fatty acids and glycerol. Digestion of fat in the **small intestine** is helped by **bile**, made in the liver. Bile breaks the fat into small droplets that are easier for the lipase enzymes to work on. Bile is not an enzyme.

What is Digestion?

The **digestive system** is made up of a group of organs that work together to break down food. This is where digestion takes place.

During **digestion** larger insoluble food molecules are broken down into smaller soluble ones with the help of enzymes.

These molecules are transported around our body to be used for energy, growth and repair.

The opposite of digestion is egestion.

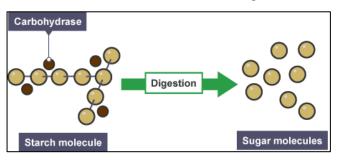
Egestion is the process of passing out food that has not been digested, as faeces.

Enzymes

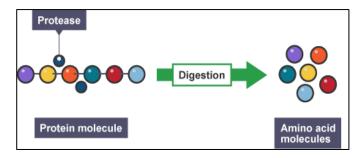
Enzymes are not living things. They are just special proteins which catalyses a chemical reaction by breaking large molecules into small molecules. Different types of enzymes can break down different nutrients

Types of Enzymes

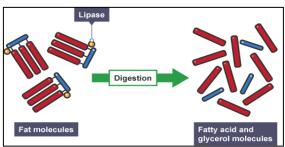
Amylase and other **carbohydrase** enzymes break down **starch** into **sugar**



Protease enzymes break down **proteins** into **amino acids**.



Lipase enzymes break down **lipids** (fats and oils) into **fatty acids** and **glycerol**.





SCIENCE

Photosynthesis

- **Photosynthesis** is a chemical reaction that takes place inside a plant, producing food for the plant to survive.
- Carbon dioxide, water and light are all needed for photosynthesis to take place.
- Photosynthesis happens in the **leaves** of a plant.

This is the word equation for photosynthesis:



This is the symbolic equation for photosynthesis:



Factors Affecting Photosynthesis

Several factors can affect the rate of photosynthesis:

- light intensity
- carbon dioxide concentration
- temperature

To measure the rate of photosynthesis in the lab, you can measure:

- the rate of **oxygen** output
- the rate of carbon dioxide uptake
- the rate of carbohydrate production

These are not perfect methods as the plant will also be respiring, which will use up some oxygen and carbohydrate and increase carbon dioxide output.







Carbon Dioxide Concentration

Carbon dioxide is one of the reactants in photosynthesis. If the concentration of carbon dioxide is increased, the rate of photosynthesis will therefore increase until there is a limiting factor.

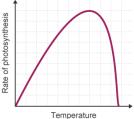


Temperature

Photosynthesis is an enzyme controlled reaction.

Therefore, the rate of photosynthesis is affected by temperature.

At low temperatures, the rate is limited by the number of molecular collisions between enzymes and substrates. At high temperatures, enzymes are **denatured**.

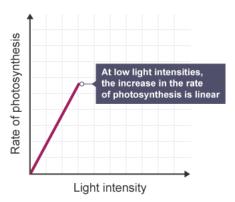


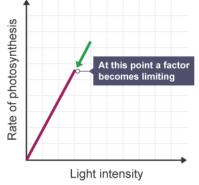
Light Intensity

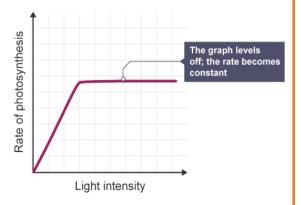
Without enough light, a plant cannot photosynthesise very quickly - even if there is plenty of water and carbon dioxide and a suitable temperature.

Increasing the light intensity increases the rate of photosynthesis, until some other factor – **a limiting factor** – becomes in short supply.

At very high light intensities, photosynthesis is slowed and then inhibited, but these light intensities do not occur in nature.









MATHS

Powers and Roots

The notation 3^2 is known as **index form**. The small digit is called the index number or **power**. The index number tells you how many times the number should be multiplied.

When the index number is two, the number has been **squared**. When the index number is three, the number has been **cubed**.

Ratio and Proportion

Ratios are usually written in the form a:b and can be used on maps to show the scale in relation to real life. Two quantities are in direct proportion when they increase or decrease in the same ratio.

Example:

If you are making orange squash and you mix one part orange to four parts water, then the ratio of orange to water will be 1:4(1 to 4).

- If you use 1 litre of orange, you will use 4 litres of water (1:4).
- lacksquare If you use $m{2}$ litres of orange, you will use $m{8}$ litres of water $(m{2}:m{8})$
- If you use 10 litres of orange, you will use 40 litres of water (10:40).

These ratios are all equivalent:

$$1:4=2:8=10:40$$

Both sides of the ratio can be multiplied or divided by the same number to give an equivalent ratio.

