

Represent the carbon cycle and examine how key processes including...

represent the carbon cycle and examine how key processes including combustion, photosynthesis and respiration rely on interactions between Earth's spheres (the geosphere, biosphere, hydrosphere and atmosphere)

Learning intention

- represent the carbon cycle and examine how key processes including combustion, photosynthesis and respiration rely on interactions between Earth's spheres (the...

Teach and model

- identifying Earth as a system, describing Earth's spheres and discussing examples of interactions between different spheres
- examining the carbon cycle using diagrams, animations or simulations and explaining the role of photosynthesis and respiration in that cycle
- identifying the impact of combustion reactions as a result of human activity on the carbon cycle

Check understanding

- Explain the main idea in represent the carbon cycle and examine how key processes including... 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.