

Evolutionary Biology

A hands-on practical look at how species change over time

Year 7-9

Learning Outcomes:

At the end of the session:

- ✓ **All pupils** will begin to understand how adaptations develop, leading to new species
- ✓ **Most pupils** will understand there are two main types of variation (discontinuous and continuous) and this variation can be caused by environment, genetics, or both
- ✓ **Some pupils** will start to recognise how changing habitats (sometimes due to human influences) can drive and shape survival

Session Outline:

The session begins with a brief introduction to Darwin and the Galapagos finches. We discuss how Darwin studied scientific specimens and how Natural History collections, including those in zoos, continue this practice. Students will handle real scientific study skins to hypothesize the habitats these birds adapted for. We then explain Darwin's theory of adaptations, including descent with modification, natural selection, and survival of the fittest. The discussion deepens with variations, covering continuous/discontinuous and genetic/environmental factors. Students receive historical data for their study skin species and compare it to current data to identify changes, developing hypotheses to explain how and why these species have evolved over time.



Curriculum Links

Science:

Scientific attitudes

Genetics and evolution