

Year 9 Geography

Knowledge organiser booklet



Instructions

- You will need to keep this booklet safe as you will need it each term to revise for your assessment.
- Your teacher will tell you which sections you need to revise for each test. Make sure you prepare the correct ones!

UNIT 1: MEGACITIES

Theory



Urban area – 10,000 + people live there

Urbanisation – increase in the proportion of people living in urban areas compared to rural areas.

Megacity – a city where over 10 million people live

Natural increase – One reason why cities grow. Here, a higher birth rate than death rate sees the population naturally grow.

Rural to urban migration – The second reason why cities grow. People migrate to the city from the countryside in search of a better quality of life. Pull factors include better jobs, education and healthcare services.



Urban planning



Urban planning - Urban planning aims to improve the conditions for urban poor whilst protecting their social communities



Sustainable - Actions that meet the needs of the present without reducing the ability of future generations to meet their needs.

Mumbai slum sanitation project



300 community toilet blocks were built between 1996 and 2005 containing more than 5100 toilets at a cost of US\$295.6 million.



Positives - This program has benefited about 400,000 people in the slums of Mumbai; People were involved in the consultation process which made it socially sustainable.



Negative – Not everyone can afford to the monthly fee to use the toilets; many more toilets are needed for the 1 million people who live in Dharavi.

Mumbai



Location - Mumbai is a city of 24 million people. It is found in the state of Maharashtra on the western coast of India.



Causes of growth

- The biggest reason is **rural to urban migration**. A recent study found that migration into Mumbai was averaging nearly 1 person per minute.
- **Natural increase** (more people being born than dying) also plays a part because the population is quite young.



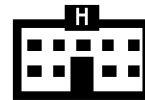
Importance

- **Local** - Over 3 million people commute to the city each day for work, many by train.
- **National** - Mumbai is home to India's most important port. 60% of all of India's sea trade goes through this port.
- **International** - It is home to Bollywood – the biggest cultural industry in Asia.



Opportunities

- Mumbai has **many schools and hospitals**.
- The **Mumbai Metro Project** is expected to be completed by 2024. It will connect areas of the city not currently served by trains.



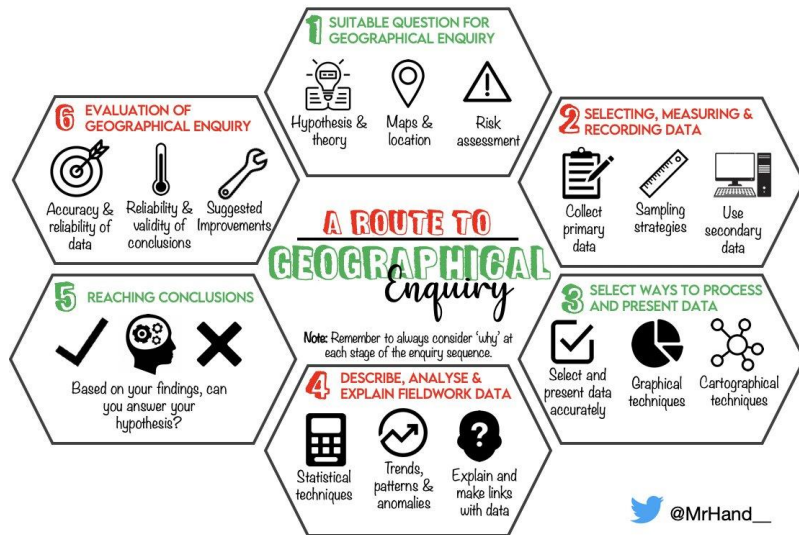
Challenges

- Urban growth is happening too fast so there are not enough houses. Therefore, **squatter settlements** (like Dharavi) have developed.
- **Traffic congestion** is a huge problem as many people use cars instead of congested trains.



UNIT 2: WEATHER AND CLIMATE

The enquiry process



Example: Somerset Levels flooding, winter 2013/2014



Causes = Heavy rain from very low depressions; the levels are a **low lying** area; the rivers Tone and Parrett had **not been dredged**



Impacts = Overall **cost to farmers** estimated to be £10 million; **train services stopped** from Exeter to Bristol due to the line being flooded; **settlements cut off**.



