

Tides

Chapter 3: Tides · Topic 1

Key Concept

Tides occur due to the gravitational pull of the moon (and to a lesser extent the sun) on Earth's oceans, causing water to bulge.

High tide occurs when a location faces the moon or is on the opposite side, while low tide occurs at locations perpendicular to this bulge.

Spring tides, with the highest high tides and lowest low tides, occur when the sun, moon, and Earth align during full or new moon.

Neap tides, with less extreme tidal differences, occur when the sun and moon are at right angles to each other relative to Earth.

Quick Revision Notes

- Tides: caused by moon's (and sun's) gravity.
- This causes ocean water to bulge.
- High tide: facing moon or opposite side.
- Low tide: perpendicular to the bulge.
- Spring tides: highest highs, lowest lows.
- Occur during full/new moon alignment.
- Neap tides: less extreme differences.
- Occur when sun/moon at right angles.

Practice Questions

- 1 Discuss what causes high and low tides.
- 2 Research when spring tides occur.
- 3 Research when neap tides occur.
- 4 Discuss why the moon has the strongest tidal effect.
- 5 Draw a diagram showing tidal bulges.
- 6 Discuss how tides might affect coastal life.