Geography
Week 3 Year 5

I can explain coastal erosion.

Instructions.

Work through the PowerPoint watching the clips by following the links. (You may need to copy and paste the link into your search).

Complete the ordering activity. You can do this by printing the worksheet and cutting out or by numbering if you don't have a printer.

Try to label the diagram. If you don't have a printer you can add text boxes to the PowerPoint slide.

What is the coast?

The coast is where the land meets the sea.

What physical features can you see on the coast?

What physical features can you see on the coast?

beaches

cliffs

sand

pebbles

rocks

caves

rock pools

arch

stack

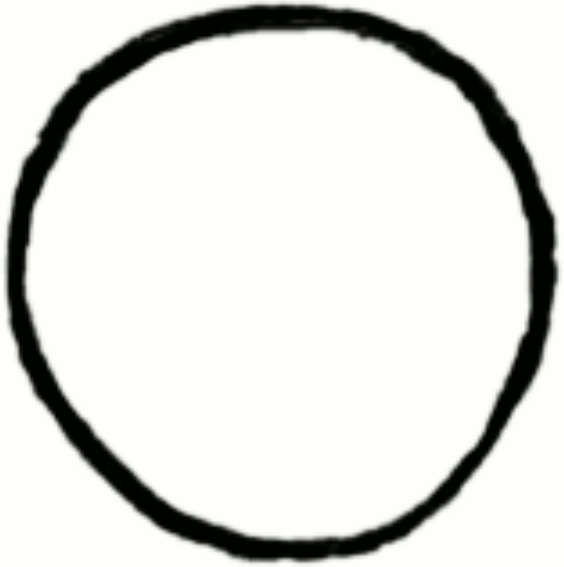
Whys does the coast look different everywhere?

- The sea constantly bashes against the edge of the land in different directions.
- Some rock in the land is soft, some is hard.
- Some places have more strong and forceful storms than others.

What is change?

Change is when something becomes different to how it was before.

E.g. it may be bigger or smaller in size etc.



Coastal Changes

Today we are learning about how the coast changes over time.

Why does this happen?

