



# Geography – Our Changing World

## Knowledge Organiser

### Year 4



#### Weathering and Erosion

**Weathering** is the process of wearing away rocks by the weather.

There are three different types of **weathering**:

- physical **weathering**
- chemical **weathering**
- biological **weathering**

**Erosion** is where natural materials are worn away and transported by environmental features such as water, wind and ice.

#### Physical Weathering

Water gets into cracks in the rock, it can then freeze causing the water to expand creating cracks in the rock.



#### Chemical Weathering

Slightly **acidic** rainwater can cause a chemical reaction and over time this can **dissolve** some of the rock.



#### Biological Weathering

Caused by animals and plants. Roots can grow under rocks and cause damage, animals can wear away paths, dig holes etc.



#### Features of Coastlines

##### Bays and Headlands

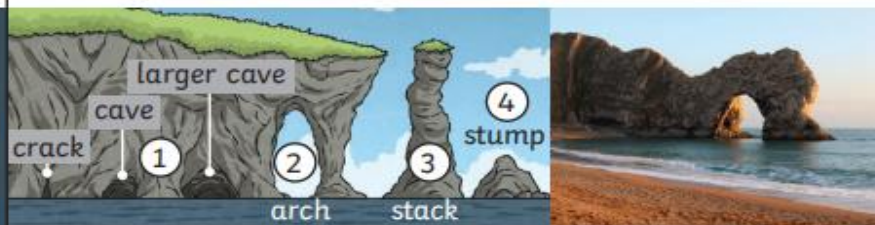
Where there is harder and softer rock, the softer rock will **erode** more quickly and can form bays. The harder rock **erodes** more slowly and can form headlands surrounding bays.



##### Arches, Stacks and Stumps

Softer or weak sections of the rock are **eroded** more easily.

1. Over time, waves cause cracks to open forming caves.
2. If a cave forms in a headland, it may break through causing an arch to form.
3. The top of the arch can weaken and may collapse into the sea leaving a stack.
4. Over time, the stack will **erode** leaving a small stump of rock.



##### Spits

Formed by **deposition**.

1. The tide carries **eroded** material along the coastline.
2. **Deposits** form a long, thin sandy area of land.
3. Changing winds may cause the spit to form a hook shape.
4. Mud flats develop on the inland side of the spit.

