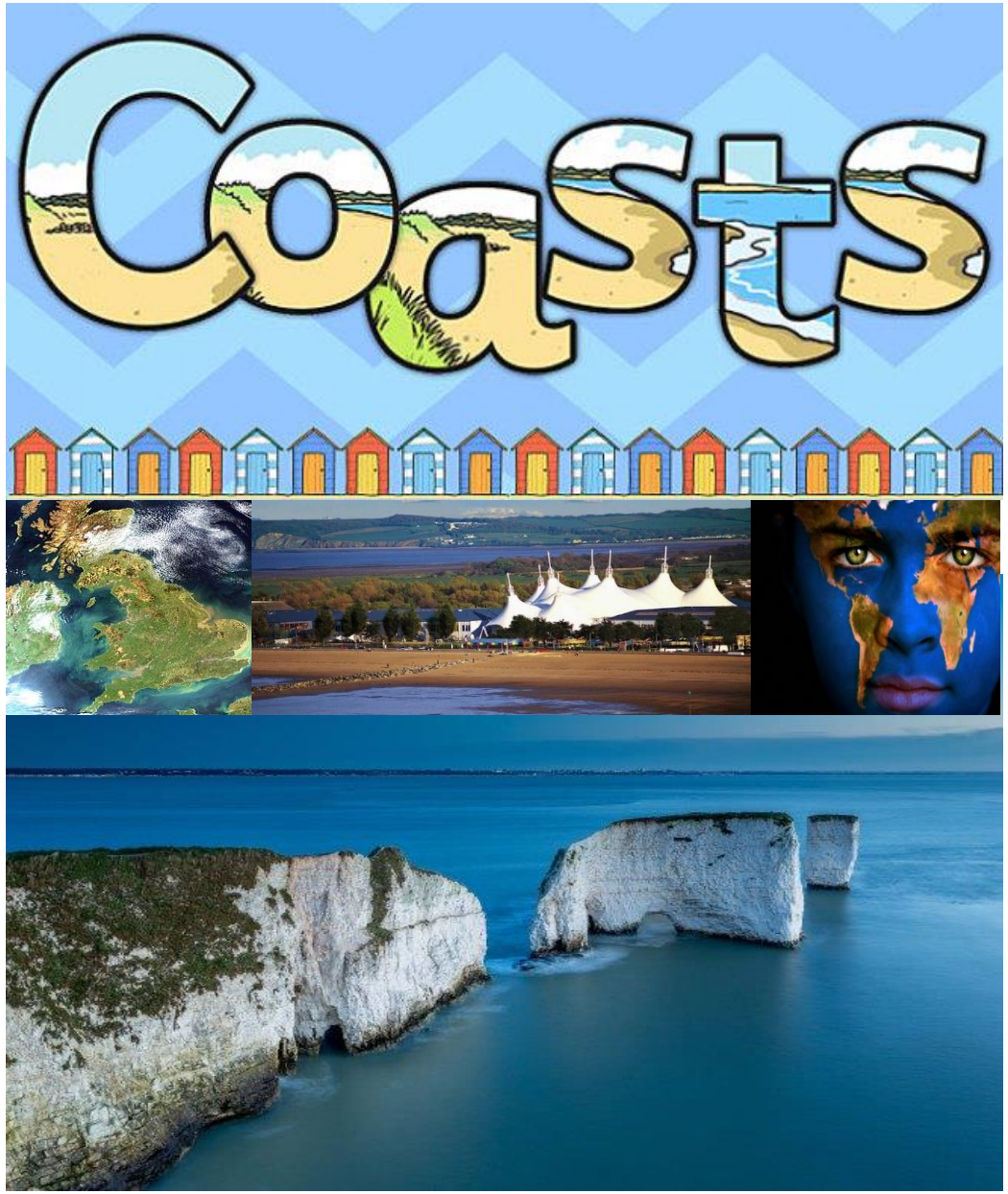
Year 8 Geography Homework: Term 1.

Name:	
Tutor:	
Geography Class:	
Geography Teacher:	

Term 1 Homework Guidance:

Your homework is to revise the key knowledge for this unit.

- You will have a banded assessment.
- Your grade will reflect how well you have revised during the term.
- This booklet contains fortnightly revision activities that you must complete to prepare.
- This booklet must be brought in for your teacher to see on the homework due date.
- All answers are on the knowledge organiser.
- The activities will be marked in class on the homework due date.

