In ecosystems, living organisms depend on each other to survive. One living thing eats another, forming a complex web of interdependence among plant and animal species. We can represent the complex relationships between food sources in the natural world by using a food web diagram.

There are three types of organisms that affect how food is made and used. They are **producers**, **consumers** and **decomposers**. **Producers** are living things that produce (or make) food. Consumers and decomposers depend upon producers to create food that they can use to provide them with energy. Examples of producers include grasses and trees.

Consumers are those types of organisms that eat, use or consume food products made by producers. Humans are consumers, because we eat all sorts of foods produced by plants and animals.

Decomposers use up the leftovers that consumers do not use. Decomposers break food down by making it rot or decay. They absorb the nutrients from the remains of broken down food. Decomposers include fungi, moulds and small like worms, slugs and termites. Beetles and flies help to break down the bodies of dead plants and animals and their droppings. Micro-organisms, including various bacteria, are also decomposers that break down all kinds of substances, including milk, eggs and meat.

All of the consumers in a particular ecosystem need to eat. The products made by the producers contain energy, which is needed by the consumers and decomposers. This creates what scientists call a **food chain**, where one organism depends on another to survive. Look at this example of a simple food chain:

grain → bandicoot → eagle

Food chains are not a very realistic way to describe relationships in most ecosystems. This is because food supplies usually involve many species that are connected in all sorts of complicated ways. An example is the meat of a wallaby. A human might be a consumer of the meat. But so might a goanna, a dingo or a crow. Birds eat the remains of dead animals, and decomposers like bacteria and flies eat them as well.

What we can do to improve the descriptive power of food chains is to create **food web** diagrams instead.

*Direct students to the **Student Worksheet**, where they can see examples of food chains and food webs.*

© The Australian Institute of Aboriginal and Torres Strait Islander Studies, 2019