

Science 8
Unit 1: Water Systems
Worksheet 10: Shaping Our Shoreline



The shaping of our shorelines are affected by:

- Waves that have power to erode and deposit sediments on the shore
- Tides work with waves to determine the range of shoreline that can be affected by wave action

Factors that affect the interaction of waves and tides on the shorelines are:

- Slope of the shoreline
- Shape of the shoreline
- Type of rock material
- Wave energy

Shoreline Features:

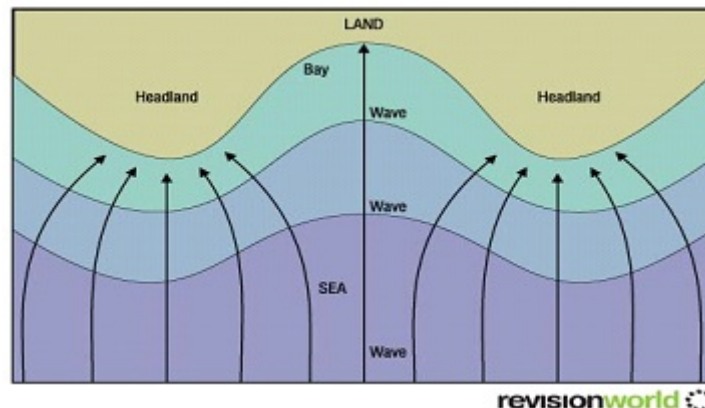
Headlands the parts of the coastline that project farther out into the ocean than the land next to them

Bay an indented areas of coastland or areas in the coastline that are in between headlands

Waves produce bays and headlands due to :

- 1) Erosion : the process that breaks down of the land around you.
- 2) Deposition: is the laying down of sediment carried by wind, water, or ice.

Wave energy is concentrated on headlands and spreads out as it reaches bays



The areas of a coastline that erode faster form bays and the areas that resist erosion become the headlands.

Technologies to prevent/ reduce the effects of wave action near human development include

- Breakwaters
- Jetties/ wharves
- Vegetation
- Sea walls

STUDENT ACTIVITY - By the Seashore

What features exist along a shoreline due to erosion and depositing of material from waves? From scenic cliffs to soft sandy beaches, shorelines have unique features due to their composition and the never ending waves that crash upon them. You can learn a lot about what a beach is composed of and what it formerly looked like from the features that presently exist. In this activity, you will research the processes of erosion and deposition that have resulted from wave action and water flow.

Newfoundland and Labrador's coasts are home to hundreds of spectacular examples of how wave action weathers and erodes coastal rock. Below are just a few of these incredible features

1. The Arches — Parsons Pond on the Great Northern Peninsula,

How was it formed?

2. The Spout - Located on the East Coast Trail

How does it work?

3. The Dungeon - Bonavista

How was it formed?

Questions:

1. What is erosion

2. What is deposition?

3. What processes produce bays and headlands

4. How is a sandy beach formed?

5. How do sea stacks form?

6. Why are shorelines in a constant state of change?