Watch this class clip

https://www.bbc.co.uk/bitesize/clips/z8tyr82

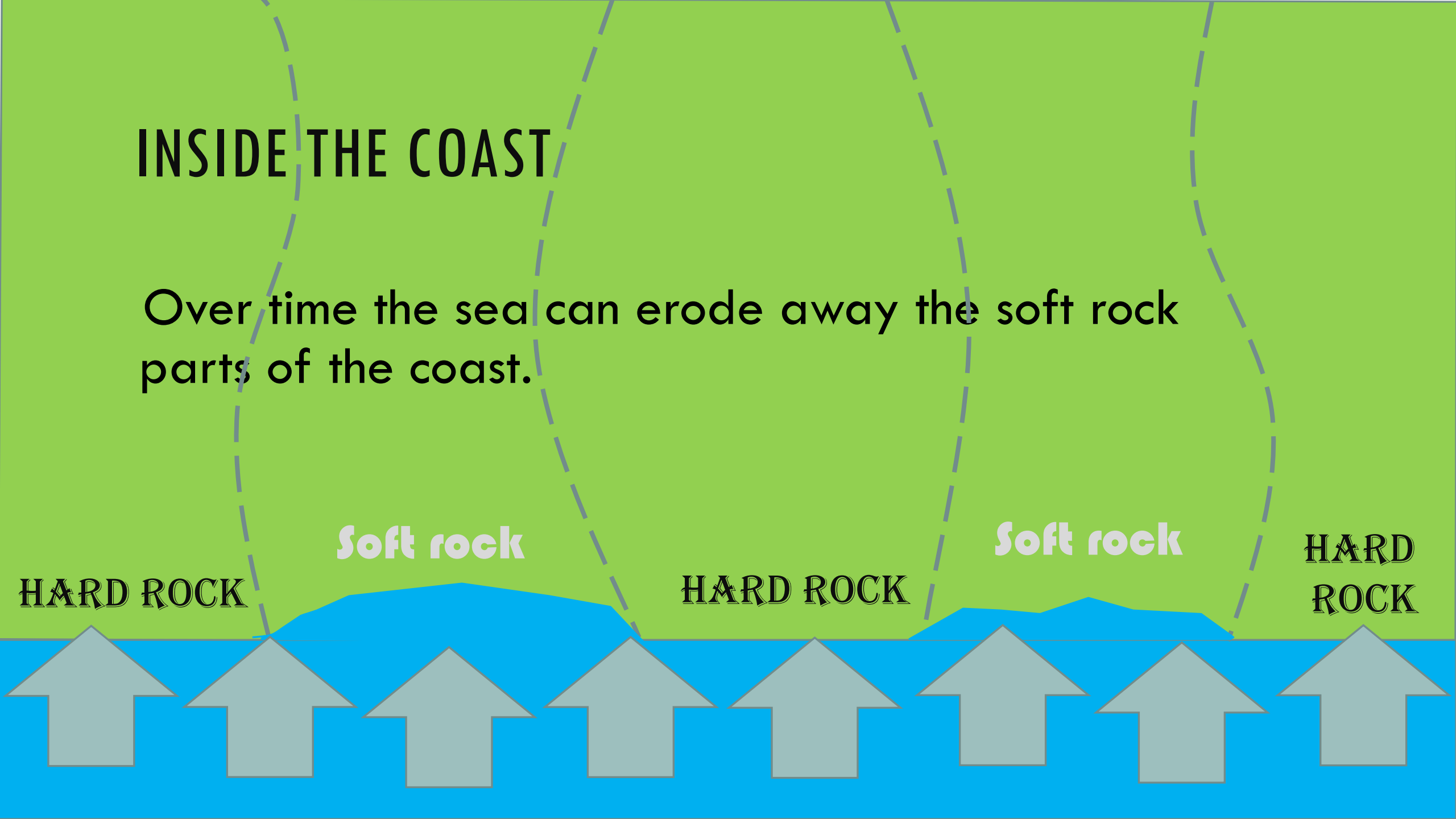
How are bays and headlands formed?

INSIDE THE COAST

The coasts are made of soft or hard rock. Often it can be in big patches likes this:

INSIDE THE COAST

Over time the sea can erode away the soft rock parts of the coast.



INSIDE THE COAST

In the gaps sand and rocks can collect and form sandy or pebbly bays.

These lovely sandy bays are formed as the weaker section of coastline here have been eroded. The headlands stick out as they are harder more resistant rock which aren't as easily eroded.

Softer, less resistant rock has already been eroded. Sediment has formed beaches.

Harder, more resistant rock

How are caves, arches, stacks and stumps formed?

