Another geography best seller!

UNIT 1: COASTAL CHAOS

"Save your Tears" be a "Starboy" and complete your revision "After Hours" with the awesome new Coastal chaos guide!

What to expect in the exam..... Dates October (check Firefly)

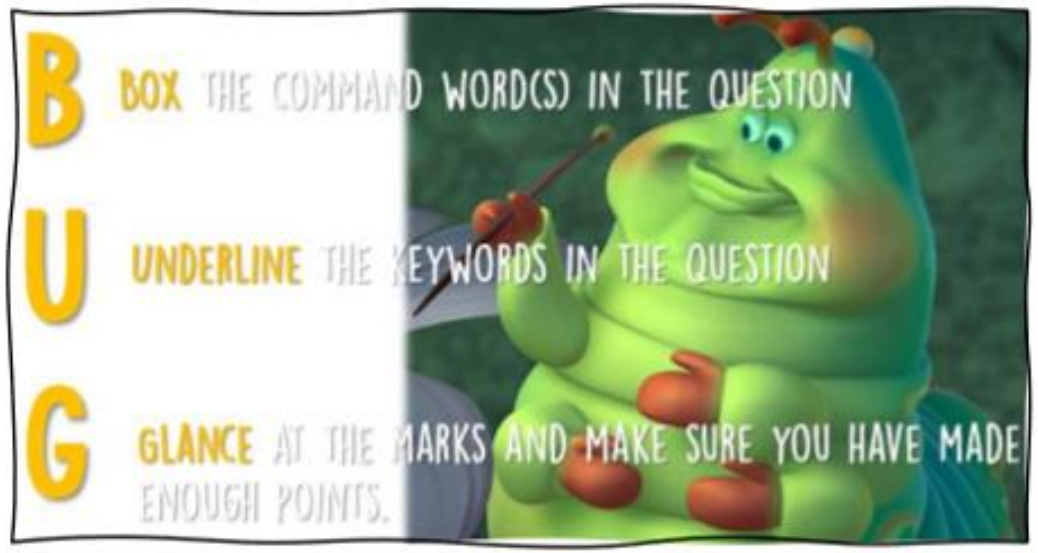
You will need:
Pen, Pencil, Ruler, Eraser at your exam and it will last around 50 minutes. No revision material or devices will be allowed.

Style of questions:

The exam will consist of a series of short response questions and one extended response question (7-mark case study required). Below are some sample answers and examiners comments. It is very important that you remember to BUG every question and really focus on the command word, so you know what the examiner wants you to write. Have a look at the table below to remind yourself of the command words to expect then read the sample answers and comments.

TYPICAL EXAM COMMAND TERMS:

ANALYSE: Separate information and discuss its parts.
ARGUE: Present a reasoned case for/against something.
COMPARE: Describe the similarities and differences of at least two things.
DEFINE: Give the meaning of a word.
DESCRIBE: Give the main characteristics or account in words.
DISCUSS: Bring out the important points, consider the good/bad and come to a conclusion.
EVALUATE: Give an opinion by exploring the pros and cons of something.
EXPLAIN: give reasons on why or how something happens.
IDENTIFY: give an example.



Example answers:

(iii) Identify from Fig. 1.1 a year when:

– net migration was greater than natural population growth ..... 2012 .....

– there were more emigrants than immigrants ..... 1992 .....

– the largest total population growth occurred. ..... 2011 .....

[3]

Here you can see the command word is identify, so the student doesn't need any explanation or detail and just needs to use Fig 1.1 only. 3/3

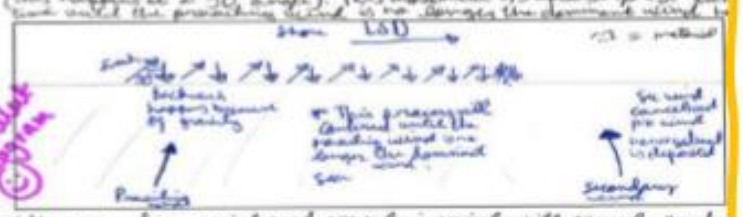
4. Using the map, describe the distribution of coral reefs. (5)

Coral reefs are mostly found near on the coast. I can see that the majority of corals are found in land between the tropics of capricorn and cancer however, there is a coral reef in New Zealand that is neither in between or on the tropics.