Map scales can also be written in ratios and tell you how many units of length on land, or sea, are equal to one unit of length on a map.

For example, if you are travelling from Manchester to Newcastle and need to know how far it is, it would be very difficult to work this out from a map if the map does not have a scale.

Standard Form

A number is said to be written in standard form when it is written as $A \times 10^n$, where:

- $oldsymbol{\cdot} A$ is a number greater than or equal to $oldsymbol{1}$, but strictly less than $oldsymbol{10}$, and
- n tells us how many places to move the decimal point.

You can convert from standard form to ordinary numbers, and back again. Have a look at this example:

 3×10^4 can be written as:

$$3 \times 10^4 = 3 \times 10 \times 10 \times 10 \times 10$$

 $= 3 \times 10,000$

= 30,000

Fractions & Percentages

Fractions represent part of a whole number. Fractions, decimals and percentages can all have the same values and you may find it useful to know how to convert between them.

Mixed numbers

 $I_{\overline{3}}^2$ is known as a **mixed number**, because it is made up of a whole number and a fraction.

Improper fractions

 $\frac{5}{3}$ is called an **improper fraction**, because the top number is bigger than the bottom number.

Percentages

Per cent means 'per 100'. If 70 per cent of the population own a pet, this means that 70 out of every hundred people own a pet. The symbol % means 'per cent'

Negative Numbers

Numbers below zero are called **negative** numbers. Numbers above zero are called **whole numbers**. There are rules you can use if adding, subtracting, multiplying or dividing positive and negative numbers.

The rule for multiplying and dividing these numbers is very similar to the rule for adding and subtracting.

- When the signs are different the answer is negative.
- When the signs are the same the answer is positive.

Surds

Surds are numbers left in square root form that are used when detailed accuracy is required in a calculation. They are numbers which, when written in decimal form, would go on forever.

Surds can be simplified if the number in the surd has a square number as a factor.

Remember these general rules:

$$\sqrt{a} \times \sqrt{a} = a$$

$$\sqrt{ab} = \sqrt{a} \times \sqrt{b}$$

$$\sqrt{\frac{a}{b}} = \frac{\sqrt{a}}{\sqrt{b}}$$



FRENCH

Learning Objectives

By the end of the term, I will be able to communicate (talk, ask and answer) about:

- My family relationship
- My pocket money and how Learn it
- Issues faced by teenagers

Grammar Objectives

I will be able to understand and apply rules about:

- Present tense
- Future tense
- Use modal verbs

Key Grammar Words

Reflexive verbs - These are verbs which mean an action done to oneself, e.g. laver means 'to wash', but se laver means 'to get washed' or literally 'to wash oneself'. **Modal verbs** – This is a type of **verb** that is used to indicate **modality** (likelihood, ability, permission, request, capacity, suggestions, order, obligation, or advice). Modal verbs are always accompanied by an infinitive form of a verb.

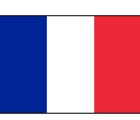


Key Words / Vocabulary

Pocket money

Relationships	
Tu as de bonnes relations	Do you have a good
avec tes parents?	relationship with you
	parents?
J'ai de bonnes/mauvaises	I have a good/bad
relations avec	relationship with
Mes parents	My parents
me laissent sortir le	let me go out at the
week-end.	weekend.
me font confiance.	trust me.
me respectent.	respect me.
me traitent comme un	treat me like a baby.
bébé.	
sont stricts la semaine.	are strict during the
	week.
sont assez cool le	are quite cool at the
week-end.	weekend.
Mon père/Ma mère est	My dad/mum is
II/Elle	He/She
me laisse/traite	lets/treats me
me respecte/fait	respects/trusts me.
confiance.	

When do you get pocket
money?
I receive money
for Christmas/my birthday.
What chores do you have
to do?
I have to
help at home.
wash the dishes.
tidy my room.
mow the lawn.
wash the car.
do the shopping.
look after my little
brother/sister.
babysit.
I receive £10 per week/
month.



devoir (must)	vouloir (want)	pouvoir (can)
je dois	je veux	je peux
tu dois	tu veux	tu peux
il/elle/on doit	il/elle/on veut	il/elle/on peut

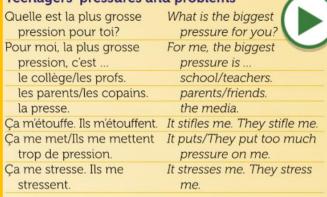
Je veux payer. - I want to pay.

Il doit économiser. - He must save.

To form the negative: **ne** ... **pas** wraps around the modal verb:

Tu ne dois pas dépenser ton argent. - You must not spend your money.