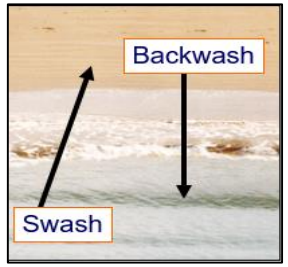


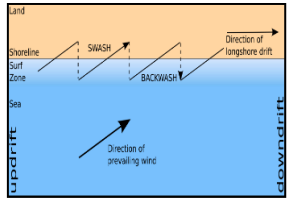
HWK	Completed:	Score:
1		/23
2		/30
3		/25

Overall Score:	/70
Overall Percentage:	

The UK and its coastline

As we are an island nation, the coastline has always been an important resource to us. It gives us important trade routes with the rest of the world, provides many opportunities for leisure and recreation and is home to millions of people. However, coastal processes are constantly changing the coastline, and because of this our coastline needs careful management





Coastal **processes,** caused by waves constantly change our coastline

Erosion – Waves wear away the coast

Transportation – Waves move eroded material from one place to another

Deposition – Waves dump eroded material to built up coastal features e.g. beaches

Types of erosion

Hydraulic action – The force of the waves crash into cliffs and smash them apart

Abrasion – Waves pick up sand and shingle and use it to smooth and wear away rocks

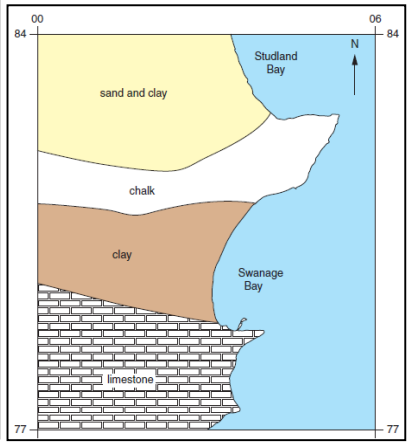
Attrition – The motion of waves moves pebbles on beaches, which smooths and rounds them

Corrosion – Sea water is capable of slowly dissolving rocks like limestone and chalk

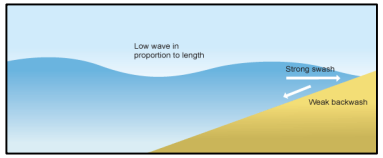
Long shore Drift is how waves transport sediment along the coast

Waves come in to shore at an angle, blown by the wind

The swash of the wave washes sand at an angle up and across the beach. The backwash pulls sand back out at 90° to the beach. Sediment is moved along the beach with the zig zag motion of each wave



As waves break they SWASH up the beach carrying sand with them. Gravity pulls them back down the slope of the beach to the sea. This is called BACKWASH



Constructive waves

Build up (deposit) beaches

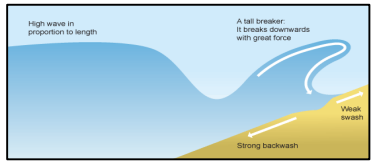
Are lower and less frequent

Break more gently

Have a large SWASH

Have a small BACKWASH

Push sand up a beach



Destructive waves

Erode away beaches

Are tall and frequent

Break powerfully

Have a small SWASH

Have a large BACKWASH

Drag sand back out to sea

The coastline erodes at different rates depending on the resistance of the coastal geology.

Resistant rocks (chalk and limestone) erode slowly forming headlands

Less resistant rocks (clays) erode quickly forming bays

Coastal landforms

These are distinctive features of the coast created by coastal processes (erosion, transportation and deposition)

Erosional features

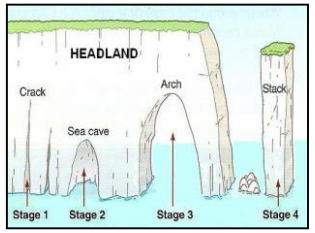
Cliffs, Caves, Arches Stacks, and Wave cut platforms.

Depositional features

Beaches, Sand dunes, Bars And Spits

Beaches are formed when constructive waves with a strong SWASH wash sand into a sheltered bay where it is deposited to build up a beach. The sand cannot be transported down the coast as it becomes trapped between the headlands at either end of the bay.

Spits are formed due to long shore drift and deposition. If the coastline suddenly changes angle where transportation is moving sand along the coast, constructive waves may deposit a beach out to sea. This is called a spit. They are often found across river mouths and estuaries.



Cliffs – Erode and retreat backwards over time leaving behind a rocky wave cut platform at sea level. This may be covered over by a beach.