Old Harry Rocks - coastal processes and landforms

Part of Geography | Coastal landscapes

Duration 04:13

More Clips

Old Harry Rocks, Dorset

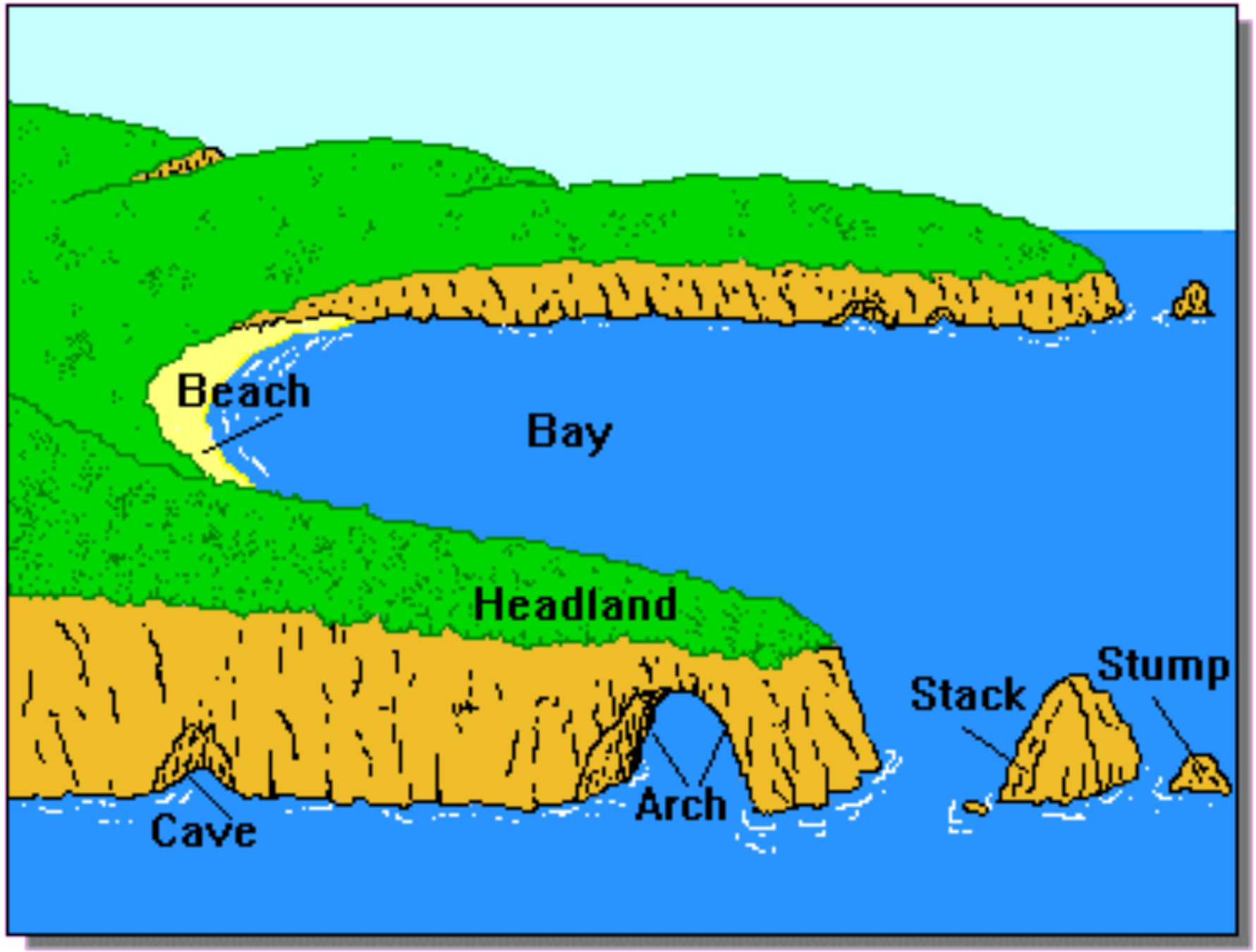
Sea defences in Minehead and managed retreat in Porlock