Teenagers' pressures and problems







FRENCH

Model Text

Salut je m'appelle Jon et j'habite à Paris	Hello I am called Jon And I live in Paris	Comment t-appelles-tu ou habites-tu ?
avec mes parents et mon frère cadet et ma sœur ainée.	with my younger brother and oldest sister	Avec qui habites-tu?
Je m'entends vraiment bien avec mon père	I get on really well with my dad	Tu t'entends bien avec tes parents?
car il est cool, compréhensif et il me respecte.	because he is cool, understanding and he respects me.	Pourquoi ?
Mais malheureusement je me dispute quelquefois avec ma mère	but I sometimes argue with my mum	Et t'entends bien avec ta mère ?
car souvent elle me traite comme un bébé	because she often treats me like a baby.	Pourquoi ?
A la maison je dois aider tous les jours	At home I have to help everyday	Tu dois aider à la maison ?
par exemple je dois laver la vaisselle après le diner.	for example I have to wash the dished after diner.	
Je dois aussi garder mon petit frère	Also I have to look after my little brother	
J'aime bien ça car on regarde des dessin animes ensemble et en plus ma mère me donne 10 € .	I quite like it because we watch cartoon together and my mum gives 10 euros.	Combien d'argent de poche reçois-tu?
Pour moi la plus grande pression est le collège et les profs	For me the biggest issue is school and teachers	Quelle est la plus grosse pression ?
Car l'éducation est très importante	Because education is very important	
dans ma vie, je veux devenir quelqu'un dans la vie	for me, i want to become someone in life.	
et je veux que mes parent soient fières de moi	And i want my parents to be proud of me	

Key Grammar – Modal Verbs – Sentence Structure

Le weekend	Je dois	Ranger	ma chambre		Mon père
Pendant les vacances	On doit	Laver	la voiture	а	Ma mère
Pendant mon temps libre	Je peux	garder	à la maison	v e c	Mon petit frère
En soirée	On peut	Tondre	la pelouse		Ma petite sœur
Le matin		Faire / Aider	les courses		

Talking About Relationships

To talk about relationships with family members, use je m'entends bien avec (I get on well with), or je ne m'entends pas bien avec (I don't get on well with) followed by the family member(s).

- Je m'entends bien avec mes parents I get on well with my parents.
- Je ne m'entends pas bien avec mon frère - I don't get on well with my brother.
- Je m'entends bien avec ma sœur parce qu'elle est amusante - I get on well with my sister because she is funny.





COMPUTING

Keywords

Data – Facts and statistics collected together for reference or analysis

Information – Facts provided or learned about something or someone / Data as processed, stored or transmitted by a computer

Data Protection Act – An act of parliament defining the ways in which information about living people may be legally used and handled

Social Engineering – the use of deception to manipulate individuals into divulging confidential or personal information that may be used for fraudulent purposes

Hacking – Attempt to exploit a computer system or a private network

Cyber – relating to the culture of computers, information technology, and virtual reality

Malware – software that is specifically designed to disrupt, damage, or gain unauthorized access to a computer system.

Network – a group or system of interconnected people or things e.g. a network of computers

DDoS Attack- Distributed Denial of Service Attack

Computer Misuse Act (1990)

Currently the **Computer Misuse Act** (1990) is the only way of preventing and dealing with **computer misuse** in the UK Therefore it is a very **important** legislation as it keeps the 13.9 million people in the UK, who own computers, safe from unauthorised access and modification. This is more important when dealing with businesses where it can result in huge losses of finance.

Security Risks

There are lots of technical ways to try and keep data safe and secure.

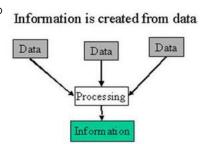
Human error arguably creates the largest risk of the data being compromised.

Social engineering is a set of methods used by cybercriminals to deceive individuals into handing over information that they can use for fraudulent purposes.

Difference Between Information and Data

Data and information are interrelated. Data usually refers to raw data or unprocessed data. Once the data is analysed, it is considered as information. Information is "knowledge communicated or received concerning a particular fact or circumstance."

Basically, information is the message that is being conveyed, whereas data are plain facts.



Email

Email (short for **electronic mail**) is the digital equivalent of sending a letter. Each email has a **sender**, a **receiver** and a **message**. The big difference is that instead of waiting for our posted letter to be delivered by the post office, an email is **sent and received almost immediately**.









GEOGRAPHY

Sectors of the Economy

Primary The collection of and direct use of natural resources (e.g. wood, iron). Any business that

grows goods or takes materials from the land is part of the primary sector

Secondary The processing of raw materials turning them into usable goods and products (for example in

factories – making wood into furniture)

Tertiary The selling of services, skills or a product to a consumer (e.g. selling furniture in a shop, serving

meals in a restaurant, providing a haircut

Quaternary Industries providing information services such as computing, ICT, consultancy (giving advice)

and research development

Measuring development

Standard of Livina

The level of wealth or what people own in an area.

Quality of Life

The standard of health, comfort, and happiness experienced by a person or a group.