1. The waves erode a wave cut notch into the base of the cliff
2. The top of the cliff becomes weakened by weathering (the action of the weather)
3. The weakened cliff collapses as it is not supported at the bottom
4. The cliff retreats backwards as pieces fall off

Stacks Like Old Harry are formed as a headland is attacked over time by erosive waves.

1. Waves erode and enlarge weaknesses and cracks (faults) in the headland
2. Some cracks are enlarged into caves
3. A cave may erode right through the headland to form an arch
4. The top of the arch is weakened by weathering and eventually collapses leaving a free standing stack

Where flooding and erosion is a problem along the coast e.g. Minehead, defences are used to reduce the effects. This is called coastal management.

Hard engineering is about building solid structures to stop erosion and floods.

Soft engineering is using natural materials and processes to reduce the effects.

In Minehead £12.5 million has been spend on new sea walls, rock armour and groynes to protect the town and Butlins holiday resort from storm flooding.

Hard engineering	Soft engineering
Sea walls – A strong and expensive (often curved) wall that deflects the power of waves back out to sea, protecting valuable property behind from flooding and erosion	**Beach nourishment** – Adding sand to a beach to widen it and make it higher so it absorbs wave energy more effectively
Groynes – Wooden structures that trap sand moved along the coast by Long Shore drift. The extra sand makes a wider beach which absorbs (dissipates) wave energy	**Sand dune regeneration** – Encouraging sand dunes to develop . They absorb wave energy, protecting the land behind
Rock armour – Large piles of boulders that block waves and absorb (dissipate) wave energy in the gaps between them	**Managed retreat** – Letting old defences fail so that the land and the sea can reach a new balance

geography is my world

Homework Task 1 | Set W/C: 22nd April 2019 | My Class Due Date:

1. The UK and its Coastline:

As we are an _____ nation, the coastline has always been an important resource to us. It gives us important _____ _____ with the rest of the world, provides many opportunities for _____ and _____ and is home to millions of people. However, coastal _____ are constantly _____ the coastline, and because of this our coastline needs careful _____.

2. Coastal Processes.

Coastal _____ caused by waves constantly _____ change our coastline.

<u>Multiple Choice Quiz – circle the correct answer</u>

2.1 Which process involves waves moving eroded material from one place to another?

a) Erosion.
b) Transportation.

2.2 Which process involves waves wearing away the coastline?

a) Erosion.
b) Transportation.

2.3 Which process results in the building up of beaches?

a) Deposition.
b) Erosion.

3. Longshore Drift.

Longshore Drift is how waves _____ sediment along the coast. _____ come in to shore at an angle, blown by the _____. The _____ of the wave washes sand at an angle up and across the _____. The _____ pulls sand back out at 90 degrees to the beach. Sediment is moved along the beach with the _____ _____ motion of each wave.

<u>True or False - decide if the statement is True or False – Types of Erosion.</u>

4. Hydraulic action is the force of the waves smashing cliffs apart.

TRUE
FALSE

5. Abrasion happens when pebbles are smoothed and rounded.

TRUE
FALSE

6. Attrition happens when sand and shingle wears away rock.

TRUE
FALSE

7. Corrosion occurs when sea water slowly dissolves rock.

TRUE
FALSE

The answers for all these questions are found on the knowledge organiser.

GEOGRAPHY WELL DONE!

Homework Task 2	Set W/C: 6th May 2019	My Class Due Date:

1. Fill the gaps:

As waves break they _____ up the beach carrying sand with them. _____ pulls them back down the slope of the beach to the sea. This is called _____.

2. <u>Multiple Choice Quiz – circle the correct answer – Constructive and Destructive Waves.</u>

2.1 Which wave has a large backwash?

a) Constructive.
b) Destructive.

2.2 Which wave is able to push sand up a beach?

a) Constructive.
b) Destructive.

2.3 Which wave breaks more gently?

a) Constructive.
b) Destructive.

2.4 Which wave drags sand back out to sea?

a) Constructive.
b) Destructive.

2.5 Which wave erodes beaches?

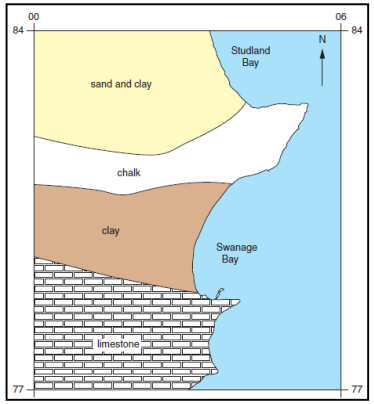
a) Constructive.
b) Destructive.

