Organisms need energy to survive, and they obtain it different ways.

- **Photosynthesis**
  - $6\text{CO}_2 + 12\text{H}_2\text{O} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$
  - Requires light absorbing pigments within *chloroplasts*

- **Autotrophs**—make their own food (plants)
  - Termed “primary producers”
  - First *trophic level*
Heterotrophs—depend on autotrophs for their food, either directly or indirectly.

- If herbivores, eat plants, and are the second trophic level
- If carnivores, eat animals and are the third trophic level
Trophic Relationships
Food Pyramids, Food Chains & Webs

THE OCEANIC FOOD PYRAMID

Adapted from: A. C. Hardy, Fisheries Investigations 7 (1928): 1-55.