# Year 9 Geography Knowledge Organiser – Coasts

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| 1 | Erosion | Wearing away of the land by a moving force, such as the waves, wind, rivers – hydraulic action, abrasion, corrosion, attrition are all forms of coastal erosion |
| 2 | Deposition | The dropping down of material, for example when water slows down and loses energy sediment can no longer be carried |
| 3 | Transportation | When sediment of different sizes is moved - solution, suspension, saltation and traction |
| 4 | Hydraulic action | Force of the water hitting the cliff face. Air forced into crack and causes rocks to break away |
| 5 | Abrasion/ Corrasion | The wearing away of rocks by the sandpaper effect – small stones within the water hit the bed or banks or a river or cliff and make it smoother |
| 6 | Solution | The transportation of dissolved rock and minerals |
| 7 | Attrition | Rocks knock into each other causing them to become smaller and rounder |
| 8 | Corrosion | A form of erosion where rocks dissolve due to weak acids in the water |
| 9 | Biological weathering | Plant roots grow in cracks in rocks and animals burrow making rocks weaker and break apart |
| 10 | Chemical weathering | Rainwater absorbs carbon dioxide ($CO_2$) and is slightly acidic – this dissolves rock very slowly |
| 11 | Mechanical weathering | Freeze thaw weathering/frost shattering – caused by constant heating and cooling effect causes water to freeze and thaw– fragments of rock break off<br>Salt weathering – salt crystals grow and expand when water evaporates – rock fragments break of |
| 12 | Headlands and bays | Headland – outcrop of hard rock (limestone, sandstone) and bay - indentation of soft rock (clay) in the shape of an arc |
| 13 | Longshore drift | Transportation (movement) of sediment along the coastline due to the angle of the waves approaching the beach |
| 14 | Backwash | Wave retreating from the beach, at right angles |
| 15 | Swash | Wave approaching the beach in the direction of the wind |

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| 16 | Relief | Physical features including height, steepness and shape of the landscape |
| 17 | Mass movement | Downward movement or sliding of material due to gravity – e.g. rock fall, landslide, mudflow, slumping |
| 18 | Constructive wave | These waves help to build up the beach – characteristics are strong swash, weak backwash, causing deposition |
| 19 | Destructive wave | These waves erode or 'destroy' the beach – characteristics are weak swash, strong backwash, causing erosion |
| 20 | Landform | A feature of the landscape that is the result of erosion, transportation or deposition |
| 21 | Spit | Long, narrow finger of sand or shingle jutting out into the sea – attached to land at one end. Depositional landform feature |
| 22 | Bar | When a spit extends right across a bay and attaches to the other side. My form a lagoon lake behind it. |
| 23 | Hard engineering | Artificial, man-made structures to control natural erosion of the coastline. These often don't look natural, are expensive but are hard wearing and effective against a erosion, e.g. sea wall |
| 24 | Soft engineering | More environmentally-friendly methods of protecting the coastline, often cheaper and less visually obvious, e.g. planting marram grass |
| 25 | Managed retreat | Controlled erosion of coastline e.g. allowing sea to erode or flood certain areas of low-lying land. This is soft engineering |
| 26 | Coast | Where the land meets the sea |
| 27 | Beach | Deposits of sand, pebbles or shingle (broken shells) at the coast |
| 28 | Coastal management | When coasts are protected from erosion and flooding by humans. This can be hard or soft engineering |
| 29 | Groynes | An example of hard engineering – wooden or rock structures built at right angles to the coast, which trap sediment and help to build up a beach, therefore reducing coastal erosion |
| 30 | Beach nourishment | An example of soft engineering – this is the addition of sand or shingle to a beach it make it higher or wider. Sand is dredged from the sea floor. This looks natural but has to be maintained regularly |