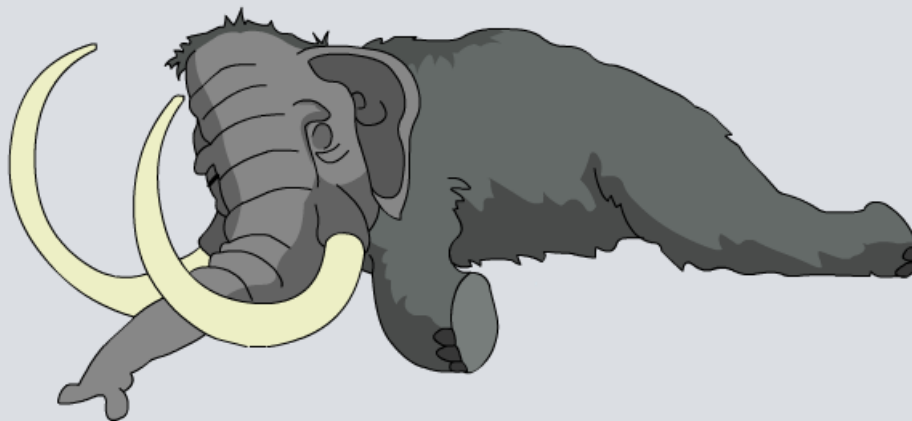


## Extinction



Darwin said, “It is not the strongest of the species that survives, nor the most intelligent, but rather the one most responsive to change.”



The environment today is changing rapidly as a result of habitat destruction, pollution and the artificial control of populations.

How is environmental change affecting the evolution of animals, plants and microbes?



# What happens when habitats change?

Adaptive evolution ensures that individuals within a species have traits allowing them to survive and reproduce in their habitat.

If the habitat changes, however, successful traits can become a disadvantage.

For example, if global warming caused arctic snow to melt, brown rabbits living in arctic regions might be better camouflaged and so more likely to survive than white rabbits.



Individuals that fail to reproduce, compete effectively for food or survive against new predators will eventually die out. If the last individual of a species dies, the species is **extinct**.



# Why did the dodo become extinct?

The dodo was a large flightless bird that lived on the island of Mauritius. It nested on the ground in forests, producing one egg at a time.

When human settlers arrived on the island in the mid-1600s, they brought animals such as rats and dogs to the island, which ate the dodos' eggs.



The settlers chopped down the forests in which the dodos lived, and may have even hunted the dodo for food.

The dodo became extinct sometime in the late 1600s. What traits might have helped the dodo to survive longer?



# Why does extinction happen?

Extinction has always taken place, even before humans evolved. For example, the dinosaurs are thought to have become extinct due to a comet striking the Earth.

How does human activity cause extinction?

- destruction of natural habitats
- over-hunting
- climate change
- pollution.

Do you know of any extinct animals?



Lack of sustainability threatens many organisms with extinction.

Over 1.5 million different species of organisms have been identified, but scientists think there are many millions still to be discovered.

However, extinction rates are the highest since the death of the dinosaurs. On average, one species of plant or animal becomes extinct every 20 minutes.