A good description using the map. No need for explanation here as the question as to describe location. This student also clearly makes at least 3 points as asked for by the number of marks. 3/3

5 Explain the process of longshore drift. You also draw a diagram. (4)

As the prevailing wind is at a certain direction, sediment in the water are carried by the waves. The swash then drop carries the material onto the shore, but it then rolls back into sea because of gravity (this happens at a 90° angle). This movement is repeated for a few times until the prevailing wind is no longer the dominant wind to



• the secondary wind and prevailing wind will cancel each other out. As a result, material (sediment) is deposited in that area. This is called longshore drift.

A clear explanation with lots of detail. Furthermore, the student not only draws a diagram but also annotates it – this is crucial. Marks are awarded for the annotations not for creating the next Picasso painting. All points of longshore drift explained. 4/4

(e) Explain the location of a factory or industrial zone in a named area you have studied.

Name of area ..... Burnaston, England. .....

•The location of the Toyota factory has excellent transport links. The factory in Burnaston has easy access to the M1 (a major motorway) and to the East Midlands Airport. Toyota would have made a factory here because the motorway, M1, provides easy road access to the rest of the UK therefore reducing transport costs. This also makes it easier for the workers to get to the factory. The local airport provides links to other areas of the UK as well as other countries in Europe, which will have reduced the costs of transport as they no longer need to export it from Asia.

•The local environment provides many amenities and n excellent quality of life for the workers. The nearby settlement of Derby has many services like cinemas and shopping centres. Toyota would have likely set up the factory here because the amenities would have provided many workers with a great quality of life and would have attracted them to work in the factory due to the incredible location. The great quality of life will attract many highly educated workers

•The general area of the Burnaston Toyota factory is very flat making it easy for expansion. The UK has approximately 65 million people with the number likely to increase as surrounding countries like Ireland and France will. This means that the demand for the Toyota cars will be higher than the supply. Due to the land being large and flat, this attracted the Toyota company to make a factory here in case there needs to be an expansion. This would reduce costs in the future as they might have had to make a new factory or reclaim the land in their favour.

•The area of Burnaston has already got many skilled workers. The Universities in Derby provide lots of skilled workers every year and Derby is a traditional place for the location of manufacturing industries such as Rolls Royce. This means that there will be even more skilled workers in the area. This would influence Toyota's decision on where to locate their car factory as they would want highly educated to conduct the jobs in their factories and for research and development projects. Due to the skilled workforce in Derby, this location would be ideal for Toyota.

[7]

This is an example of an extended response 7-mark case study question. The student uses lots of place specifics to support his argument. A good use of Point, Evidence, Explanation. We would be looking for 4+ PEEs here and this student does it. 7/7