A measure of whether or not people have what they need and the resources to enjoy life

Development indicators

Different types of data used to measure the quality of life in an area (e.g. birth rate, death rate, level of literacy, etc.

Key Terms and Concepts

Globalisation The increasing interdependence which is a result of the

increasing connections between different places in the world

Interdependence The relationships and connections between countries,

especially in trade – most people in the world today depend

on the rest of the world for survival

Distribution The way in which something is spread over an area or in

different categories

Colonisation When one country takes control of another. Many European

countries colonised African countries in the past

Development

Gap

The difference in the standard of living and quality of life

between HICs and LICs

HIC High Income Country

LIC Low Income Country

NEE Newly Emerging Economy

Key Development Indicators

Death Rate

Life Expectancy

Population Growth

Infant Mortality Rate

Access to safe drinking water

GDP (per capita)

Birth Rate

Calories consumed per day

Population per Doctor

% of children in school

% of Adult Literacy



ENGLISH

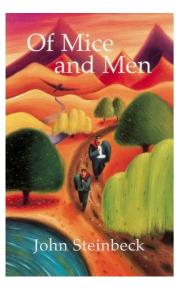
Plot Summary

The entire timeframe of the novella is four days.

- 1. George and Lennie camp the night before starting new jobs as ranch hands. They talk about their dream of getting a piece of land together.
- **2.** George and Lennie arrive at the ranch in the morning and are shown around by old Candy. They meet their boss and, later, his son, Curley George is suspicious of Curley's manner and warns Lennie to stay away from him.
- 3. Later that evening, George tells Slim about why he and Lennie travel together and about what happened in Weed. George tells Candy about their dream of getting a piece of land and Candy eagerly offers to join them. Curley provokes Lennie into a fight, which ends up with Lennie severely injuring Curley's hand.
- **4.** Crooks is alone in his room when Lennie joins him. When Candy happens to come in and discuss about owning land, Crooks is convinced and asks to be in on it too. Curley's wife arrives. She threatens Crooks and an argument develops.
- **5.** Lennie accidentally kills the puppy that Slim had given him by petting it too much. Curley's wife finds him and starts talking openly about her feelings. She invites Lennie to stroke her soft hair, but he does it so strongly and she panics leading to him killing her.
- **6.** Lennie hides in the brush by the pool. George finds Lennie, talks to him about dreams and shoots him with Carlson's gun.

Themes

- Hopes, dreams and plans
- Loneliness and companionship
- Brutality and dignity
- Friendship
- Isolation
- Innocence
- Justice
- Freedom and confinement
- Prejudice
- Weakness



Context

- The American Dream The national ethos of the United States in which freedom includes a promise of the possibility of prosperity and success, regardless of social class or circumstances of birth. The American Dream is written into the Declaration of Independence: "life, liberty, and the pursuit of happiness." Lennie and George's dream of owning a farm and living off the "fatta the lan" symbolises this dream. Of Mice and Men shows that for poor migrant workers during the Depression, the American Dream became an illusion and a trap.
- The Great Depression and the Dust Bowl A major economic catastrophe occurring after the Wall St Crash (1929) where a major part of the workforce become unemployed (20% of the population 10 million). To make things worse, huge dust storms destroyed the agricultural lands in the centre of the country during the Dust Bowl (1934--1937). These workers migrated to California.
- The Role of Women As the role of women in the economy grew, they were resented and treated with hostility by men, particularly in the climate of the time where jobs were difficult to come by. Women are poorly valued in the novel and seen as possessions
- Racial segregation During the 1930s, black people were physically separated from white in public spaces, like buses, cinemas or toilets. This continued until the civil rights movement in the 1960s, but hostility was widespread during the era of the novel.

Key Quotations

- · **George:** (C1.) "Guys like us, that work on ranches, are the loneliest guys in the world. They got no family. They don't belong no place…"
- · Lennie: (C1.) "Slowly, like a terrier who doesn't want to bring a ball to its master, Lennie approached, drew back, approached again."
- Slim: (C2.) "Ain't many guys travel around together, he mused. I don't know why. Maybe ever'body in the whole damn world is scared of each other."
- Candy: (C3.) "I ought to of shot that dog myself, George. I shouldn't of ought to let no stranger shoot my dog."
- **Crooks:** (C4.) "Every body wants a little piece of lan'. I read plenty of books out of here. Nobody never gets to heaven, and nobody gets no land."
- · Crooks: (C4.) "A guy needs somebody to be near him. He whined, a guy goes nuts if he ain't got nobody."
- **Curley's wife:** (C5.) "And the meanness and the plannings and the discontent and the ache for attention were all gone from her face. She was very pretty and simple, and her face was sweet and young."
- · Chapter 6: A silent head and beak lanced down and plucked it out by the head, and the beak swallowed the little snake while its tail waved frantically."
- · **George: (**C6.) "No, Lennie. I ain't mad. I never been man, an' I ain't now. That's a thing I want ya to know."



