Activity Title: How do people affect beaches?

Focusing questions
How do people affect beaches?
What actions have people (individuals, groups and community) taken to protect dunes?

Resources required
• DVD/Video – Part three (video time 7.11 – 12.22)
• Worksheet – How do people affect beaches? – page 191
• Teacher answer sheet for the worksheet – How do people affect beaches? – page 192
• Copying: copy sufficient worksheets – How do people affect beaches? for one per copy per student or one digital image

Prior learning
2j Species lost from the beach
3b Parts of the beach and human activities
3d New Zealanders and the beach
4a Importance of sand dunes
5a The past – how have people affected beaches?

Method
1 The objective of this activity is to begin to explore how people affect beaches.
2 Watch the final section of the DVD about people’s impact on beaches. Complete the worksheet while watching the DVD for a second time.
3 Use the teacher answer sheet to review worksheet answers.
4 Reflection:
   • What are some of the positive and negative impacts you and your friends, whanau or family have on our local sand dunes?

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Environmental Education Aspect: About and For/With the environment

Environmental Education Concept:
• Personal and social responsibility for action
• Sustainability
• Interdependence

Curriculum Links: Social Science

Suggested Curriculum Level: Any

SUSTAINABILITY TIP!
Project a digital image of the worksheet and save paper.

189
Possible next steps

- **5c Positive and negative beach use posters** – reinforcing and summarising key points from this activity, 5c is a simple visual interpretation activity where students interpret positive and negative beach uses from two beach use posters.

- **5i Impacting interconnectedness** – a game exploring what interconnections exist between biotic and abiotic factors of the dune environment and how these interconnections can be affected and altered by human and natural induced changes.
Worksheet

How do people affect beaches?

People can have a major impact on the beach in a relatively short period of time and unfortunately this impact is not always positive.

The DVD shows how people have affected the beach environment. Watch carefully and answer the following questions:

1. Describe five examples of damage caused by humans to beaches and dunes.

   1. 
   2. 
   3. 
   4. 
   5. 

2. Why have dunes been bulldozed?

3. Where in the dunes is it not safe to build roads and houses?

4. Why is there more natural damage to the dunes during the winter months?

5. Why is there more human-induced damage to the dunes during the summer months?

6. What impact does human-induced erosion have on the cut and fill cycle?

7. What actions can people make to prevent the sand dunes from eroding?

   1. 
   2. 
   3. 

8. Describe a dune system that will be most resistant to erosion.

   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________
   __________________________________________
People can have a major impact on the beach in a relatively short period of time and unfortunately this impact is not always positive.

The DVD shows how people have affected the beach environment. Watch carefully and answer the following questions:

1. Describe five examples of damage caused by humans to beaches and dunes.
   1. Dunes bulldozed away for shops and car parks
   2. Houses and roads have been built right on top of dunes
   3. Walking on dune plants (walking/trampling)
   4. Sandboarding on dunes
   5. Building seawalls

2. Why have dunes been bulldozed?
   To make way for shops, houses and car parks

3. Where in the dunes is it not safe to build roads and houses?
   Right on top of the dunes (front dunes)

4. Why is there more natural damage to the dunes during the winter months?
   Normally, storms are more frequent in winter

5. Why is there more human-induced damage to the dunes during the summer months?
   Beaches are flooded with people in summer

6. What impact does human-induced erosion have on the cut and fill cycle?
   It prevents the repair of dunes by allowing the sand to blow away. It reduces the reservoir of sand

7. What actions can people make to prevent the sand dunes from eroding?
   1. Help plant dune plants
   2. Use beach accessways
   3. Join a coast care group and learn more!

8. Describe a dune system that will be most resistant to erosion.
   A dune with healthy functioning native dune plants growing down the dune face
   A dune with formalised accessways to minimise plant damage
   A dune where all development is a safe distance away from the sea