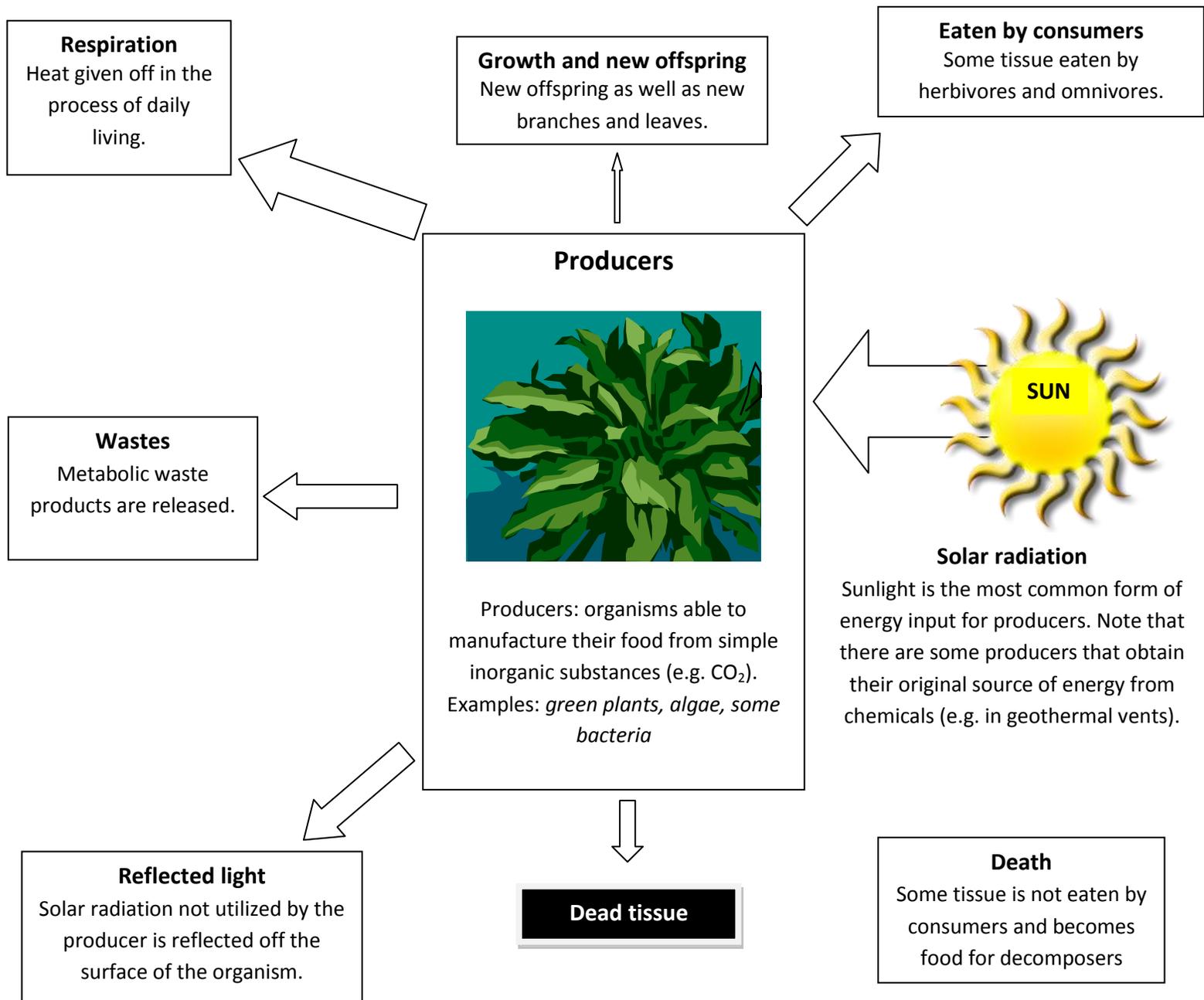
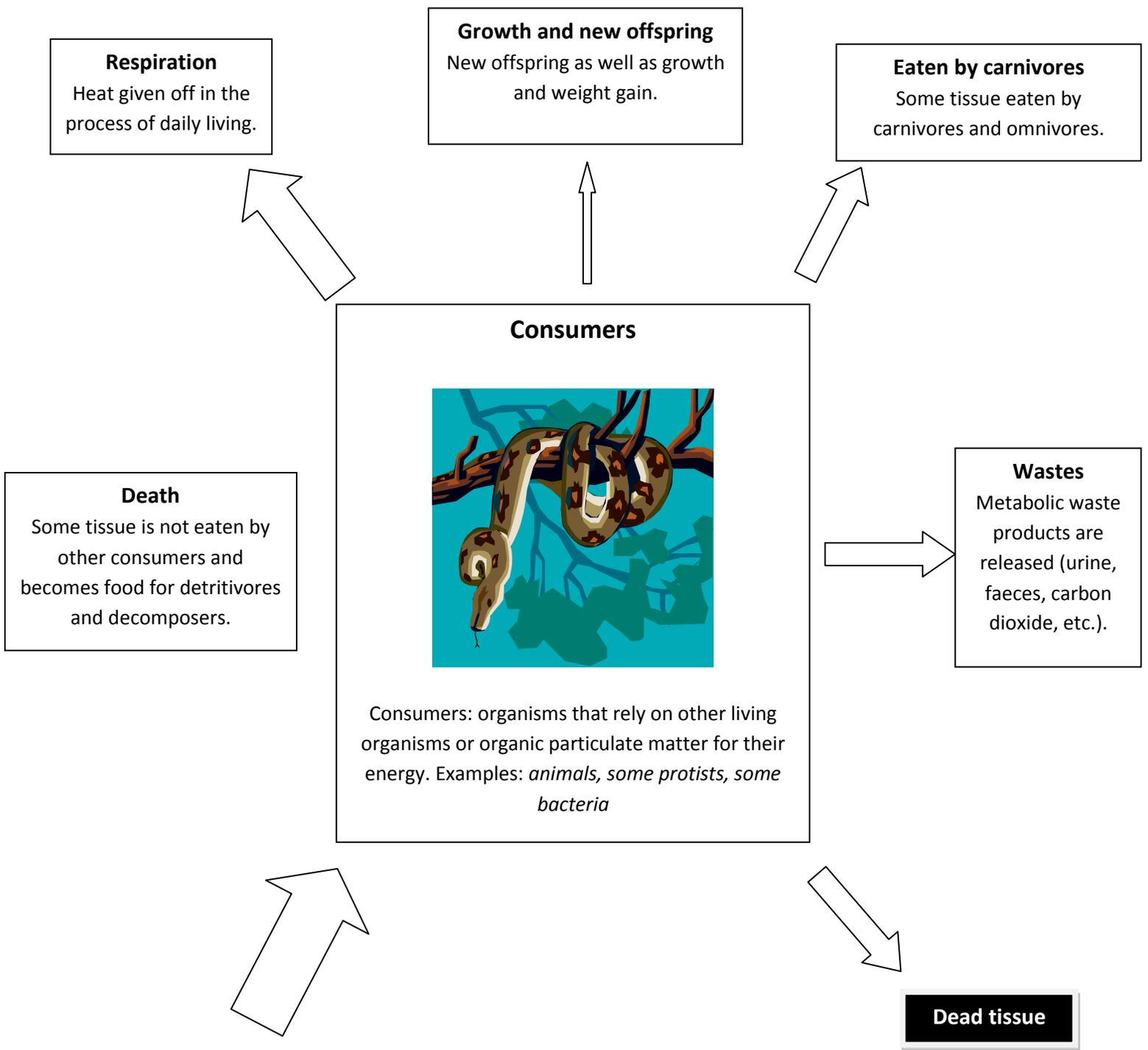


## Energy Inputs and Outputs

The way living things obtain their energy can be classified into two categories. The group upon which all others depend are called **producers** or **autotrophs**: organisms that are able to manufacture their food from simple inorganic substances. The **consumers** or **heterotrophs** (comprising the herbivores, carnivores, omnivores, decomposers, and detritivores), feed on the autotrophs or other heterotrophs to obtain their energy. The energy flow into and out of each trophic level in a food chain can be identified and represented diagrammatically using arrows of different sizes. The sizes of the arrows (see the diagrams below and on the next page) represent different amounts of energy lost from that particular trophic level.





Consumers obtain their energy from a variety of sources: plant tissues (**herbivores**), animal tissues (**carnivores**), plant and animal tissues (**omnivores**), dead organic matter or detritus (**detritivores** and **decomposers**)