TOPIC 1: COASTAL CHAOS

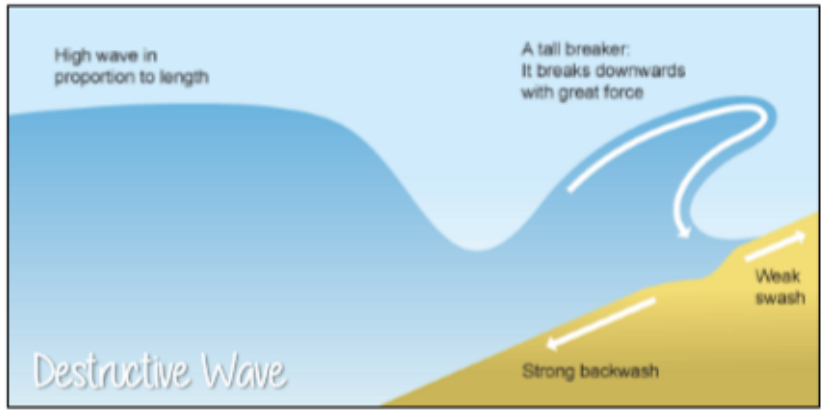
Waves

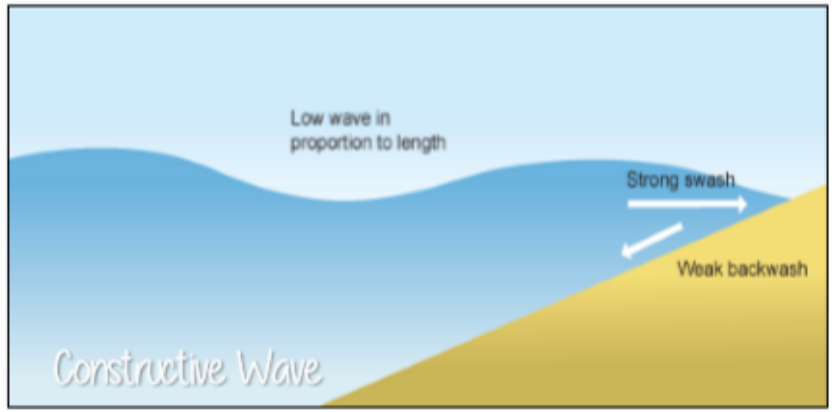
When a wave breaks, water is washed up the beach - this is called the **swash**. Then the water runs back down the beach - this is called the **backwash**. With a constructive wave, the **swash is stronger** than the backwash. With a destructive wave, the **backwash is stronger** than the swash.

Destructive Waves

- Destructive waves are created in storm conditions.
- They are created from big, strong waves when the wind is powerful and has been blowing for a long time.
- They occur when wave energy is high and the wave has travelled over a long fetch.
- They tend to erode the coast.
- They have a stronger backwash than swash.
- They have a short wave length and are high and steep.

USE YOUR DEVICE TO SCAN THE QR CODE FOR COASTAL ANIMATIONS, EXAM QUESTIONS, AND REVISION VIDEOS!





Constructive waves

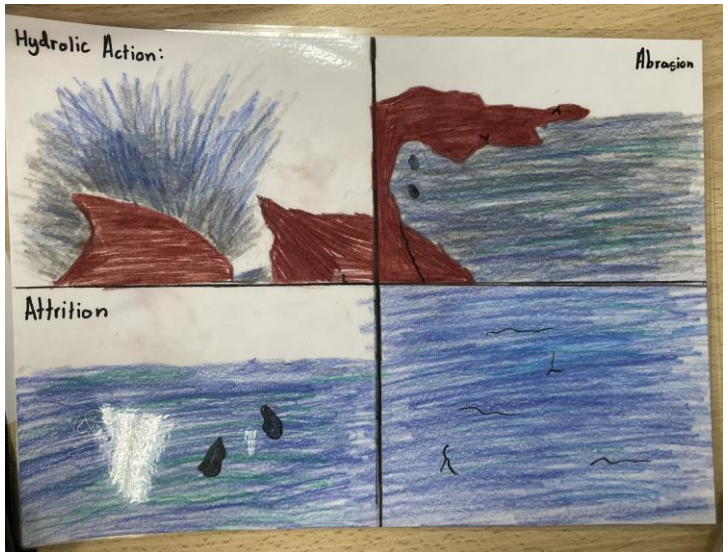
1. They are created in calm weather and are less powerful than destructive waves
2. They break on the shore and deposite material building beaches.
3. They have a swash that is stronger than their backwash.
4. They have a long wavelength and are low in height

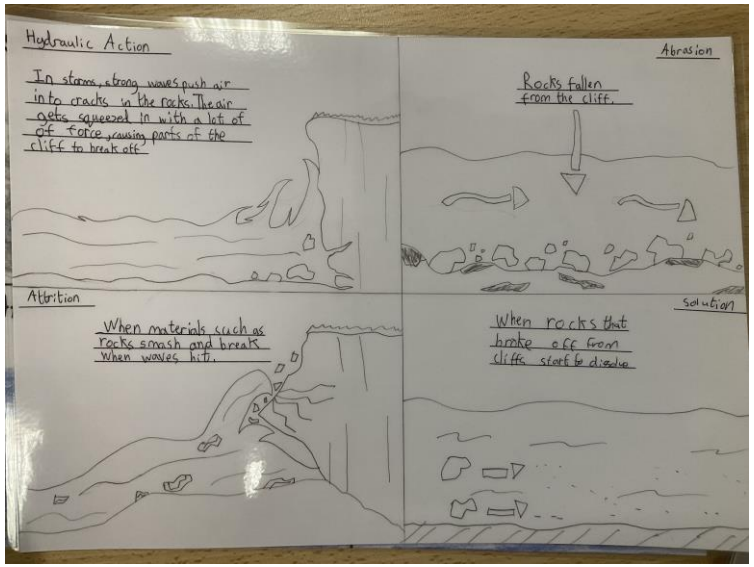
CAN YOU EXPLAIN HOW COASTAL EROSION AND DEPOSITION CREATES LANDFORMS AT THE COAST?

