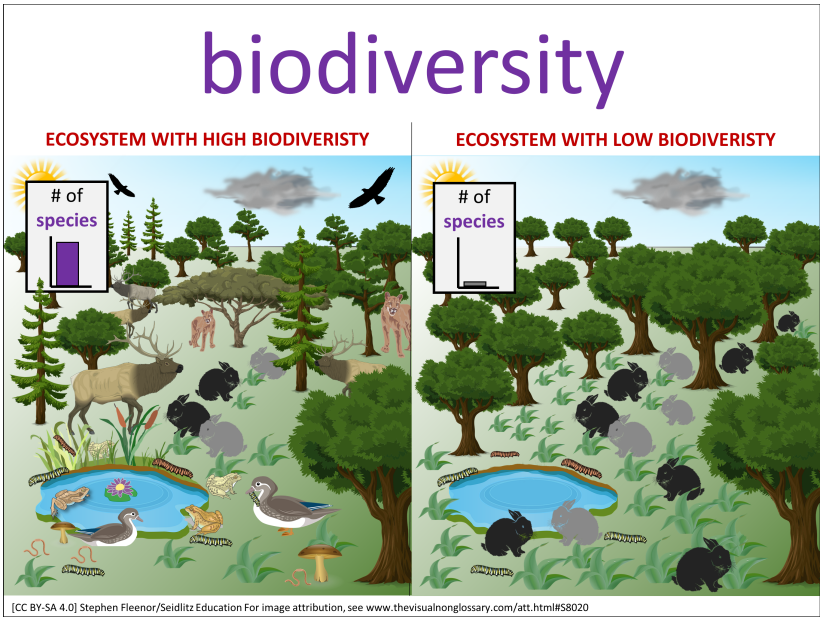
The Visual Non-Glossary™

Biodiversity in Ecosystems

The purpose for reading is to learn how biodiversity supports the stability of an ecosystem and helps organisms stay healthy.

Pay Attention To:

- The meaning of biodiversity
- How biodiversity is connected to stability
- Ways biodiversity helps organisms stay healthy
- What happens when an ecosystem has low biodiversity



An **ecosystem** is a place where living and nonliving things work together. When there is high **biodiversity**, it means there are many different **organisms** like plants, animals, and tiny living things. Each kind has a job. Some are food for others, some recycle, and some are predators that keep balance.

A system with high **biodiversity** has more **stability**. If one kind of organism goes away, another can help take its place. A system with low **biodiversity** is not as strong. If one species disappears, the whole **ecosystem** can be harmed.

The health of organisms depends on **biodiversity**. In a biodiverse **ecosystem**, there are more choices for food, and problems like diseases do not spread as easily. In low biodiversity, there are fewer choices and more danger if one kind is lost.

Protecting **biodiversity** helps keep **ecosystems** strong and healthy for all **organisms**, including people.

Constructed Learning

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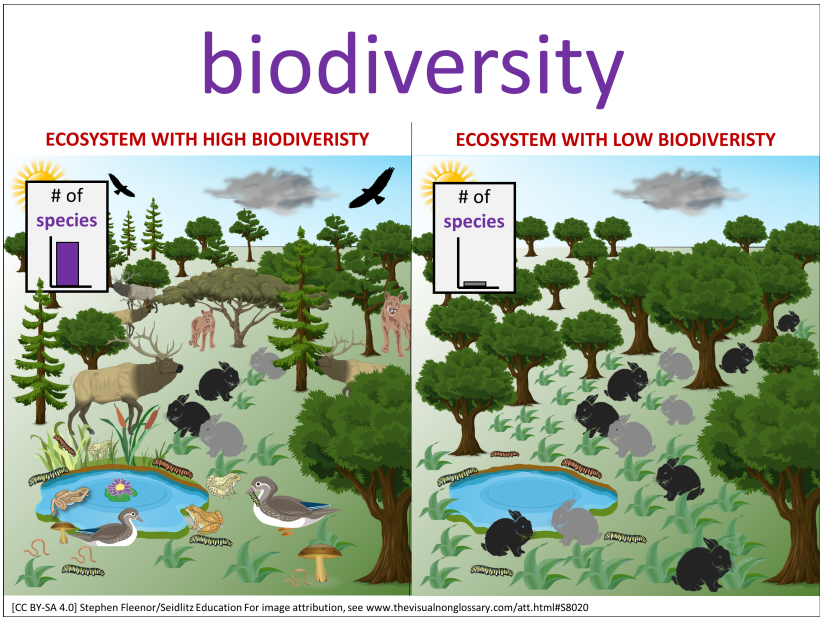

