Photosynthesis and Cellular Respiration

**Photosynthesis**
Photosynthesis is a chemical reaction used by plants and other organisms to store energy as glucose. The process changes carbon dioxide and water into glucose and oxygen and requires light energy.

\[
6 \text{H}_2\text{O} + 6 \text{CO}_2 \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6 \text{O}_2
\]

(water) (carbon dioxide) (glucose) (oxygen)

**Cellular Respiration**
Cellular respiration is a chemical reaction used by most organisms to generate energy from glucose. The process changes glucose and oxygen into water and carbon dioxide and releases chemical energy for the cell.

\[
\text{C}_6\text{H}_{12}\text{O}_6 + 6 \text{O}_2 \rightarrow 6 \text{CO}_2 + 6 \text{H}_2\text{O}
\]

(glucose) (oxygen) (carbon dioxide) (water)

© The LEGO Group and MIT. All Rights Reserved. LEGO, the LEGO logo, and the brick and knob configuration are trademarks of the LEGO Group, used here with permission.