



The Evidence That Proves Animals Have Evolved

KS4 BIOLOGY

EVOLUTION

Ages 13-16 ⌚ 3 min read

What Is Evolution?

Evolution is the process where animals and plants change and adapt over millions of years. Scientists have discovered lots of proof that this is real. Think of it like a family tree, but for all living things on Earth.

Fossils: Records Frozen in Stone

One of the biggest pieces of evidence comes from **fossils**—the preserved remains of ancient animals and plants found in rocks. Scientists dig these up and study them carefully. When they look at fossils from different layers of rock (which represent different time periods), they can see how creatures slowly changed shape and size over time.

Think of it like looking through old family photos in your attic. The older photos at the bottom show your great-great-grandparents looking quite different from you, but each generation looks a bit more like the next, showing how your family changed over time.

For example, scientists found fossils showing how fish gradually developed legs and crawled onto land, eventually becoming amphibians and then reptiles.

DNA: The Blueprint of Life

DNA is the genetic code that makes every living thing unique. Scientists discovered something amazing: all animals share similar **DNA**. Humans share **99% of our DNA with chimpanzees**, and we even share genes with fish and insects! This proves we all come from common ancestors.

Think of it like different LEGO creations made from the same basic bricks. Even though a car and a castle look completely different, they're both built from similar pieces arranged in different ways.

Body Structures Tell a Story

Many animals have **similar bone structures**, even though they use them for different things. A human arm, a whale's flipper, and a bat's wing all have the same basic bones inside, just arranged differently. This **homology** suggests these animals inherited their body plans from shared ancestors who lived long ago.

Observing Evolution Today

Evolution doesn't just happen in the past—we can see it happening now. Scientists observe bacteria becoming resistant to antibiotics within months, and they watch finches in the Galápagos Islands change their beak size depending on food availability. These are examples of evolution in real time.

Think of it like how video game characters adapt to their environment—if the game changes, they develop new skills to survive.

All this evidence—fossils, **DNA**, body structures, and modern observations—combines to create a powerful scientific case that evolution is real and continues happening around us.