

Directed Reading

Section: Coastal Erosion and Deposition

1. Coastlines are affected by the long-term rise and fall of _____ and the long-term uplifting and sinking of land that borders the water.
2. Coastlines are also affected by the rapid processes of wave erosion and _____

ABSOLUTE SEA-LEVEL CHANGES

- _____ 3. Sea level rises or falls when
 - a. deposition occurs.
 - b. erosion occurs.
 - c. the amount of ocean water changes.
 - d. pollution occurs.
- _____ 4. Scientists estimate that during the last glacial period, some water that is now ocean existed as
 - a. continental ice sheets.
 - b. icebergs.
 - c. ice drifts.
 - d. alpine glaciers.
- _____ 5. During the last glacial period, it is estimated that ice sheets held
 - a. about 40 million cubic kilometers of ice.
 - b. about 70 million cubic kilometers of ice.
 - c. about 1 million cubic kilometers of ice.
 - d. about 125 million cubic kilometers of ice.
- _____ 6. Ice sheets in Antarctica and Greenland currently hold
 - a. about 13 million cubic kilometers of ice.
 - b. about 25 million cubic kilometers of ice.
 - c. about 46 million cubic kilometers of ice.
 - d. about 300 million cubic kilometers of ice.
- _____ 7. During the last glacial period, sea level was
 - a. higher than it is today.
 - b. first lower and then higher than it is today.
 - c. the same as it is today.
 - d. lower than it is today.

Directed Reading *continued*

- _____ 8. If today's polar ice caps were to melt completely,
- a. the oceans would fall about 60 m.
 - b. the oceans would rise over 50 m.
 - c. the oceans would stay about the same.
 - d. Antarctica and Greenland would be submerged.

RELATIVE SEA-LEVEL CHANGES

9. When land or features near the coast change, _____ sea level changes.

10. A coastline can rise or sink because of movements in Earth's _____

11. In addition, coastlines near a _____ may change as _____ move.

Identify the type of coastline described by each of the following features by writing *submergent* or *emergent* in the space provided.

- _____ 12. when sea level rises or land level falls
- _____ 13. when land rises or sea level falls
- _____ 14. when erosion forms sea cliffs, narrow inlets, and bays
- _____ 15. when divides between neighboring valleys become headlands separated by bays and inlets
- _____ 16. when a gentle slope forms a smooth coastal plain with many long, wide beaches
- _____ 17. when beaches generally are short, narrow, and rocky

Directed Reading *continued*

In the space provided, write the letter of the description that best matches the term or phrase.

- _____ 18. barrier island a. long, narrow ridge of sand nearly parallel to the shoreline
- _____ 19. fiord b. narrow region of shallow water that separates the shoreline and a barrier island
- _____ 20. estuary c. narrow, deep bay with steep walls
- _____ 21. lagoon d. wide, shallow bay where salt water and fresh water mix

PRESERVING THE COASTLINE

- _____ 22. Coastal lands are NOT used for
 - a. development and recreation.
 - b. shipping.
 - c. creating pollution.
 - d. fishing.
- _____ 23. Which of the following is NOT considered a threat to coastal areas?
 - a. an oil spill
 - b. industrial pollution
 - c. residential sewage
 - d. a wildlife habitat
- _____ 24. Coastal protection has included
 - a. removing barrier islands.
 - b. removing marine birds and other animals.
 - c. drilling offshore.
 - d. rebuilding beaches damaged by storms.
- _____ 25. Coastal zones can be preserved by
 - a. developing environmentally sensitive areas.
 - b. increasing human activity along shorelines.
 - c. following guidelines for use.
 - d. introducing submerged coastlines.

