

"Ecosystems as Open Environment"

Are the following statements true or false?

An organism is considered an open system because it only exchanges energy, not matter, with its environment.	TRUE	FALSE
The energy an ecosystem gets from the Sun is recycled and reused constantly as it moves through the food chain.	TRUE	FALSE
When an animal eats a plant, most of the plant's energy is retained by the animal and is passed on to the next consumer.	TRUE	FALSE
The "materials" or "matter" in an ecosystem, such as carbon and water, are constantly being recycled.	TRUE	FALSE
An ecosystem can lose some of its matter to the outside, such as when a river flows out, which is why it is considered an open system.	TRUE	FALSE



Choose the correct answer

1. What two things must an organism exchange with the environment to be considered an open system?

- A. Heat and Waste
- B. Energy and Matter
- C. Carbon Dioxide and Water

2. What is the ultimate starting source of new energy for almost all ecosystems?

- A. Food
- B. Heat
- C. The Sun

3. What happens to most of the energy every time it moves along the food chain (e.g., when a deer eats grass)?

- A. It is converted to matter.
- B. It is stored for later use.
- C. It is lost as heat into space.

4. How does the flow of energy differ from the flow of matter (like water or dirt) in an ecosystem?

- A. Energy is recycled, but matter is a one-way street.
- B. Energy is a one-way street, but matter is recycled.
- C. Both energy and matter are entirely lost and must be replaced.

5. Besides recycling materials internally, what is one way an ecosystem can bring in new matter from the outside?

- A. By releasing heat.
- B. By losing matter like a river flowing out.
- C. By bringing in new water (rain).