Responses = The UK Government **pledged £30 million**; residents formed **FLAG** (Flooding on the Levels Action Group) to campaign for action; a **flood action plan** was set up, which included the dredging of the rivers.

Theory



Weather - The conditions of the atmosphere, such as temperature, and presence of rain and clouds. Weather changes daily.



Climate - The average weather conditions of a location over a long period of time. The UK has a temperate climate: warm summers, mild winters and some rainfall all year.



Air masses - A 'chunk' of air with the same temperature and humidity. Different air masses bring different weather e.g. Tropical air masses bring warm temperatures.



High pressure - Air is sinking so the air warms up. There is no condensation and no cloud. The sky is clear and sunny. There is no wind.



- **Anticyclone** - An area of high pressure.

Low pressure - Warm air is rising. This creates low pressure at the Earth's surface, as there is 'less' air. Warm air rises and cools, forming clouds and rain. Air rushes into the low pressure area. This creates wind.

- **Depression** - A depression is an area of low pressure which moves from west to east across the British Isles.



Measuring the weather - many aspects of the weather can be measured using weather instruments or observations.

- **Barometer** - This is used to measure air pressure (the force of the air above us). A high pressure reading means sunny and dry conditions.
- **Beaufort scale** - This scale (1-12) uses observations of the effects of the wind to determine wind speed.



Microclimate - Climate of a small area that is different from the area surrounding it.

UNIT 3: BEING RESPONSIBLE CONSUMERS

Key terms



Goods - are things that are made to be sold. Items that exist for humans' wants and needs.



Services - intangible (can't touch it) tasks done by someone else to help you e.g. hairdresser.



Producer - is a worker who makes goods and services for other people to use and enjoy.



Consumer - is someone who purchases and enjoys the use of goods and services.



Consumption - the act of using up a resource or good.



Economy - the system of how money is made and used. It includes how many goods and services are produced.



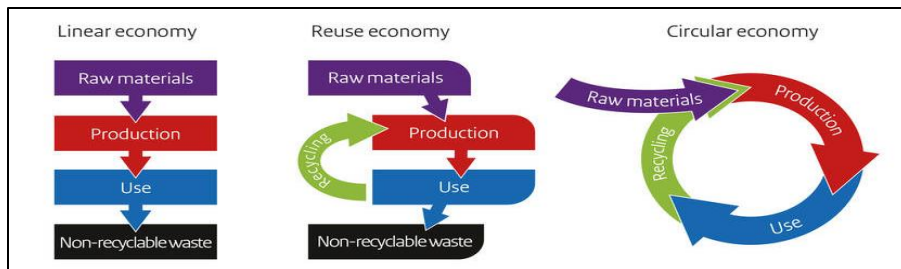
Linear economy - raw materials are collected, then transformed into products that are used until they are finally discarded as waste (take-make-waste).



Recycling economy - like a linear economy, but with a small amount of recycling (take-make-recycle-waste).



Circular economy - aims to design out waste. This means that waste does not exist: the end-of-life concept is replaced with restoration.



Changing patterns of consumption



Globalisation - the process by which the world is becoming increasingly interconnected as a result of massively increased trade (movement of products) and cultural exchange (movement of people and their ways of life).



Food miles - how far food has travelled to reach a consumer. Our food is travelling further to reach us!



Why can we buy more than we used to?

1. Average incomes have risen.
2. Prices have fallen significantly
3. Better technology allows us to shop online
4. More advertising

The dark side to consumption



Child labour - the employment of children in an industry or business, especially when considered illegal or exploitative.



De-industrialisation - due to globalisation, importing primary products, such as coal, from abroad became cheaper. Many mines in the UK down



Fast fashion - It's estimated that more than two tonnes of clothing are bought each minute in the UK, more than any other country in Europe. That amount produces nearly 50 tonnes of carbon emissions - the same as driving 162,000 miles in a car.