2.6 Which wave builds up (deposits) a beach?

a) Constructive.
b) Destructive.

3. Fill the gaps:

The coastline _____ at different rates depending on the _____ of the coastal _____. Resistant rocks such as chalk and limestone erode _____ forming _____. Less resistant rocks (clays) erode _____ forming _____.



<u>True or False - decide if the statement is True or False – Geology.</u>

4. Chalk and Limestone are resistant rocks and therefore erode more slowly.

TRUE
FALSE

5. Swanage Bay and Studland Bay have both been created because the resistance of the rocks there were weaker.

TRUE
FALSE

The answers for all these questions are found on the knowledge organiser.
Note: Please complete the next page also.

6. Coastal Landforms:
These are distinctive features of the coast created by coastal _____ (erosion, transportation and deposition). Erosional features are coastal landforms that have been made by the process of erosion. For example, cliffs, caves, arches _____ and wave cut platforms. Depositional features are coastal landforms that have been made by deposition. For example, beaches, sand dunes, bars and _____ .

Multiple Choice Quiz – circle the correct answer

7. How are beaches formed?
a) When constructive waves with a strong swash wash sand into a sheltered bay where it is deposited.
b) When destructive waves with a weak swash take sand away from a bay and cause erosion.

8. Which is a feature of a constructive wave?
a) Weak swash and strong backwash.
b) Strong swash and weak backwash.

9. Why isn't sand transported further down the coast?
a) Sand has been washed into a sheltered bay and is trapped between two headlands.
b) Because a beach never changes, sand does not move.

10. What does deposition mean?
a) When material (sediment/sand) is being transported it is dropped by constructive waves because they have less energy than destructive waves and have a stronger swash.
b) When material (sediment/sand) is worn away by the waves.

True or False - decide if the statement is True or False:
Spits.

11. Spits are similar to beaches in that they are both coastal features that have been made by the process of deposition.
TRUE
FALSE

12. Longshore drift does not contribute to the formation of beaches and spits.
TRUE
FALSE

13. Spits can be created when a coastline suddenly changes angle.
TRUE
FALSE

14. Destructive waves help to create spits.
TRUE
FALSE

15. Spits are often found across river mouths and estuaries.
TRUE
FALSE

The answers for all these questions are on the knowledge organiser.

Homework Task 3: Set W/C: 20th May 2019 My Class Due Date:

1. Cliffs and Wave Cut Platforms:
Cliffs erode and _____ _____ over time leaving behind a rocky _____ _____ _____ at sea level. This may be covered by a _____.
Firstly, the waves erode a wave cut _____ into the base of a cliff. Secondly, the top of the cliff becomes weakened by _____ (the action of the weather).
Thirdly, the weakened cliff _____ as it is not supported at the bottom. Finally, the cliff _____ retreats backwards as pieces fall off.

2. Stacks:
Stacks like _____ _____ are formed as a headland is attacked over time by _____ waves. Firstly, waves erode and enlarge weaknesses and _____ (faults) in the headland.
Secondly, some cracks are enlarged into _____ Thirdly, a cave may erode right through the headland to form an _____. Finally, the top of the arch is weakened by _____ and eventually collapses leaving a free standing _____.

3. Coastal Flooding:
Where flooding and erosion is a problem along the coast e.g. Minehead, _____ are used to reduce the effects. This is called _____ _____.
_____ engineering is about building solid structures to stop erosion and floods.
_____ engineering is using natural materials and processes to reduce the effects.

4. Coastal Flooding and Minehead:
In Minehead £ _____ million has been spend on new sea walls, rock armour and groynes to protect the town and _____ holiday resort from storm flooding.

<u>True or False - decide if the statement is True or False:</u>
<u>Coastal Management.</u>

5. Sea walls are strong but very cheap.
TRUE
FALSE

6. Beach nourishment makes a beach higher and wider so that it absorbs more wave energy; thus reducing the effects of erosion.
TRUE
FALSE

7. Managed retreat is a hard engineering strategy.
TRUE
FALSE

8. Groynes are large piles of boulders that absorb wave energy.
TRUE
FALSE

9. Sea walls protect valuable property behind them from flooding and erosion.
TRUE
FALSE

The answers for all these questions are on the knowledge organiser.