

Interdependence of Living Things

Douglas Wilkin, Ph.D.
Jean Brainard, Ph.D.

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AUTHORS

Douglas Wilkin, Ph.D.

Jean Brainard, Ph.D.

CHAPTER

1

Interdependence of Living Things

- Explain the meaning of interdependence.
- Describe how living organisms interact.



What other species do you need to survive?

Species cannot live alone. All life needs other life to survive. Here surgeon fish are feeding on the algae growth on this turtle shell, a classic example of two species needing each other. This is an example of a symbiotic relationship.

Interdependence of Living Things

All living things depend on their environment to supply them with what they need, including food, water, and shelter. Their environment consists of physical factors—such as soil, air, and temperature—and also of other organisms. An **organism** is an individual living thing. Many living things interact with other organisms in their environment. In fact, they may need other organisms in order to survive. This is known as **interdependence**. For example, living things that cannot make their own food must eat other organisms for food. Other interactions between living things include symbiotic relationships and competition for resources.

Symbiosis

Symbiosis is a close relationship between organisms of different species in which at least one of the organisms benefits. The other organism may also benefit, it may be unaffected by the relationship, or it may be harmed by the relationship. **Figure 1.1** shows an example of symbiosis. The birds in the picture are able to pick out food from the

fur of the deer. The deer won't eat the birds. In fact, the deer knowingly lets the birds rest on it. What, if anything, do you think the deer gets out of the relationship?



FIGURE 1.1

A flock of starlings looks out, before searching for parasites on a red deer stag.

Competition

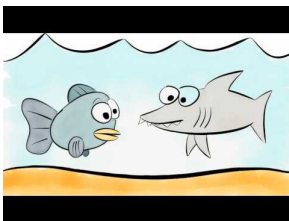
Competition is a relationship between living things that depend on the same resources. The resources may be food, water, or anything else they both need. Competition occurs whenever the two species try to get the same resources in the same place and at the same time. The two organisms are likely to come into conflict, and the organism better able to obtain that resource will "win" out over the other organism. What makes an organism better able to obtain a resource? They may be any of countless reasons, but each is considered an adaptation that makes an organism more fit to live in their environment.



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Summary

- All living things depend on their environment to supply them with what they need, including food, water, and shelter.
- Symbiosis is a close relationship between organisms of different species in which at least one of the organisms benefits.
- Competition is a relationship between living things that depend on the same resources.

Review

1. What is meant by interdependence?
2. Describe an example of a way that you depend on other living things.
3. Compare and contrast symbiosis and competition.
4. Give three examples of resources organisms may compete for.

References

1. Image copyright Godrick, 2014. [Starlings and a stag in symbiosis](#) . Used under license from Shutterstock.com