Overconsumption - when people consume things excessively (more than is necessary).

We need to try and be more.....

Sustainable - able to meet the needs of the present without impacting of the needs of the future

Responsible - having an obligation (need) to do something, having control over or care for something. To consume more thoughtfully.

UNIT 4: COASTS

Key terms:



Fetch – Distance of open water that the wind has blown over.



Swash – When a wave breaks, water is washed up the beach.



Backwash – the movement of water back down the beach



Destructive waves – the backwash is stronger than the swash.



Constructive waves – when the swash is stronger than the backwash.



Erosion – the wearing away of rock along the coastline



Hydraulic action – the sheer power of the waves as they smash against the cliff. Air becomes trapped in the cracks in the rock and causes the rock to break apart.



Abrasion – when pebbles grind along a rock platform, much like sandpaper.



Attrition – when rocks that the sea is carrying knock against each other.



Solution – when sea water dissolves certain types of rocks e.g. chalk and limestone.



Transportation – the movement of beach material.



Deposition – When the sea loses energy, it drops the material it has been carrying.



Longshore Drift - Sediment is carried by the waves along the coastline.

Example – tourism in Newquay:

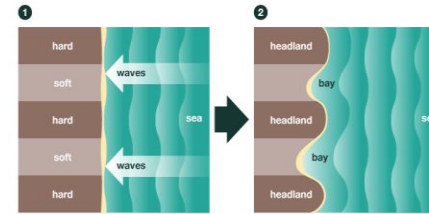


Positives - employment, money generated, social opportunities for younger people.

Negatives - impacts on habitats due to buildings, noise pollution, reliance on tourism, rise in prices.

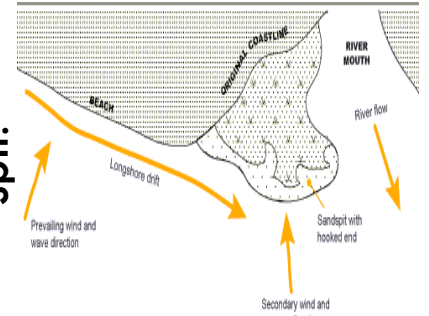
Landforms:

Headlands and Bays:

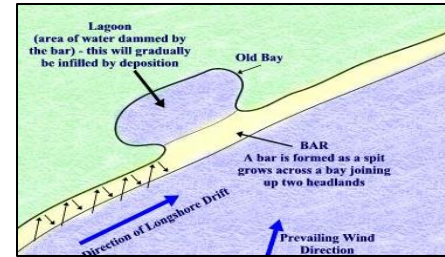


hard rock – erodes slower
soft rock – erodes faster

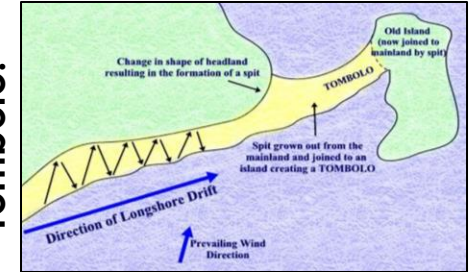
Spit:



Bar:



Tombolo:



Coastal Management

Hard engineering - involves building artificial structures which try to control natural processes.

Sea wall	<ul style="list-style-type: none"> ✓ Effective ✓ Good for tourism × Expensive 	Groynes	<ul style="list-style-type: none"> ✓ Builds the beach ✓ Controls longshore drift × Starves other beaches
Gabions	<ul style="list-style-type: none"> ✓ Cheap ✓ Forms new habitats × Look unnatural × Can be sharp to touch 	Rock armour	<ul style="list-style-type: none"> ✓ Cheaper than sea wall ✓ Forms new habitats × Can look unnatural

Soft engineering - a more sustainable and natural approach to manage coastal erosion

Dune stabilising	<ul style="list-style-type: none"> ✓ Natural looking ✓ Sustainable × Time-consuming to prepare 	Beach replenishment	<ul style="list-style-type: none"> ✓ Natural looking ✓ Creates a wider beach for tourists × Constant replacing needed
Managed retreat	<ul style="list-style-type: none"> ✓ Cheap ✓ Creates habitats × Land lost and landowners need to be compensated 		

UNIT 5: PRISONERS OF GEOGRAPHY

India



How are they prisoners? Partition of Indian subcontinent by the British in 1947.