Destructive waves

1. Cause coastal **erosion** such as:

a. **Hydraulic action** – air is forced into the cracks in rocks by the sheer force of the waves, weakening the cliffs and causing erosion
b. **Abrasion** – Bits of rock and sand are hurled against the rocks by the waves
c. **Attrition** – Waves smash rocks and pebbles into one another making them smoother and rounder
d. **Solution** – acids in the water dissolve rocks such as limestone easily.





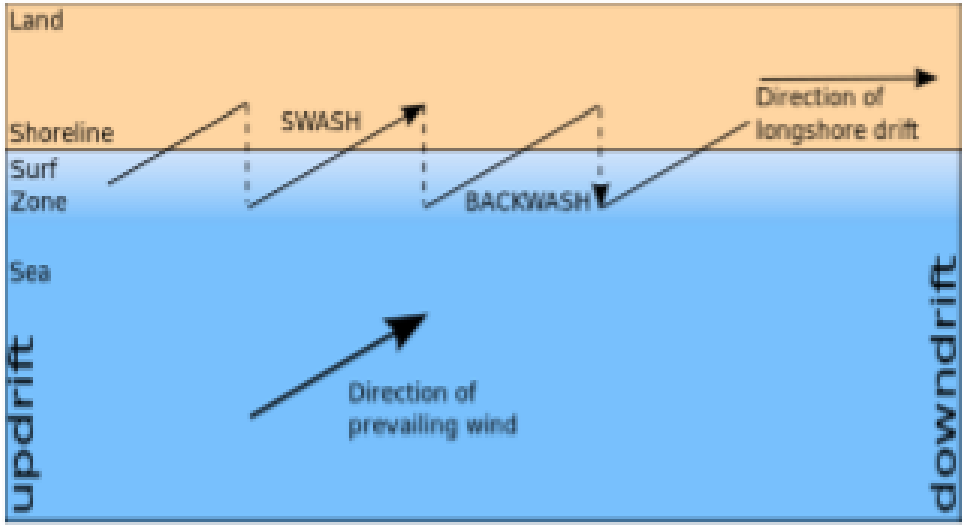
TOPIC 1: COASTAL CHAOS

Transport

There are various sources of the **material** in the sea. The material has been:

- eroded from cliffs
- transported by **longshore drift** along the coastline
- brought inland from offshore by constructive waves
- carried to the coastline by rivers.