HISTORY

Key Figures

Ella Baker

A founder of the SNCC and leader of the Montgomery Bus Boycott. Organised campaigns across the American south to register Black American voters

Daisy Bates

Leader of the NAACP in Arkansas and organiser of the Little Rock Nine challenge to segregation in schools. The only female speaker at the 1963 March on Washington

Stokely Carmichael

Leader of the SNCC from 1966 to 1968
Advocate of the Black Power movement which called for more aggressive and militant action to obtain political, social and economic equality for Black Americans

James Farmer

Leader of CORE and advocate of non-violent direct action Key organiser of the Lunch Counter Sit-ins and the Freedom Rides

Martin Luther King Jr

Baptist minister and civil rights leader and leader of the SCLC
One of the leaders of the Montgomery Bus
Boycott and organiser of the Freedom March on Birmingham and known for the I Have a Dream speech during the March on Washington
Awarded the Nobel
Peace Prize in 1964
Assassinated in 1968

John Lewis

Involved in the
Lunch Counter Sitins and Freedom
Rides
Leader of the SNCC
and key organiser of
the Freedom
Marches – leader of
the Selma March
Became a
congressman in the
United States
government

Rosa Parks

Civil Rights activist and member of the NAACP known for her part in the Montgomery Bus Boycott

Malcolm X

Civil Rights activist and member of the Nation of Islam and later founder of Organizatio n of Afro-American Unity Assassinated in 1965













Key terms and concepts

Activist: A person who campaign to bring about social or political change.

Civil Rights: the rights of citizens to political and social freedom and equality.

Jim Crow Laws: A collection of local and state laws designed to deny Black Americans the right to vote, hold jobs, get an education or other opportunities.

Segregation: the enforced separation of different racial groups in a country, community, or location.

Desegregation: Ending segregation – facilities to be open to people of all races.

Militant: confrontational or violent methods in support of a political or social cause.

Separate but Equal: The political policy that there should be separate areas and facilities for people of different races but that the separate areas would be of equal quality.





DESIGN & TECHNOLOGY

Key Words

Equipment – The necessary items for a particular purpose.

Robotics – the branch of technology that deals with the design, construction, operation, and application of robots.

Fair-Trade – trade between companies in developed countries and producers in developing countries in which fair prices are paid to the producers.

Sustainable – causing little or no damage to the environment and therefore able to continue for a long time.

Environment – the surroundings or conditions in which a person, animal, or plant lives or operates.

Consumer – a person who purchases goods and services for personal use

Trend – a general direction in which something is developing or changing

Manufacturer – a person or company that makes goods for sale

Recycle - convert (waste) into reusable material

Cooperatives – organisations and businesses that are owned and run by its members.

New and Emerging Technologies

Emerging technology has influenced change in:

- Personnel, job roles and hierarchical structure
- Physical space and layout of the workplace
- Systems, processes and workflow

Small businesses can use technology to compete with their larger competitors.

Robotics has also impacted the industry. Robotic **automation** of manufacturing processes offers significantly greater **consistency**, **accuracy**, **reliability** and **productivity** than human workers.





People, Culture and Society

Understanding the **market** is one of the most challenging aspects for **designers** and **manufacturers**.

New **invention**, discovery or **technological change** drives new product development.

Research and **Development** (R&D) drives invention discovery.

New technology is often pushed onto the market, driven by research. This is called **technology push**.

Consumer driven pressure causes manufacturers to continuously develop new products or add functionality to existing products. This is called **market pull**.

Evolution in the development of materials, technology and fashion has driven design **trends**.

Production Techniques

Automation – Automatic control is often used in production lines, communication networks and guidance systems.

CAD – Computer Aided Design software is used to create precision 2D or 3D drawings, models or technical illustrations. It is commonly used by designers, architects, engineers and artists.

JIT – Just In Time production is a process where items are created as they are demanded. No surplus stock of raw material, component or finished parts are kept.



Sustainability and the Environment

Our planet is a **well-balanced** environment. Our **consumption** of the earth's **finite** resources is damaging the **environment**.

Non-finite resources include those that are unlikely to be exhausted, or those that are **replaced** faster than we can use them.