Why are they prisoners? New nations were formed along religious lines. Resources not spread evenly.

Impacts? Bloodshed; mixed opportunities

Future? Both have nuclear arms; a pigeon was arrested recently.

Russia



How are they prisoners? Ice (10% of Russia is Tundra, 65% is permafrost).

Why are they prisoners? Hard lives; lack of warm port

Impacts? Tough lives; invasion and occupation of Crimea to get warm port.

Future? Climate change is welcomed in Russia! Climate change will open up new shipping routes; more methane will be released from permafrost, speeding up climate change (Positive/negative feedback). They want CC!

Middle East



How are they prisoners? The 1916 Sykes-Picot agreement split the Middle East into French and British control. Today oil fields create conflict.

Why are they prisoners? Nations were created which weren't based on the existing tribal kingdoms; new rules and people being forced to live together. Oil is a blessing and a curse.

Impacts? Tension created by division has led to wars once you add oil into the mix e.g. Iraq.

Future? As the world tries to be more environmentally friendly where will it leave these countries?

Korean peninsula



How are they prisoners? In 1945 America and Russia agreed to divide Korea into two zones; Democratic People's Republic of Korea (North) and the Republic of Korea (South). The boundary between them is the DMZ.

Why are they prisoners? North Korea's defensive attitude and nuclear weapons programme creates a constant threat of violence. Juche is the name for the philosophy on which Kim Il Sung founded the DPRK; put simply, it means self-reliance, The need not to need anybody else.

Impacts? The population of Seoul, and beyond, live in fear of violence. North Koreans live in considerable poverty with little engagement with the outside world. Life is very controlled.

Future? There are hopes for reunification, and North Korea is developing tourist facilities.

UNIT 6: TROPICAL STORMS

Example: Typhoon Haiyan



8th November 2013, Philippines



Category 5 – 315km/h wind, 7m storm surge



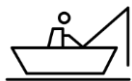
Effects – 50% of **houses destroyed**; 6190 **died**; **diseases** spread in contaminated water; **roads blocked** by debris.



Responses – **Emergency aid** arrived 3 days later by plane, **800,000 people evacuated** with many of them going to Tacloban stadium; **Oxfam replaced fishing boats**; the government announced the '**Build Back Better**' rebuilding project.

Being critical of responses

Not all responses were good, despite looking so 'on paper'. There was a lack of coordination which meant that people received as many as 3 fishing boats, leading to an increase in fishing which decreased fish supplies and led to conflict in the community.



Theory



What? Tropical storms are an area of low pressure with winds moving in a spiral around the calm central point called the eye of the storm.



Where? They form in areas of shallow, warm water ($27^{\circ}\text{C}+$) generally between 5° and 30° north and south of the Equator, with light winds.



How? Thunderstorm > tropical depression > tropical storm > hurricane. This development and intensifying process is called **tropical cyclogenesis**. Tropical storms dissipate when they make landfall, as they lose their key energy source and encounter friction.



Weather? As a tropical storm passes, over cloud cover, rain and wind will increase, reaching their peak at the eye wall. The eye is associated with calm weather. Then, the weather sequence will repeat, but in reverse.



Measuring? Tropical storms are measured using the Saffir-Simpson scale. This categorises the strength of the winds into 5 categories, with category 5 (157+mph) the worse.



Climate change? Due to the warming of the planet, it is predicted that the **distribution** of tropical storms will increase (as shown by Hurricane Ophelia). They are also predicted to be more **intense** due to increased energy and moisture in the atmosphere. Whether or not they will be more **frequent** is unclear.



Management? Work can be done to reduce the impacts of a tropical storm. This includes **monitoring and prediction, planning** and **protection**.