

Model cyclic changes in the relative positions of the Earth...

model cyclic changes in the relative positions of the Earth, sun and moon and explain how these cycles cause eclipses and influence predictable phenomena on Earth, including seasons and tides

Learning intention

- model cyclic changes in the relative positions of the Earth, sun and moon and explain how these cycles cause eclipses and influence predictable phenomena on Earth...

Teach and model

- using physical models or virtual simulations to explain how Earth's tilt and position relative to the sun causes differences in light intensity on Earth's surface, resulting in...
- examining the effect of the gravitational attraction of the moon and the sun on Earth's oceans and describing how the relative positions of the moon and sun with...
- using physical models or virtual simulations to explain the cyclic patterns of lunar phases and eclipses of the sun and moon

Check understanding

- Explain the main idea in model cyclic changes in the relative positions of the earth... using an example.
- Show the idea in a second way: with words, a model, a diagram or symbols.
- Apply the idea to a short unfamiliar situation and justify the result.

Teaching cautions

- Ask the student to explain their choice, not only state an answer.
- Check that key vocabulary is understood in a new example.
- Mix representations so the skill is transferred rather than copied.

Quick lesson sequence

- Connect to prior knowledge and introduce the key vocabulary.
- Model one clear example, then solve a second example together.
- Finish with an independent check and a short student explanation.