

37 Multiple choice questions

Term

What is weathering?

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- The chemical breakdown of rocks that releases carbon.
- The mechanical erosion of rocks by wind and water.
- The physical breakdown of rocks by temperature changes.
- The formation of new rocks through volcanic activity.

Term

How does fashion impact the Carbon Cycle?

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- Fast fashion increases textile waste and pollution, contributing to emissions.
- Fast fashion reduces textile waste and promotes recycling.
- Fast fashion supports carbon capture through sustainable practices.
- Fast fashion decreases pollution by using organic materials.

Term

What is the greenhouse effect?

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- The stabilization of Earth's temperature by ozone depletion.
- The absorption of heat by oceans, reducing surface temperature.
- The warming of Earth's surface caused by greenhouse gases trapping heat.
- The cooling of Earth's surface due to solar radiation.

Term

What is combustion?

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- The process of converting organic material into water and oxygen.
- The burning of organic material, releasing CO₂.
- The synthesis of organic material, storing CO₂.
- The decomposition of organic material, absorbing CO₂.

Term

What is carbon sequestration?

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- The storage of CO₂ in plants for energy production.
- The conversion of atmospheric CO₂ into oxygen.
- The process of capturing and storing atmospheric CO₂.
- The process of releasing stored CO₂ into the atmosphere.

Term

How does the geosphere/ lithosphere influence the biosphere?

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- Through control of water cycles and precipitation patterns.
- By influencing ocean currents and marine life distribution.
- Through regulation of atmospheric gases and weather patterns.
- Through soil formation and nutrient availability.

What is sedimentation?

- The breakdown of sediments releasing carbon into the atmosphere.
- The accumulation of sediments that can store carbon over time.
- The dissolution of sediments in water, reducing carbon content.
- The erosion of rocks that removes carbon from the cycle.

What is the Carbon Cycle?

- The process of nitrogen fixation in soil.
- The exchange of oxygen between plants and animals.
- The movement of carbon among Earth's spheres.
- The cycling of water through Earth's systems.

What are greenhouse gases?

- Gases in Earth's atmosphere that cool the planet.
- Elements that maintain a constant temperature on Earth.
- Substances that block solar radiation from reaching Earth.
- Gases in Earth's atmosphere that trap heat and regulate the planet's temperature.

How can individuals reduce their impact on the carbon cycle?

- Increasing meat consumption, using more electricity, and driving more.
- Using more plastic, ignoring recycling, and wasting water.
- Using public transport, reducing waste, conserving energy, and supporting sustainable practices.
- Flying frequently, using single-use plastics, and increasing energy consumption.

How does the enhanced greenhouse effect differ from the natural greenhouse effect?

- The natural effect is driven by solar radiation, while the enhanced effect is caused by reduced ozone levels.
- The natural effect is caused by industrial pollution, while the enhanced effect is due to volcanic activity.
- The natural effect warms the planet excessively, while the enhanced effect maintains a stable climate.
- The natural effect maintains a habitable climate, while the enhanced effect is caused by excess greenhouse gases from human activities, amplifying warming.

What is methane's role in the carbon cycle?

- Methane is a potent greenhouse gas produced during decomposition and by certain microbes.
- Methane is a harmless gas that cools the atmosphere.
- Methane is a rare gas produced only by volcanic activity.
- Methane is a stable gas that does not affect climate.

What is erosion?

- The process that builds up rocks and sediments, storing carbon.
- The process that breaks down rocks and sediments, releasing stored carbon.
- The process that stabilizes soil and prevents carbon release.
- The chemical reaction that transforms carbon into minerals.

How does water movement in the hydrosphere affect the atmosphere?

- The burning of organic material, releasing CO₂.
- Through soil formation and nutrient availability.
- Through evaporation and precipitation.
- The movement of CO₂ between the atmosphere and oceans.

What is decomposition?

- The absorption of carbon from the atmosphere into soil.
- The synthesis of organic matter, storing carbon in plants.
- The conversion of carbon into solid minerals.
- The breakdown of organic matter, releasing carbon as CO₂ or methane.

What are fossil fuels?

- Renewable energy sources like solar and wind power.
- Coal, oil, and natural gas formed from ancient organic matter.
- Synthetic fuels made from non-organic materials.
- Biomass fuels derived from plant matter.

What is methane, and why is it significant?

- A harmless gas produced by industrial processes.
- A stable gas that does not affect the environment.
- A cooling gas released by ocean organisms.
- A potent greenhouse gas produced by decomposing organic matter and livestock.

How do Earth's spheres interact?

- They maintain separate systems with no influence on each other.
- They isolate energy and matter, preventing any exchange.
- They compete for resources without interaction.
- They exchange energy, matter, and influence each other's processes.

What is carbon offsetting?

- Increasing industrial production to boost CO₂ levels.
- Supporting initiatives that release CO₂ into the atmosphere.
- Funding projects that enhance fossil fuel extraction.
- Compensating for emissions by funding projects that reduce or capture CO₂.

How does increased CO₂ affect global climate?

- It stabilizes weather patterns and reduces ice melt.
- It causes colder winters and more frequent snowstorms.
- It leads to decreased temperatures and increased rainfall.
- It leads to higher temperatures, melting ice, and changing weather patterns.