


Assessment Answers

- 1a. ATP is an abbreviation for the compound adenosine triphosphate. Cells use ATP to store and release energy.
 - 1b. ATP can easily release and store energy by breaking and re-forming the bonds between its phosphate groups.
 - 1c. ADP and ATP are like batteries because they store energy in the chemical bonds they contain. ADP has only two phosphate groups (and fewer bonds), so it's like a partially charged battery. ATP has three phosphate groups, so it is like a fully charged battery and has more bonds available for energy storage.
- 2a. the sun
 - 2b. Heterotrophs obtain energy by feeding on other living things. Autotrophs, by contrast, make their own food.
 - 2c. Decomposers consume the remains of living things for energy and cannot make their own food.
3.  Sample answer: Photosynthesis provides the base for the one-way flow of energy through the biosphere. Plants convert energy from the sun into sugars, which provide fuel for themselves and for other organisms. Photosynthesis also cycles carbon and oxygen nutrients through the biosphere.