Ecosystems are made up of many living things that interact with each other and their surroundings. When an ecosystem has high **biodiversity**, it means there are many different **organisms**, such as plants, animals, and microorganisms, living together. Each of these species plays a role in keeping the system balanced. Some organisms provide food, others recycle nutrients, and some act as predators that keep populations in check.

A system with high **biodiversity** tends to have greater **stability**. If one species decreases in number, other species can often fill its role. In contrast, a system with low **biodiversity** is more vulnerable. If a single species disappears, the balance of the entire **ecosystem** may be disrupted. This can lead to a collapse in food chains and a loss of important resources for other organisms.

The health of organisms also depends on **biodiversity**. In a biodiverse **ecosystem**, species are less likely to face pests or diseases spreading quickly because many different organisms limit problems from growing. More food sources are available,

and competition is balanced. This allows populations to adapt to changes. On the other hand, organisms in a less diverse **ecosystem** may struggle if conditions shift or if a key species is lost.

Protecting **biodiversity** helps scientists and communities support strong, sustainable **ecosystems**. This not only benefits the environment but also supports the health of every **organism**, including humans.

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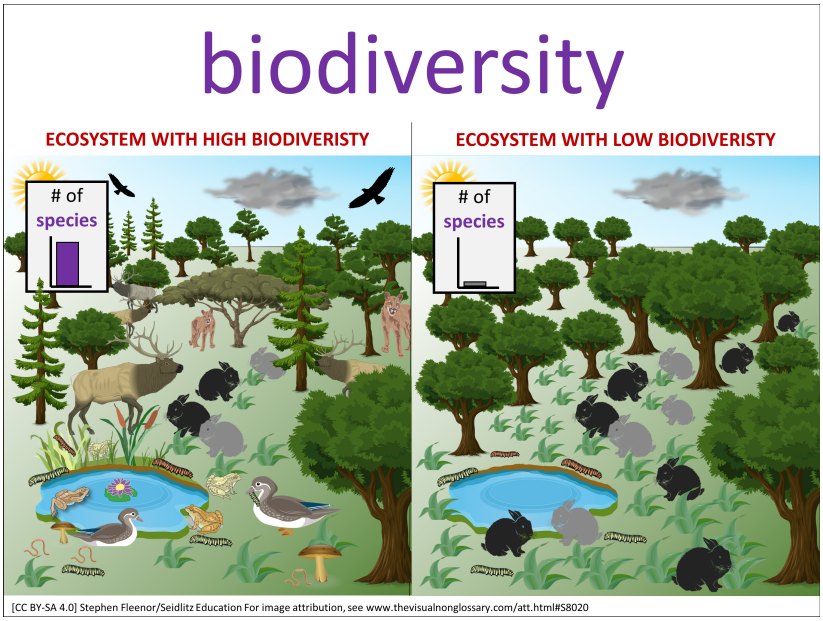

An **ecosystem** depends on the complex interactions of many species and the roles they fulfill. High **biodiversity** means that a wide range of **organisms**, from producers to decomposers, work together to maintain balance. These relationships support energy flow, nutrient cycling, and resilience against disturbances.

Greater **biodiversity** strengthens **stability** by allowing ecosystems to adapt to change. If one species declines, another can assume its function, preventing large-scale disruption. In ecosystems with low **biodiversity**, however, the loss of even a single species may destabilize food webs, reduce available resources, and weaken resilience.

The health of organisms reflects the level of **biodiversity**. Diverse **ecosystems** can slow the spread of disease, reduce extreme competition, and provide multiple food sources. This diversity allows populations to withstand environmental pressures such as climate change, invasive species, or habitat loss. Low-diversity systems lack this flexibility and are far more likely to collapse under stress.

Constructed Learning

Protecting **biodiversity** ensures the sustainability of **ecosystems** that adapt to change and continue supporting all **organisms**, including humans. Maintaining biodiversity is essential for the long-term survival of life on Earth.