

Activity Title:

Dune formation

Focusing question

How are sand dunes formed and eroded?

Resources required

- PowerPoint presentation – 4b Formation of dunes

Prior learning

4a Importance of sand dunes

Method

- 1 The objective of this exercise is to introduce students to the dynamic process by which sand dunes are formed and eroded (known as the 'cut and fill' or the 'accretion and erosion' process).
- 2 View the PowerPoint presentation **4b Formation of dunes** before using it with the class, or set a small group this responsibility. Identify good places to stop for discussion and questioning. Have some questions already identified e.g. What is a dynamic process? What happens during calm weather and stormy weather? How is the balance maintained? If a small group has previewed the PowerPoint presentation then they can act as the questioner.
- 3 View the PowerPoint presentation as a whole class. Create a mind map of new learning. You could also break the class into groups. Each group should create their own mind map of new learning and share these with the rest of the class.
- 4 Reflection:
 - What new learning has come out of this session?
 - What are significant factors in maintaining the balance between erosion and accretion of dunes?

Possible next steps

- 4c (i) Sand budgeting – a literacy activity exploring the concept of a sand budget and the formation of sand dunes.
- 4c (ii) Sand budgeting – an activity exploring in more detail the concept of a sand budget and how this is maintained (as described by the cut and fill diagram).

Activity Title:

Dune formation

Environmental Education Aspect:

About the environment

Environmental Education Concept:

- Interdependence

Curriculum Links:

- Social Science
- Science

Suggested Curriculum Level:

Senior secondary