

Connect Matter and Energy in Cells



Use the matching sheet ID when checking answers.

Use the material to work through each task. Show the requested response.

1. Name two matter inputs to photosynthesis.

Answer: carbon dioxide and water

2. What is the energy input to photosynthesis?

Answer: light energy

3. Name two matter outputs of cellular respiration.

Answer: carbon dioxide and water

4. Do plants perform cellular respiration?

Answer: yes

5. Explain how the products of one process connect with the inputs of the other.

Look for:

- Connects matter without claiming the pathways are identical reversals.

One possible response: Sugars and oxygen from photosynthesis can be used in respiration; carbon dioxide and water can be used in photosynthesis.

6. Is energy endlessly recycled in exactly the same way as matter?

Look for:

- Distinguishes energy flow from matter cycling.

One possible response: No. Energy is transferred and some becomes less available as heat; organisms require energy input.

Open responses use criteria and an illustrative response. Other well-supported responses can be acceptable.