

Evolution, Classification and Inheritance

Suitable for Years 4-6, March to November

This interactive programme brings the science of evolution and classification alive while investigating our exciting tree collection.

Key Concepts

Classification, Similarities and differences of living things, Adaptations, Heredity, Evolution.

Learning Outcomes

By the end of the programme, students should be able to:

- Identify many ways trees and plants are adapted to suit their environment
- Understand that plants pass on genetic information from one generation to the next.
- Explain how adaptation can lead to evolution
- Name ways to classify woodland plants and animals into different groups based on specific characteristics and the reasons why this is useful.
- Ask questions about the adaptations of trees based on observations of the real world

Before you come

Q Trees are the tallest plants on our planet. Why would it be useful for a plant to be tall?

Programme Outline

Learning objectives	Activity
An opportunity to assess pupil's prior understanding	Introduction A whole class discussion Do things change over time? Why do they change? What can a fossil tell us? How are we the same / different from our parents? How are we the same / different from our distant ancestors?
Identify many ways trees and plants are adapted to suit their environment	Adaptation metaphors A game exploring how plants are adapted to suit their environment in different ways. Students compare plant adaptations with familiar metaphors before hunting for examples of these adaptations in the arboretum
Understand that plants pass on genetic information from one generation to the next. Explain how adaptation can lead to evolution	Sock Swap A fun, active game with patterned socks to represent the coded genetic information transmitted from one generation of trees to the next. Throughout the game students will "decode" the sock seeds to find out if they have what it takes to survive.

Name ways to classify woodland plants and animals into different groups based on specific characteristics and the reasons why this is useful.	<i>Woodland Guess Who?</i> As a class, students play a game that explores different ways of classifying plants and animals from the woodland habitat into broad groups based on observable characteristics.
Identify many ways trees and plants are adapted to suit their environment	<i>Colour clues</i> Students explore the variety of our tree collection using colour as a basis of investigation into adaptations.
Ask questions about the adaptations of trees based on observations of the real world	<i>Hypothesis labelling</i> Students are invited to question the possible adaptations of trees in the arboretum and share these thoughts with one another.

National Curriculum Links

Sc6/2.3 Evolution

Sc6/2.3a recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago

Sc6/3.2b recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents

Sc6/2.3c identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.