This includes the different forms of **renewable energy** such as:

- Wind
- Wave
- Solar
- Geothermal
- Tidal
- Biomass



Informing Design Decisions

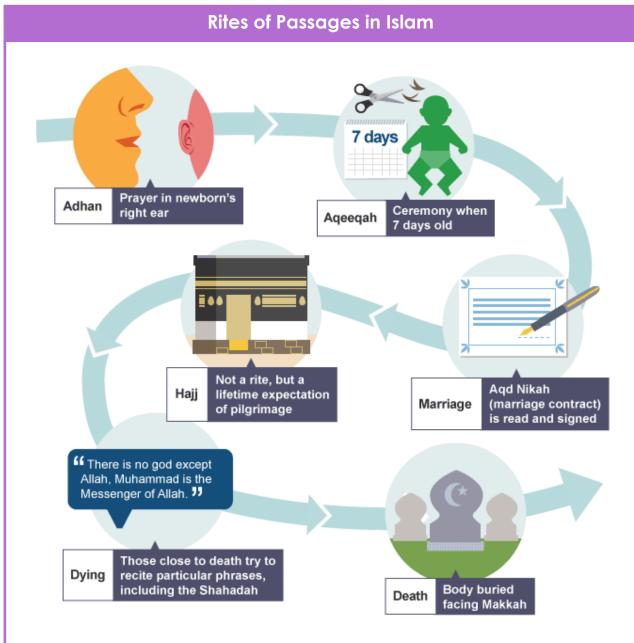
The success of new technologies and products are frequently evaluated according to the following points:

- Cost
- Reliability
- Longevity
- Sustainability
- Recyclabili





RELIGIOUS EDUCATION



Birth

At the moment of birth, many Muslims speak the words of the <u>Adhan</u> (the call to prayer) in the ear of the baby so that the call to serve <u>Allah</u> is present from the start of the child's life.

On the seventh day after birth, the child's head is shaved. This is called **Aqeeqah** and is performed as part of the naming ceremony.

The baby is given a taste of honey to reflect the sweetness of the **Qur'an**. A sheep or a goat may be offered in sacrifice to mark the occasion.

Marriage

Marriage is expected for all Muslims. It is a **Sunnah** of the prophet. Muslims do not expect any individual to take a vow of **celibacy**.

Muslim parents may **arrange** a suitable marriage partner for their children. However, the couple have to agree to their parents' choice.



n is dvina if h

When a person is dying, if he or she is able to, they should say the **Shahadah**.

Death

As soon as possible after death, the body is washed three times by relatives of the same gender as the deceased, and it is then wrapped in a white cloth. The body is then taken to an outdoor location, sometimes near the **mosque**, where Muslims will stand and offer prayers for the **forgiveness** of the deceased and that they may find peace and happiness in the world to come.

When a person dies, Muslims believe they enter an intermediate phase in the grave, waiting for **Yawm al-Din** or the Day of Judgement, when **Allah** will raise the body. This is why Muslims generally do not practise **cremation**.



ART & DESIGN

Key Words

Composition – The position and layout of a group of visual information.

Mood – The atmosphere or emotion communicated through the Visual Elements.

Contrast – Colours that are opposite on the colour wheel.

Expressive – Artworks that communicate emotion or express feelings.

Visual Representation –

Demonstrating abstract concepts and ideas through images, shapes, patterns, textures and texts.

Abstract – An artwork made of shapes, forms or colours that are not recognisable.

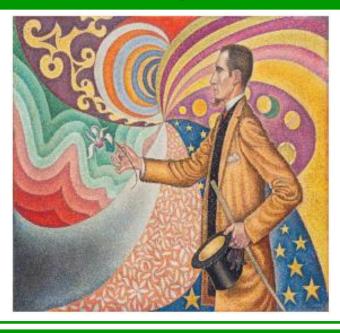
Representational – Groups who are grassroots, political and/or social activists e.g. independent music, art and film.

Fauvism – An art movement known for its use of vibrant and unusual colour to represent familiar subjects.

Content

Consider the importance of colour in abstract and representational artworks. Create a series of your own artworks that display differing moods. Develop art analysis skills by commenting in your own work and artists' work.

Image



Steps for Success

- 1. Learn about primary and secondary colours.
- 2. Research artists who use colour to convey emotion and comment on this.
- 3. Decide what different colours represent to you.
- 4. Create artworks inspired by memories / emotions.
- 5. Use colour to create mood in the artwork.
- 6. Create final painting inspired by emotion.

Colour Knowledge		
Mixing	The creation of secondary or tertiary colours from primary colours.	
Colour Theory	The theory of colour including gradient, contrast and complementary colours.	
Blending	To use water to dilute and/or mix different shades of colour.	
Application	To apply paint to paper or card to explore its impact.	
Receding / Advancing colours	The use of warm colours	
Contrast	To use colour wheel knowledge to select and enhance an opposite colour to improve the image.	
Overlap	To place differing or similar colours over one another for effect.	