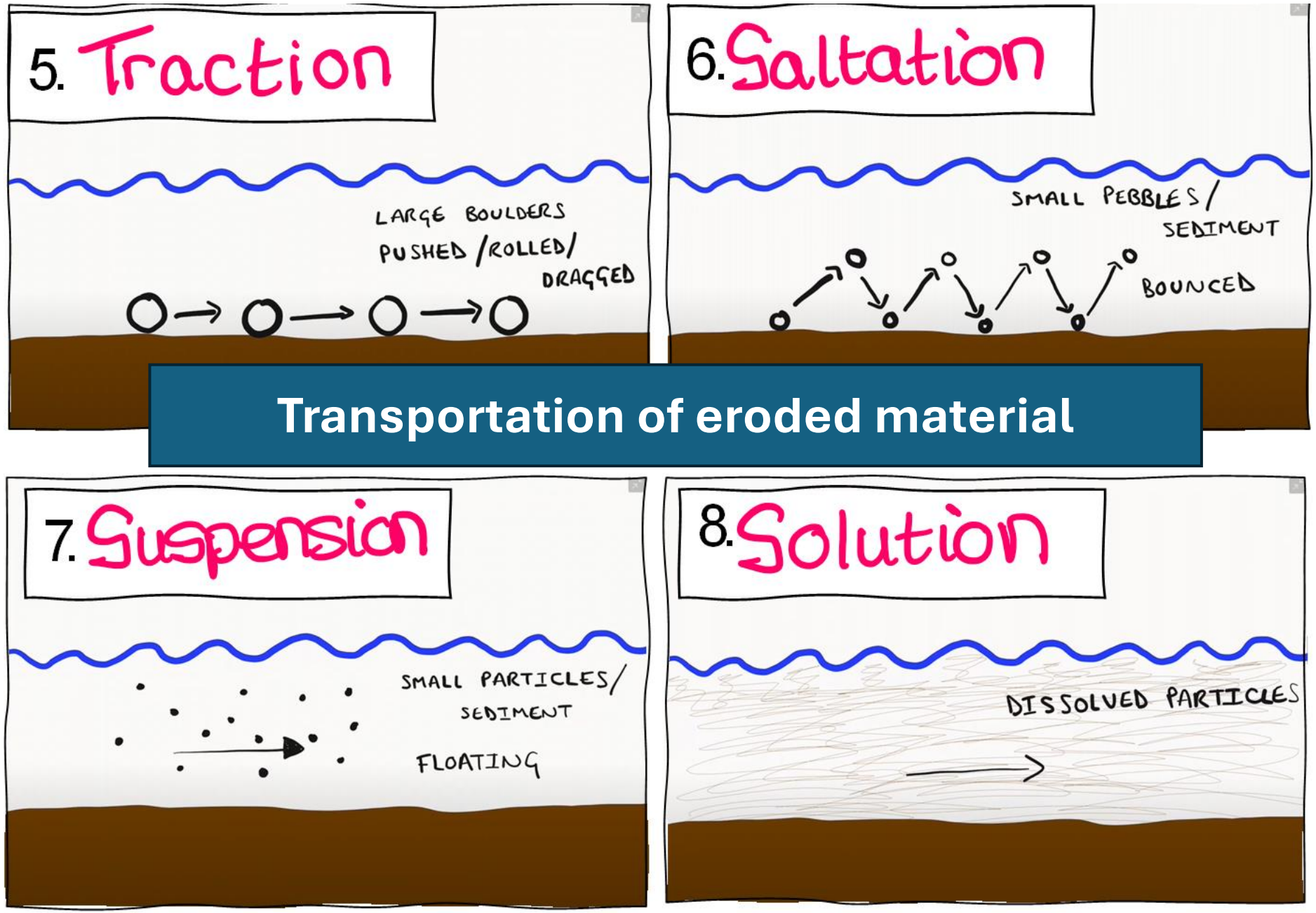
Waves can approach the coast at an **angle** because of the direction of the **prevailing wind**. The **swash** of the waves carries material up the beach at an angle. The backwash then flows back to the sea in a straight line at 90°.



