



Oxford City Schools

Proficiency Scale

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GRADE LEVEL: 7TH COURSE NAME: SCIENCE
MEASUREMENT TOPIC: EXPLAIN THE FLOW OF ENERGY AND CYCLING OF MATTER THROUGH AN ECOSYSTEM

4

- Defend from evidence how manipulating a chosen factor impacts the process of photosynthesis and cellular respiration.

3

- Explain the flow of energy between the biotic and abiotic parts of ecosystems.
- Explain the cycling of matter between abiotic and biotic parts of ecosystems using the carbon, nitrogen, and water cycles.
- Evaluate evidence to determine the role of photosynthesis and cellular respiration in the cycling of matter and flow of energy into and out of organisms.

2

- Compare and contrast aerobic and anaerobic respiration.
- Recognize the stages of the water cycle, carbon cycle, and nitrogen cycle.
- Identify how energy is transferred through a food web.
- Compare and contrast the roles of abiotic and biotic factors in an ecosystem.

1

With help, a partial understanding of some of the simpler details and processes and some of the more complex ideas and processes.

Key Vocabulary: