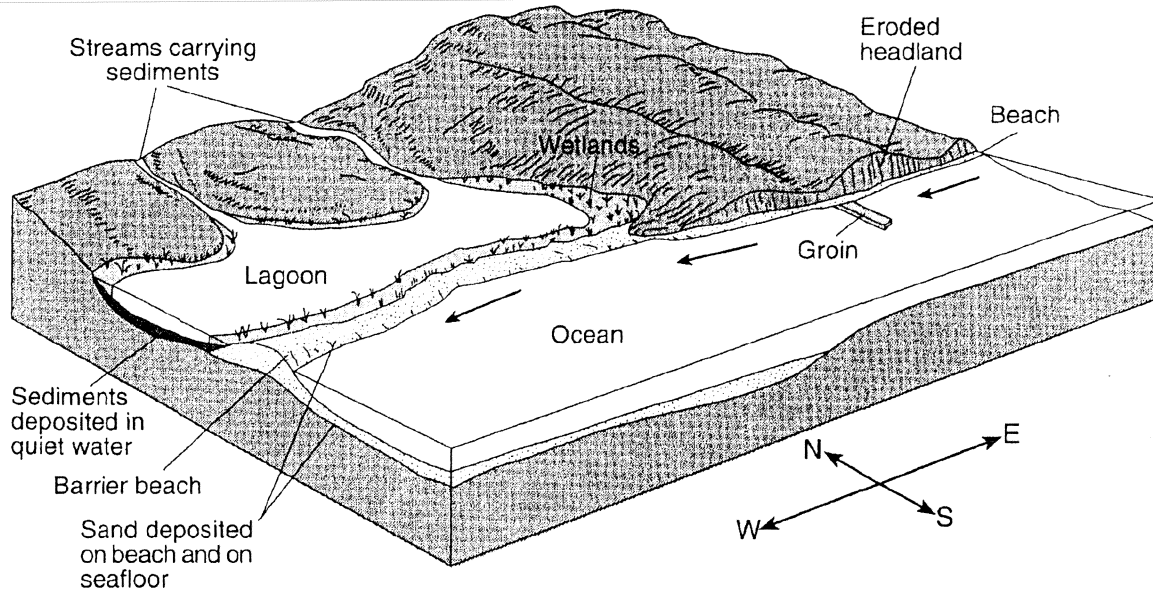


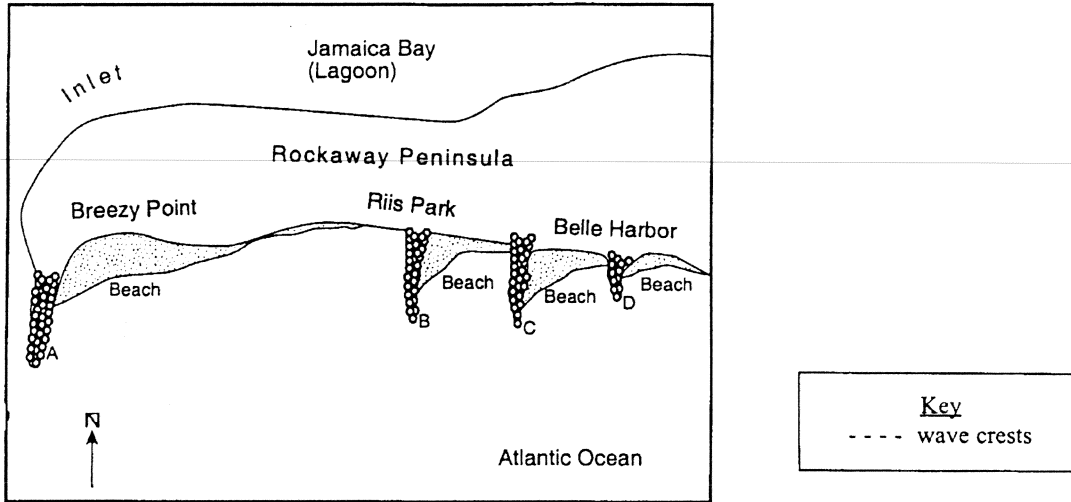
Base your answers to questions 1 through 8 on the diagram below. The arrows show the direction in which sediment is being transported along the shoreline. A barrier beach has formed, creating a lagoon (a shallow body of water in which sediments are being deposited). The eroded headlands are composed of diorite bedrock. A groin has recently been constructed. Groins are wall-like structures built into the water perpendicular to the shoreline to trap beach sand.



- The groin structure will change the pattern of deposition along the shoreline, initially causing the beach to become
  - wider on the western side of the groin
  - wider on the eastern side of the groin
  - narrower on both sides of the groin
  - wider on both sides of the groin
- Which two minerals are most likely found in the beach sand that was eroded from the headlands?
  - quartz and olivine
  - plagioclase feldspar and amphibole
  - potassium feldspar and biotite
  - pyroxene and calcite
- The sediments that have been deposited by streams flowing into the lagoon are most likely
  - sorted and layered
  - sorted and not layered
  - unsorted and layered
  - unsorted and not layered
- Which event will most likely occur during a heavy rainfall?
  - Less sediment will be carried by the streams.
  - An increase in sea level will cause more sediments to be deposited along the shoreline.
  - The shoreline will experience a greater range in tides.
  - The discharge from the streams into the lagoon will increase.
- Draw an X on the map where you expect a delta might form. (Hint: More than one answer is possible.)
- The sediments that have been deposited on the beach are most likely
  - sorted
  - unsorted
  - made up of boulders
  - made up of clay
- Which agent of erosion was the main factor in creating the eroded headland and barrier beach?
  - ice
  - river
  - wind
  - waves

Oceans/Wave Action

12. The map below shows Rockaway Peninsula, part of Long Island's south shore, and the location of several stone barriers, *A*, *B*, *C*, and *D*, that were built to trap sand being transported along the coast by wave action.



On which map do the arrows best show the direction of wave movement that created the beaches in this area?

