

# Adaptation

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Image 1. A gray whale calf sits on top of its mother's back. They are seen here in the San Ignacio Lagoon, in Baja California South, Mexico. Gray whale mothers migrate thousands of miles every year from the Arctic to give birth in warm waters. Photo by: Francois Gohier/UIG via Getty Images

An adaptation is a type of mutation. It results from a change in an organism's genes. Genes tell living things how to look and behave. They are passed down from parent to child. An adaptation is a helpful change. It allows an organism to better survive in its environment.

## **Structural And Behavioral Adaptations**

Some adaptations are structural. That means they are a physical part of the organism. They change how a living thing looks. Other adaptations are behavioral. That means they affect the way a living thing acts.

Many plants have structural adaptations. For example, certain plants have adapted to the desert. Deserts are dry, hot places. Plants called succulents have found a way to survive there. They do it by storing water in their thick stems and leaves.

There are many examples of behavioral adaptations. Animal migration is just one. Gray whales migrate thousands of miles every year. They spend some time in the warm waters off the coast of

Mexico. They spend the rest of their time in the cold Arctic Ocean.

## Habitat

Adaptations always happen for a reason. Usually, adaptations occur in response to a change in the environment.

The English peppered moth is a famous example. Before the 1800s, most peppered moths were light. A few displayed a mutation of being gray or black. However, these dark moths were rare.

Over time, the environment changed. The rise of factories brought smoke and smog. As a result, the darker moths became less rare. In fact, they began to thrive in the smoky cities. Their dark color helped them blend in.



## Speciation

Sometimes, an organism develops a very special adaptation. It is so different that it creates an entirely new kind of animal. This is known as speciation.

The marsupials in Australia are a good example. Marsupials are mammals that carry their young in pouches. They are the main type of mammal in Australia.

Koalas are one of the most famous marsupials. They adapted to feed on eucalyptus trees. These are plants that grow in Australia. Other marsupials also adapted to live in Australia. They changed over time into new animals. Each one plays a special role in the environment.

## Coadaptation

Organisms do not always adapt alone. Sometimes they adapt with other organisms. This is called coadaptation. Certain flowers have adapted their pollen to attract hummingbirds. Hummingbirds have adapted long beaks to collect pollen. This relationship helps both organisms. The flowers get their pollen spread around. The hummingbirds get food.