

## Decomposition

Decomposition is an important part of the ecosystem, because it is the process where once living organisms are disassembled and the material, the atoms and molecules, are allowed to continue to flow through the nutrient cycle.

One misconception that people have is that decomposition “just happens” and no specific mechanism is provided to explain how it happens. Another misconception is that the once living organic matter “just goes away” and there is no conservation of matter.

Living matter is decomposed by other living organisms. Decomposers in the food web include worms, fungi, and bacteria. A decomposer is a type of consumer, so the matter for a once living organism is used as food by the decomposer, the worm, fungus, or bacteria, to grow or to do work. This means that the matter from the once living organism can either stay in the nutrient cycle as another organism or can go into the surroundings.

Tracing the different ways matter can flow through the nutrient cycle is a useful thought experiment that supports the idea of a food web and the idea of conservation of matter.

For more information refer to:

- Nutrient Cycle
- Conservation of Matter and Energy

## Questions

- Where does the material from a once living organism go?
- How could a carbon atom stay in the nutrient cycle forever?
- How could a carbon atom leave and then re-enter the nutrient cycle?