

(C3)

Notes: Darwin's Finches

TODAY'S
DATE

EQ: How did the research of Charles Darwin help scientist learn that organisms can change over time?

evolution - the process of change over time

In Darwin's travels aboard the HMS Beagle, which began in 1831, Charles Darwin made 3 important observations:

- the world includes a tremendous diversity of living things throughout a wide range of habitats
- animal species, like those of the Galápagos Islands, that are related, can have different characteristics or occupy different habitats
- fossils, or preserved remains of ancient organisms, resemble many organisms alive today

Darwin's observations led him to develop the scientific theory of evolution which explains how modern organisms evolved over long periods of time by natural selection

adaptation → a trait that helps organisms survive and reproduce

natural selection → process by which individuals that are better adapted to their environment are more likely to survive and reproduce than other members of the same species

factors that affect the process of natural selection:

- overproduction - species produce more offspring than can survive (e.g., insects and fish)
- variations - difference between individuals
- competition - resources are limited, species must compete to survive