

IGCSE Biology

Name: _____ Score: _____

1. The original source of energy for almost all ecosystems is the:
 - ☐ Sun
 - ☐ soil
 - ☐ wind
 - ☐ water
2. In a food chain, the arrows show the direction of:
 - ☐ energy flow (from food to eater)
 - ☐ energy flow (from eater to food)
 - ☐ water movement
 - ☐ oxygen flow
3. A trophic level is:
 - ☐ a feeding stage in a food chain
 - ☐ a type of producer
 - ☐ a decomposer
 - ☐ a habitat
4. Which process removes carbon dioxide from the air?
 - ☐ photosynthesis
 - ☐ respiration
 - ☐ combustion
 - ☐ decomposition
5. Why can't plants use nitrogen gas from the air directly?
 - ☐ it is unreactive
 - ☐ it is poisonous
 - ☐ there is too little of it
 - ☐ it is too heavy
6. Roughly what percentage of energy is passed to the next trophic level?

7. Which are limiting factors on a population? (Select all that apply.)

- ☐ food supply
- ☐ space
- ☐ predators
- ☐ sunlight on the Moon

Tick every correct option.

8. How is energy lost between trophic levels? (Select all that apply.)

- ☐ heat from respiration
- ☐ movement
- ☐ undigested waste
- ☐ photosynthesis

Tick every correct option.

9. Energy flows through an ecosystem and is lost, rather than being recycled.

- ☐ True ☐ False

10. Decomposers break down dead matter and recycle nutrients.

- ☐ True ☐ False

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1. **Sun**

Producers capture the Sun's energy.

2. **energy flow (from food to eater)**

Arrows point from the eaten to the eater.

3. **a feeding stage in a food chain**

Each feeding stage is a trophic level.

4. **photosynthesis**

Photosynthesis fixes CO₂ into glucose.

5. **it is unreactive**

N₂ is unreactive; it must be turned into nitrates.

6. **10**

About 10% is passed on; the rest is lost.

7. **food supply; space; predators**

Food, space and predators limit growth.

8. **heat from respiration; movement; undigested waste**

Photosynthesis captures energy; the others lose it.

9. **True**

Energy must be resupplied by the Sun; only nutrients cycle.

10. **True**

Bacteria and fungi recycle nutrients back to the soil.