Cellular Respiration and Photosynthesis

Cellular Respiration is used by all eukaryotic cells (contain mitochondria) to release energy from food.

glucose + oxygen ➜ carbon dioxide + water + energy*

$C_6H_{12}O_6 + 6\ O_2 \rightarrow 6\ CO_2 + 6\ H_2O + \text{energy*}$

*energy uses an ATP intermediate molecule

It is for this reason, that blood glucose must be at a high enough level, you must have a supply of oxygen (lungs) and carbon dioxide must be excreted through the lungs as well.

Photosynthesis occurs in all plants, algae and photosynthetic bacteria.

carbon dioxide + water + energy** ➜ glucose + oxygen

$6\ CO_2 + 6\ H_2O + \text{energy**} \rightarrow C_6H_{12}O_6 + 6\ O_2$

** this energy is solar energy (sun)

It is for this reason that plants absorb CO_2 and release O_2. Plants make their own food and then use it the same way that we would. Glucose is the best way for a plant to store energy.