

# Extinct Animals



## Something to get you thinking...

*What if we could bring back woolly mammoths?*

What might be a positive, negative and interesting way to think about the question. You might want to consider the following things:

- Why did mammoths become extinct in the first place?
- Where did woolly mammoths live and what did they eat?
- Would woolly mammoths be able to live on earth today?
- What are the closest living relatives to mammoths alive today?
- If woolly mammoths were brought back from extinction, where would they live?

## A Brief History...

Woolly Mammoths lived on Earth over 10,000 years ago during the **ice age**. With their large tusks and thick shaggy fur, they were well **adapted** to live in the cold tundra environments of that time. But, as the climate changed, the mammoths were no longer well adapted to their environment and started to die out, becoming extinct around 4000 years ago. Their closest living relatives alive today are the Asian elephants.

*But how do we know so much about these creatures that lived thousands of years ago?*

Well-preserved **fossils** and frozen carcasses have been found that provide scientists with lots of evidence about what the mammoth looked like and how they lived. Some of the mammoth remains were so well preserved that scientists were able to extract **DNA!**



DNA is the biological molecule that's like a genetic instruction book for all living things. It is passed down from parents to offspring (**inheritance**) - this why we look like our parents and siblings. The DNA of woolly mammoths can help us to understand what they looked like, for example, the colour of their fur and how they could have lived. If we have samples of DNA then in theory we could use the DNA to make a new living woolly mammoth.

**What do you think?**

Compare modern-day elephants with woolly mammoths (or other animals that you know have evolved over time), what do they have in common, what makes them different, how are elephants adapted to their environment?

*Are there any animals that you would bring back from extinction?*

*Is it the right thing to do? Should we bring back animals that have not been on the planet for hundreds, thousands or millions of years?*

*Write a short argument for/against the genetic engineering/cloning of animals. There is a PDF on our class web page called 'Genetics - Hot Topics' to help you with this.*