

# Young Pavement Artists Competition 2010



## Evolutionary Development

### Introduction

In biology, '**evolution** is the change in the inherited traits of a population of organisms through successive generations. When a population splits into smaller groups, these groups evolve independently and develop into new species.'

Anatomical similarities, geographical distribution of similar species and fossils that have since been found all indicate that all organisms are descended from a common ancestor through a long series of these divergence events, stretching back more than 3,500 million years of life on Earth.

This activity requires students to identify issues that animals might have faced during evolution that led to changes in appearance or geographic location by looking at changes to the species that have been shared or diverged since they were first discovered or recorded.

### Development

Using the Muscular Dystrophy Campaign and National Geographic Kids factsheets plus relevant secondary sources of information, including news articles and the Internet; pull out and list the key physical and other characteristic changes to the animals. Identify the contributing factors such as the environment or the introduction of a predator that might have led to these changes.

### Group activity

Collate evidence to support these changes and document how many species have evolved since the animal's discovery. Students could use the time to explore how the animals demonstrate strength and how the evolutionary changes support this.

Ask students to present these ideas on evolution to the large group and give them time to discuss how the animal has evolved to be better placed for survival in the future.

### Plenary

Using the development of evolution across the globe, engage students' curiosity and initiate learning through the development of a personal project that demonstrates their understanding of environmental issues facing animals. Students should be given opportunity to evaluate their own performance as well as the performance of others, considering:

- how well they worked as a group

- something they found particularly difficult
- something they did well
- the overall coherence of their argument and its presentation/justification.