

THE WORLD OF GENETICISTS

Geneticists are scientists who study **genes**. They are interested in how genes vary to create differences in living things, as well as how **traits** are passed from one **generation** to the next.

*Geneticist
(juh-NEH-tih-sist)*



*Geneticists' work is mostly done in the lab, studying DNA and different genes. They use strong **microscopes** and **advanced technology** to do this. While in the lab, it's important that geneticists wear protective gear like **goggles**, **gloves**, and a **lab coat** to keep samples clean.*

WHAT DO GENETICISTS DO?

A geneticist's work is very important because it helps us learn about our own bodies and the bodies of other living things!

LAB WORK

Many geneticists spend most of their time working in the lab, studying DNA and genes, planning and carrying out experiments, and looking at data to figure out how different genes work and what they affect in the body.

Part of this work involves writing research papers so that they can share their findings and discoveries with other scientists.



FIELDWORK

Some geneticists don't work in the lab, but out in the community.

Some work in medical settings, talking to patients to help diagnose or treat genetic conditions alongside other medical professionals like doctors. Others may work as consultants, supporting people with genetic conditions to help them cope with different symptoms.

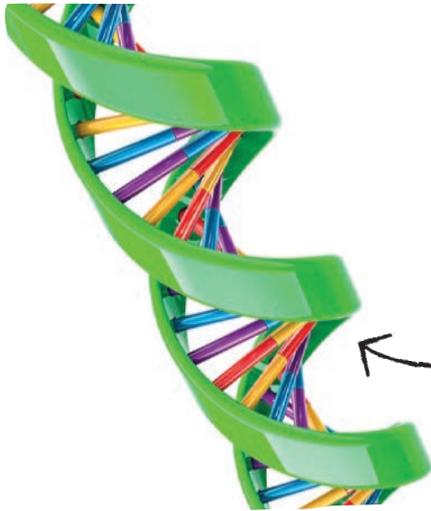


WHO DO GENETICISTS WORK FOR?

Many geneticists work for universities, carrying out research and teaching students. Others work for research institutions run by governments or private companies. While some geneticists focus their research on medicine, others focus on farming, food production, or solving crimes.

FAMOUS DISCOVERIES

Geneticists have made so many amazing discoveries that have changed our understanding of genes and living things. Here's just a few of the biggest and best!

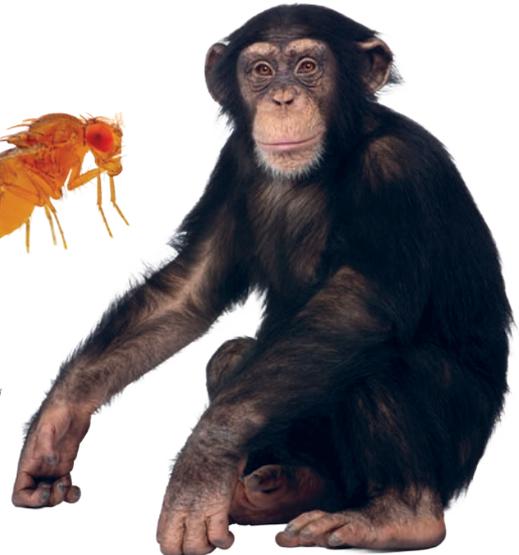


THE DOUBLE HELIX

In the 1950s, two scientists called James Watson and Francis Crick worked out that DNA is a double helix shape – it looks like a twisted ladder!

HUMANS AND ANIMALS

Scientists think that humans share 60% of our genes with fruit flies and more than 95% of our genes with chimpanzees!



DOLLY THE SHEEP

Scientists can copy a living thing's DNA to create an identical clone. In the 1990s, a sheep called Dolly became the first animal to be successfully cloned. This has taught scientists lots about genes and cells.

Geneticists are making discoveries all the time; who knows what they might discover next!

FAMOUS GENETICISTS

There have been so many clever scientists over the years who have contributed to the study of genetics. Here's just a few of the most famous.



BARBARA MCCLINTOCK

Barbara was an American scientist who won a **Nobel Prize** in the 1980s for her incredible discovery of “jumping genes” – parts of DNA that can move around within a cell!



GREGOR MENDEL

Some of the first genetics studies were carried out by Gregor Mendel, who studied pea plants! He looked at how traits are passed from parent plants to their offspring. His findings have helped scientists understand animal genes too.



SVANTE PÄÄBO

Svante is a Swedish geneticist who studied ancient samples of DNA. He made incredible discoveries about the genes of **Neanderthal** people and how human bodies have changed over hundreds of thousands of years.



These are just a few of the many scientists who have made a huge difference to the study of genes.