PHYSICAL EDUCATION

	Football Rules		Skills & Tactics	
•Game is started by a kick off in the centre of the pitch. •In a full sided game each team consists of 11 players. •If the ball goes off the side of the pitch it is a throw in to the		Short Pass	Non kicking foot next to the ball/ use the side of the kicking foot to contact the ball following a short back swing/ keep head over the ball to improve accuracy and ensure ball stays on the ground/ follow foot through to generate more power.	
team that didn't touch the ball last. If the ball goes off the end of the pitch it is a corner or a goal kick depending who the ball touched last. Depending on where the incident takes place, a free kick or a penalty is awarded if the player in possession of the ball	Long Pass	Non kicking foot next to the ball/ use the front (laces) of the kicking foot to contact the ball following a bigger back swing (flexion of the knee)/ keep head over the ball to improve accuracy of the pass/ lean back slightly to help generate height if required on the pass/ follow foot/leg through to generate more power.		
Rules	 The goalkeeper is the only player allowed to touch the ball with their hands and can only do this inside their 18 yard box. 	Heading	Keep eyes focused on the ball when preparing to header/ use the forehead to contact the ball/ move feet to ensure body is slightly behind the ball before heading/ use neck to generate more power on the header/ defensive headers are normally headed high with increased distance whereas attacking headers on goal are normally headed down to make it more difficult for the goal keeper to save/perform a jump before the header to increase power and give yourself more chance of beating the opponent to the header.	
	a free kick is awarded to the opposition team. •The team with the most goals at the end of the game will win the game.	Shooting	Non kicking foot next to the ball/ keep body balanced/ head slightly over the top of the ball/ use side foot for placement or top of the foot for in- creased power/ flex leg back further when preparing to strike to the football for increased power/ aim for the area of the goal that the goalkeeper is	
	Rugby Tactics		least likely to save the ball.	
Handling	A vital skill involved in passing and running with the ball. Two hands in contact with the ball will help with passing the ball and making sure it is secure	Attacking	Attack defender with pace/ keep ball in close control away from the defender/ move the ball to make it more difficult for the defender to tackle	
Tackling	Trying to stop an opponent who has the ball by bringing them to the ground. A variety of tackles can be used, for example a side-on tackle, front on tackle, smother tackle or tap tackle.		you/ use tricks to outwit the opponent.	
Carrying	The act of carrying the ball around the pitch. Players can use a variety of techniques to avoid being tackled, for example a side step, swerve or spin.	Defending	Man to man marking—sideways on/ close to player/ try to slow attacking player down/ on toes/ show attacker to their weaker foot/ time tackle effec-	
Rucking	A ruck is a phase of play where one or more players from each team, who are on their feet, close around the ball on the ground to prevent the opposition from gaining possession after a tackle has been made.		tively to increase chances of winning the ball back.	
Mavling	A maul forms when several players from the same team come together to help move the ball towards the try line. Several players from the opposing team may then come together to prevent this. A maul is different to a ruck, as the ball is not on the ground but in hand.	Crossing	Non kicking foot placed next to the ball/ contact ball with the instep of the foot/ lean body slightly back to add height on to the cross to avoid the first defender/ follow leg through to increase the power on the cross/ the body needs to remain balanced to increase accuracy and success of the cross.	



LIFE SKILLS

Unit Overview

You will look at the concept of human rights and the strong links to personal responsibility.

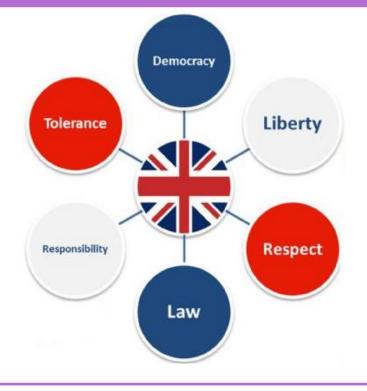
You will consider the **ethics** behind the products we buy in the UK and evaluate how much we are **accountable** for the poor working conditions for some workers and the **supply and demand** of unethical products.

You will evaluate how we can tackle these issues in our **global communities** through smarter choices and being able to identify social injustices and **violations** in the modern world to help make a positive difference to the world we live in.

Key Concepts

- Citizenship
- British Values
- Living in the Wider World
- Human Rights





Key Words Human A fundamental right that every person is entitled to **Rights** have, to be or to do. European The European court in France which hears cases where Court of people feel their human rights have been breached. Human **Rights** Conventio An agreement with states covering particular matters. Article In this sense, a separate clause or paragraph of a legal document or agreement, typically one outlining a single rule or regulation. Internation Laws which cover the treatment of civilians and prisoners of war, as well as setting out what is illegal in a al Humanitari conflict. an Laws Sustainabili Focusses on meeting the needs of the present without ty compromising the needs of future generations.

A factory or workshop, especially in the clothing industry, where manual workers are employed at very low wages

Trade between companies in developed countries and producers in developing countries in which fair prices

Moral principles that govern a persons behaviour or the

for long hours and under poor conditions.

are paid to the producers.

conducting of an activity.