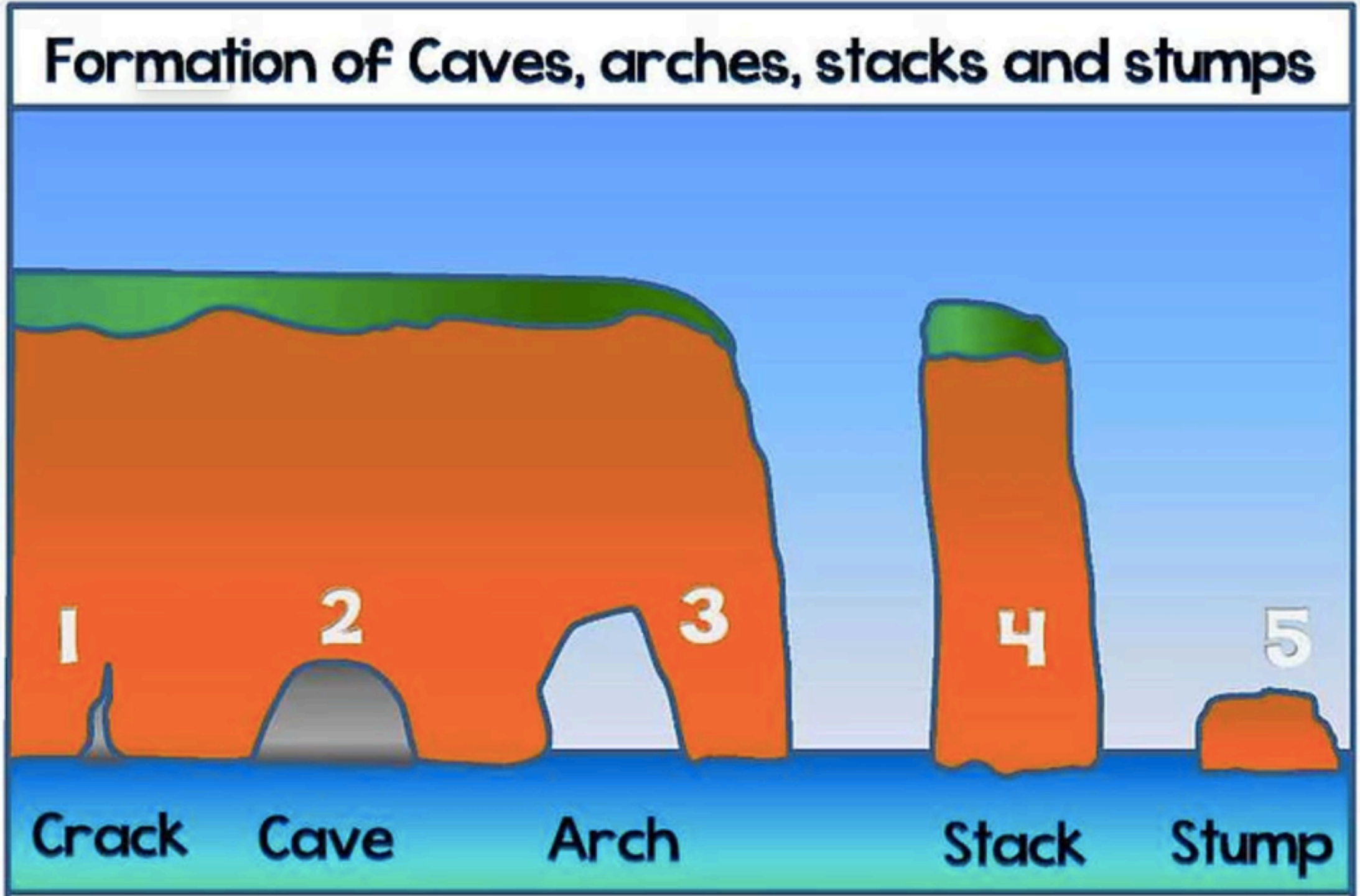
The coastline - longshore drift and spits

All GCSE Coastal landscapes videos

[Watch this clip about Old Harry Rocks before reading on.]

https://www.bbc.co.uk/bitesize/clips/zj6rkqt


Beach
Bay
Headland
Stack
Stump
Arch
Cave


Formation of Caves, arches, stacks and stumps
1
2
3
4
5
Crack
Cave
Arch
Stack
Stump

1. Waves attack a rock face using the force of the water and a crack forms in the weakest part of the rock.
2. Over time the crack enlarges to form a cave.
3. The cave is widened and deepened and pushes through the headland to form a natural arch.
4. More erosion from the sea and weathering can cause the arch to collapse, leaving a stack.
5. Over time further weathering and erosion lead the stack to wear down to a stump.

The sea cuts through to form an arch

A stump is the remains of the eroded stack

The cave is widened and deepened

Part of the former cliff is now isolated as a stack

The sea erodes the foot of the arch and widens it

Lines of weakness such as faults (cracks) occur in headlands

The roof of the arch becomes too heavy and collapses

Abrasion and hydraulic action erode the fault to form a cave

Over time the stack is eroded, it might be undercut and collapse

Order these images on your table to show how an arch and stack is formed.