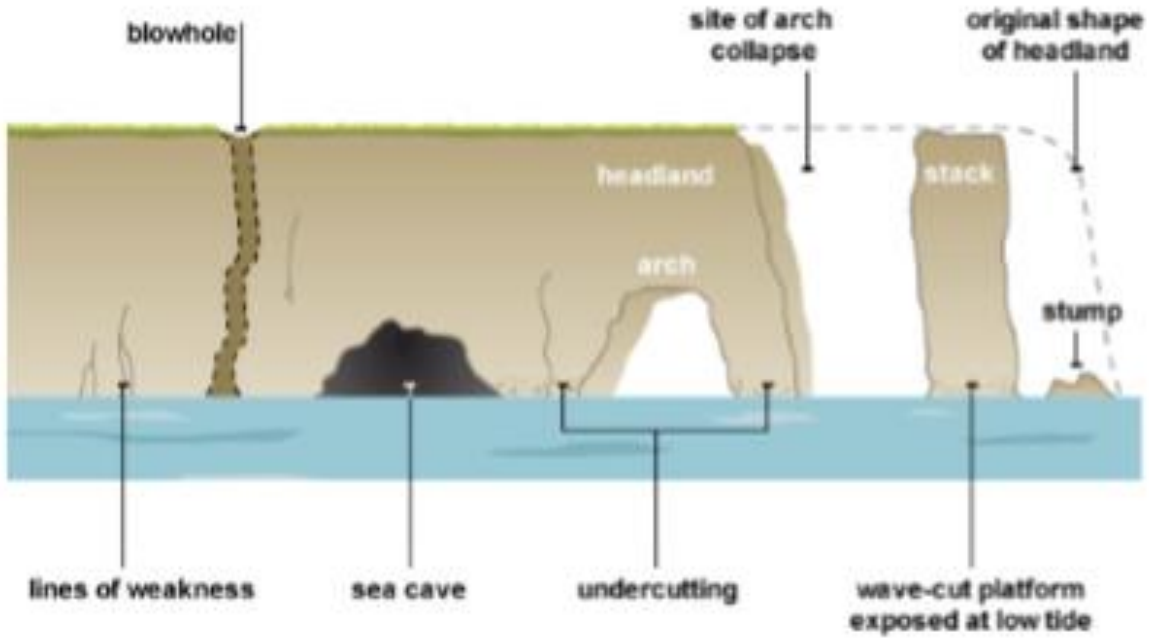
- Longshore Drift

This movement of material is called **transportation**.

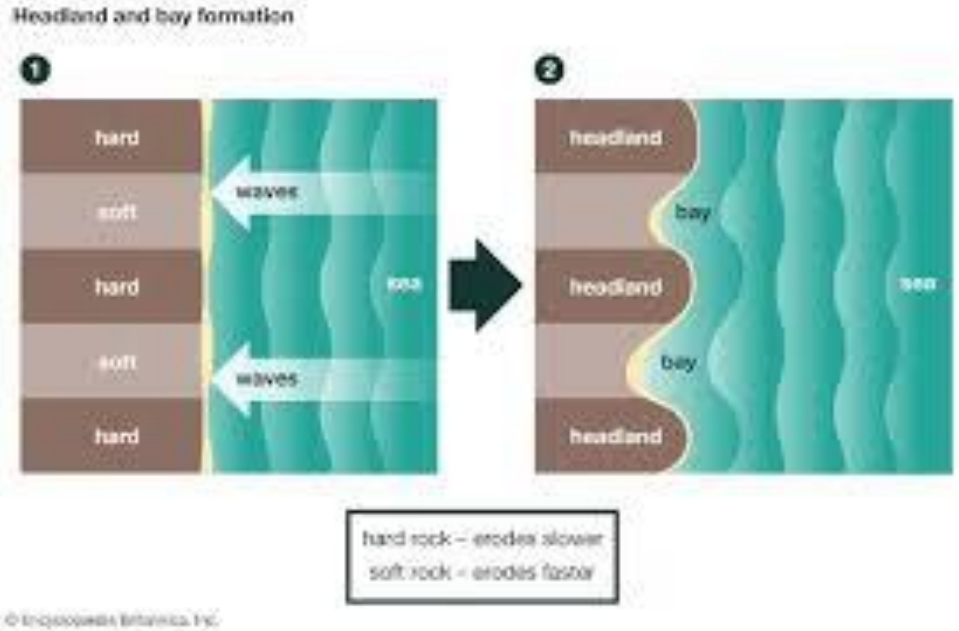
Continual swash and backwash transports material sideways along the coast. This movement of material is called **longshore drift** and occurs in a zigzag


5. Traction
LARGE BOULDERS
PUSHED /ROLLED/
DRAGGED
6. Saltation
SMALL PEBBLES/
SEDIMENT
BOUNCED
Transportation of eroded material
7. Suspension
SMALL PARTICLES/
SEDIMENT
FLOATING
8. Solution
DISSOLVED PARTICLES

Coastal Landforms



REMEMBER WHEN ANSWERING QUESTIONS ABOUT COASTAL PROCESSES YOU CAN DRAW AN ANNOTATED DIAGRAM TO HELP SUPPORT YOUR ANSWER.



COASTS END OF TOPIC PRACTICE QUESTIONS

1. Describe the difference between constructive and destructive waves? (4)
2. Explain how longshore drift works? (4)
3. Describe how erosion affects the coast? (4)
4. Identify landforms that can be created by the coast? (4)