

Name _____

The Power Vault: How Plants Store Energy from Photosynthesis

Open-Ended Response Answer Key

1. Annual plants complete their life cycle within one year and often store energy for reproduction. Perennial plants live for multiple years and invest more in long-term storage to support growth and survival over multiple seasons.
2. Plants play a vital role in converting sunlight into energy-rich molecules, providing food for herbivores and, ultimately, supporting entire ecosystems. They also serve as a renewable energy source and contribute to carbon cycling.
3. Climate change can affect plant energy storage and growth patterns by altering temperature and precipitation patterns. This can impact ecosystems, affecting plant distribution, food availability, and wildlife populations.
4. Plant energy storage is interconnected with the availability of food for herbivores. Changes in plant energy storage can affect herbivore populations, which, in turn, impact carnivores in the ecosystem. Healthy plant populations are essential for maintaining balanced food chains.