1. Lines of weakness such as faults (cracks) occur in headlands

2. Abrasion and hydraulic action erode the fault to form a cave

3. The cave is widened and deepened

4. The sea cuts through to form an arch

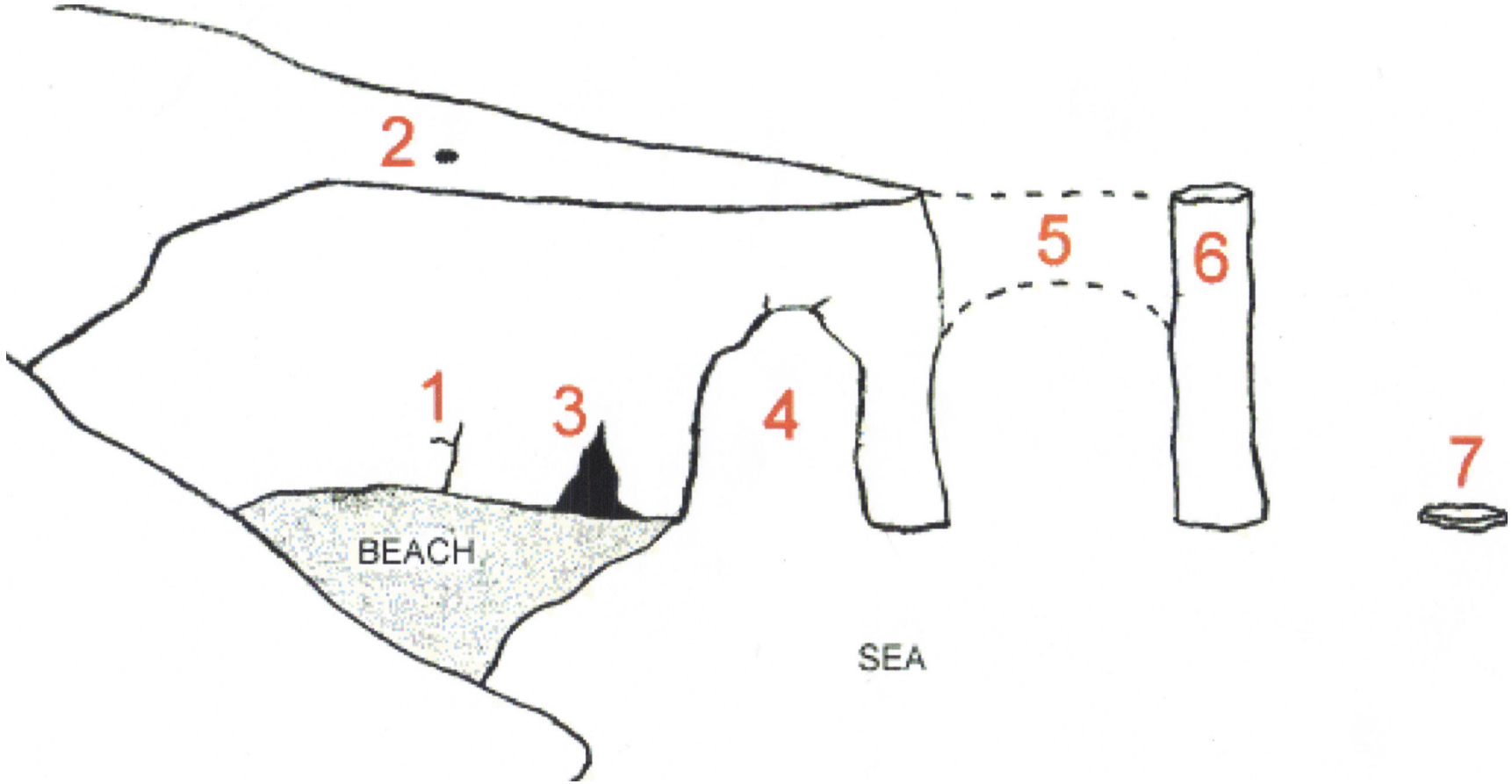
5. The sea erodes the foot of the arch and widens it

6. The roof of the arch becomes too heavy and collapses

7. Part of the former cliff is now isolated as a stack

8. Over time the stack is eroded, it might be undercut and collapse

9. A stump is the remains of the eroded stack



stack
stump
cave
arch

fault
collapsed arch
blowhole