Sweatshop

Fairtrade

Ethics



ARABIC

Shopping Key Words

To shop	التسوق
Shopping centre	مركز التسوق
For various reasons	لأسباب مختلفة
Firstly	أولا
Not a lot of money	الكثير من المال
To eat	لتناول الطعام
Goods	السلع

Questions

التسوق

Interlingo

- ١. ما رأيك في أن التسوق هو مضيعة للمال؟
 ٢. أين تفضل التسوق؟ في مركز تجاري أو دكان صغير؟
- ٣. ما رأيك في من يقول أن النساء مدمنات على التسوق؟
 - ٤. متى تسوّقت آخر مرة؟ ماذا اشتريت؟
- 1. What is your opinion about shopping wastes money?
- 2. Where do you like to shop? Shopping centre or small shops?
- 3. What is your opinion of women being addicted to shopping?
- 4. When was the last time you went shopping? What did you buy?

		Ter	ises		
Future	المُسْتَقْبَلُ	Present	المُضَارعُ	Past	الماضي
رُسُ	سَأَفْعَلُ - أنا سَأَدْ		أَفْعَلُ - أَنَا أَدْرُسُ		فَعَلْتُ - أَنَا دَرَسُ
ىتَدْرُسُ	سَتَفْعَلُ - أنْتَ سَ	ئى	تَفْعَلُ - أَنْتَ تَدْرُه	ئىت	فَعَلْتَ - أَنْتَ دَرَهُ
	سَتَفْعَلِينَ - أَنْتِ	گر <i>ئ</i> سينَ	تَفْعَلِينَ - أَنْتِ تَهٰ	لىت	فَعَلْتِ - أَنْتِ دَرَهُ
	سَيَفْعَلَ - هُوَ سَيَ	ئ	يَفْعَلُ - هُوَ يَدْرُسُ		فَعَلَ - هُوَ دَرَسَ
	سَتَفْعَلُ - هِيَ سَ	ئ	تَفْعَلُ - هِيَ تَدْرُه	ئىڭ	فَعَلَتْ - هِيَ دَرَهُ
•	سَنَفْعَلُ - نَحْنُ ا		النَّفْعَلُ - نَحْنُ نَدُرُ	لمنا	فَعَلْنَا - نَحْنُ دَرَ،
	سَتَفْعَلُونَ - أَنْتُهُ		ا تَفْعَلُونَ - أَنْتُمْ تَ	ستم	أَفْعَلْتُمْ - أَنْتُم دَرَ
	سَيَفْعَلُونَ - هُمْ		يَفْعَلُونَ - هُمْ يَدُ	-	أُفَعَلُوا - هُمْ ذَرَسُ
	سَتَفْعَلْنَ - انْتُنَّ		تَفْعَلْنَ - انْتُن تَد		فَعَلْتُنَّ - أَنْتُنَّ دَ
سيدرسن	سَيَفْعَلْنَ - هُنَّ ا	رُسْنَ	يَفْعَلْنَ - هُن يَدُ	ئ	الْفَعَلْنَ - هُنَّ دَرَهُ

Sentences

Shopping	التسؤق
How much is this jacket?	بِيَّمْ هَذِه الجَاكِتَّة؟
I didn't like the jacket I bought.	لَم تُعْجِيني السُّتَرَةُ التِّي اشْتَرَيْتُهَا.
These jeans are too long.	اً هَذِهِ الْجِينَزُ هِيَ طَوِيلَةٌ جِدًا .
The clothes are too <u>tight</u> .	المَلَاسِ صَيَقَةً جِدًا.
I would like to return this.	، <u>أَوَدُ أَنْ</u> أَرْجِعَ هَذَا.
I did not <u>find</u> my size.	اً لَمْ أَحَدُ مَقَاسِي.
The service is not good.	الخذمة لنست جَتَدَة.
The prices are too <u>high</u> .	الأسْعَارُ مُزيَّفَعَةً جِدًا.
I love this <u>look</u> .	أَنَا أُحِبُ هَذِهِ الطَّلْعَةِ.

Prepositions

حُرُوف الجَر

Редоритов			
Under	تُختَ		
Above	فَوْقَ		
Between	بَيِّنَ		
On	عَلَي		
In front of	أمَامَ		
Behind	خَلْفَ/ وَرَاء		
Next to	بجَانِب		
Inside	دَاخِل		
Below	أشفل		
То	ڸؙٙؽ		
With	مَعُ		
From	قغ بن		
in	ڧ		

Time Phrases

المُعَنِّى - Meaning	العِبَارَةُ - Expression
Next January	فِي يَناير القَادِم
After two days	يَعْدَ يَوْمَيْنِ
Тотогтом	152
Next week	فِي الأَسْبُوعَ الْقَادِمَ
In the future	فِي الْمُسْتَقَبِلَ
Later	لُاحِقًا

