Skills Worksheet

Directed Reading

# Section: Tides

1. The periodic rise and fall of the water level in the oceans is

called .

1. The period when the water level is highest is called .
2. The period when the water level is lowest is called

.

THE CAUSES OF TIDES

1. According to Newton’s law of gravitation, what causes tides?

1. Why does the ocean on the side of Earth facing the moon bulge slightly?

1. When tidal bulge occurs, what is caused in the area of the bulge?

1. Why does a tidal bulge form on the opposite side of Earth?

1. What causes low tides?

BEHAVIOR OF TIDES

\_\_\_\_\_\_ 9. How long does it take for all areas of the ocean to pass under the moon?

* 1. 24 h
  2. 29 h
  3. 24 h 50 min
  4. 29 days

\_\_\_\_\_\_ 10. Most places in the ocean have two high tides and two low tides daily because

* 1. there is a tidal range.
  2. there are two tidal bulges.
  3. the moon rises about 50 min later each day.
  4. the tidal range varies from place to place.

\_\_\_\_\_\_ 11. What is the difference in levels of ocean water at high tide and low tide called? a. low tide

* 1. tidal bulge
  2. tidal range
  3. high tide

\_\_\_\_\_\_ 12. A tide that results when the gravitational pull of the sun and moon combine to create higher high tides and lower low tides is called a a. neap tide.

* 1. tidal range.
  2. spring tide.
  3. new moon.

\_\_\_\_\_\_ 13. When do spring tides occur?

* 1. in March and April
  2. every two months
  3. between the full moon and new moon
  4. twice each month

\_\_\_\_\_\_ 14. A tide that occurs when the gravity of the sun and the moon work against each other and create a small daily tidal range is called a a. tidal range.

* 1. spring tide.
  2. neap tide.
  3. full moon.

TIDAL VARIATIONS

15. Name four features of the ocean basin that influence tidal patterns in the basin.

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

|  |  |
| --- | --- |
| \_\_\_\_\_\_ 16. Gulf of Mexico coast  \_\_\_\_\_\_ 17. Pacific Coast  \_\_\_\_\_\_ 18. Atlantic Coast of the  United States | 1. experiences a mixed tidal pattern featuring a very high tide followed by a very low tide 2. experiences two high tides and two low tides each day |

c. experiences one high tide and one low tide each day

1. The slow, rocking motion of ocean water caused by tidal bulges moving

around the ocean basins is called .

1. Where is it difficult to see the effects of tidal oscillations?
2. Explain why the Baltic and Mediterranean Seas have a very small tidal range.

1. Where might tidal oscillations amplify the effects of tidal bulges?

TIDAL CURRENTS

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

|  |  |
| --- | --- |
| \_\_\_\_\_\_ 23. slack water  \_\_\_\_\_\_ 24. ebb tide  \_\_\_\_\_\_ 25. tidal current  \_\_\_\_\_\_ 26. tidal bore  \_\_\_\_\_\_ 27. flood tide | 1. the movement of water toward and away from the coast 2. time period between flood tide and ebb tide 3. flow of tidal current toward the coast 4. surge of tidal water upstream in a river that enters the ocean through a long bay 5. flow of tidal current toward the ocean |

1. Where are tidal currents strongest?

1. Tidal currents in bays and other narrow coastlines may reach speeds

of .

1. The tidal bores in the River Severn in England reach as far as

inland