

Lesson 3

ENVIRONMENTAL IMPACT OF WEATHERING AND EROSION

Learning intentions



1. To be aware that weathering and erosion of rocks can have an impact on human lives.
2. To know that when waves hit a coastline, they often cause erosion.
3. To be able to describe some effects of coastal erosion.

Resources



- Environmental impact of weathering and erosion PowerPoint presentation
- A large tray/plastic box
- Washed sand
- Water
- Lego block/s
- Piece of wood or a ruler
- Building sea walls activity sheet (DE 3.1)

Introduction



Show the class the first four photographs in the 'Environmental impact of weathering and erosion' PowerPoint presentation which show dramatic cliff erosion. Ask the pupils to think about what they have previously learnt about weathering and erosion, and use this knowledge to come up with ideas about what has happened here, or what may have caused this.

Record and display the pupils' ideas. Watch the news report on the next slide and talk about how this is an effect of coastal erosion caused by waves crashing against the cliff, along with heavy rainfall that causes the loose rocks to move.

What sort of impact would this have on people's lives? e.g. **where to build a house/own a holiday home, being careful on the beach in case of rockfalls, having to leave your home etc.**

Lesson 3 *continued*

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Development



Disappearing coasts activity

1. Set up a large tray with sand and water.
2. Make a beach using the washed sand and make cliffs of damp sand along the coastline and place a lego brick as a house on the top of the cliff.
3. Use the piece of wood (or ruler) to move the water to make waves and observe what happens. (The waves will undercut the cliffs and cause cliff collapse with the loss of the house. This happens quickly with sand cliffs).

Pupil activity

Ask pupils to draw a sequence of diagrams to show coastal erosion taking place in the Coastal Crumble activity (e.g. three diagrams to show start, middle and end of the activity). Make sure they add labels to their diagrams.

Plenary



Ask your class, how could we stop coastal erosion? Accept all suggestions, then show prez presentation of how humans have tried to prevent or slow down coastal erosion. Can pupils think of local examples where they have seen any of these prevention measures?

<http://prezi.com/embed/gwsbe3aqc5cx>

Assessment for learning



Dartboard Evaluation – children place a small sticker or draw a dot in the area of the dart board to answer a plenary question set by the teacher for example:

- Could you describe coastal erosion to a friend?
- Did you enjoy the lesson?
- Could you name some ways to prevent coastal erosion?

Pupils place their dot on the board depending on how confident they are about the answer i.e. in the bulls eye very confident (or really enjoyed the lesson), outer most area if they not so sure at all or unable to answer the question.

Lesson 3 *continued*

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Extension activities



- In small groups use the resource 'Building sea walls' (DE 3.1) to build their own sea defence.
- Write own newspaper reports and/or headlines for a dramatic cliff erosion incident.
- Conduct further investigation into local examples of cliff or beach erosion.
- On Grid Club website, My World section, play 'Defend My Beach' game; a short game which asks pupils to place sea defences on a beach area.