

# Smashing Stereotypes in Science



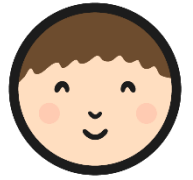
# Aim

- To explore how scientists are **diverse**.

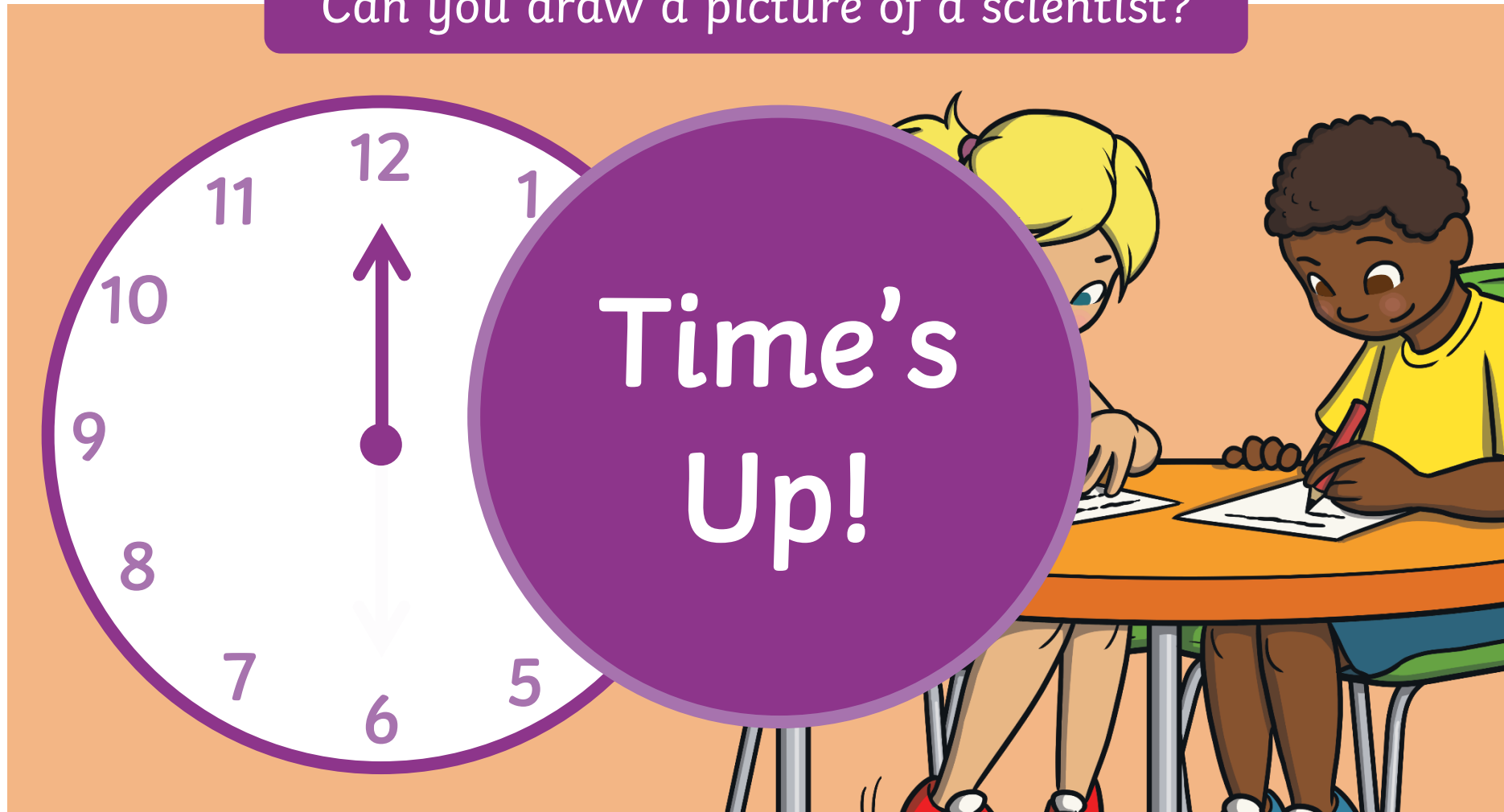
# Success Criteria

- I can explain what the words '**diversity**' and '**stereotype**' mean.
- I understand that scientists come from a **diverse** range of backgrounds.
- I can name and describe some of the many different jobs scientists do.

# What Is a Scientist?

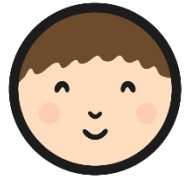


Can you draw a picture of a scientist?





# What Is a Scientist?



Let's share our pictures of what we have drawn.

Are they  
similar or  
different?





# What Is a Scientist?

A scientist studies **science**.

They are **curious** about how the world works. Their work includes:



Making **observations**  
(looking at things  
closely)



Asking **questions**



Carrying out  
**experiments** to find  
out new things.

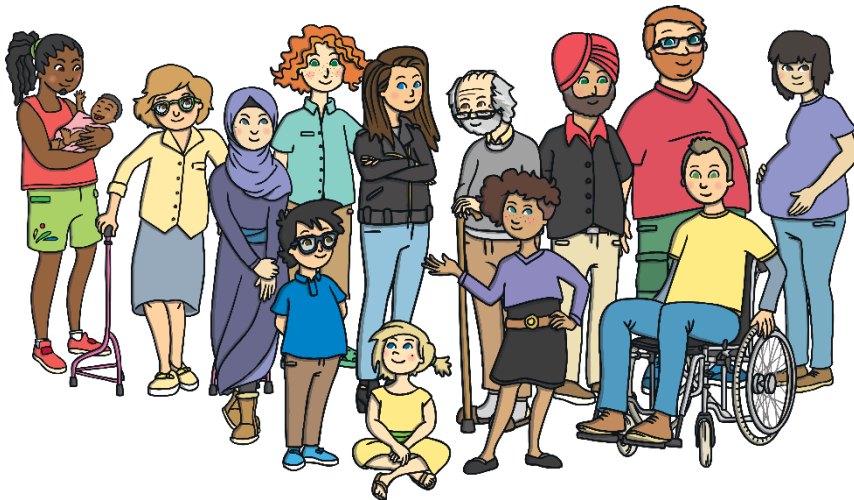


# Smashing Stereotypes in Science

## Keywords

### diverse

means a mix of different people or things, for example:



This group of people is **diverse**.

### stereotype

an idea about what a certain group of people are like that may not be true, for example:



'Girls wear pink and boys wear blue' is a **stereotype**, because this is not always true!

# Smashing Stereotypes in Science

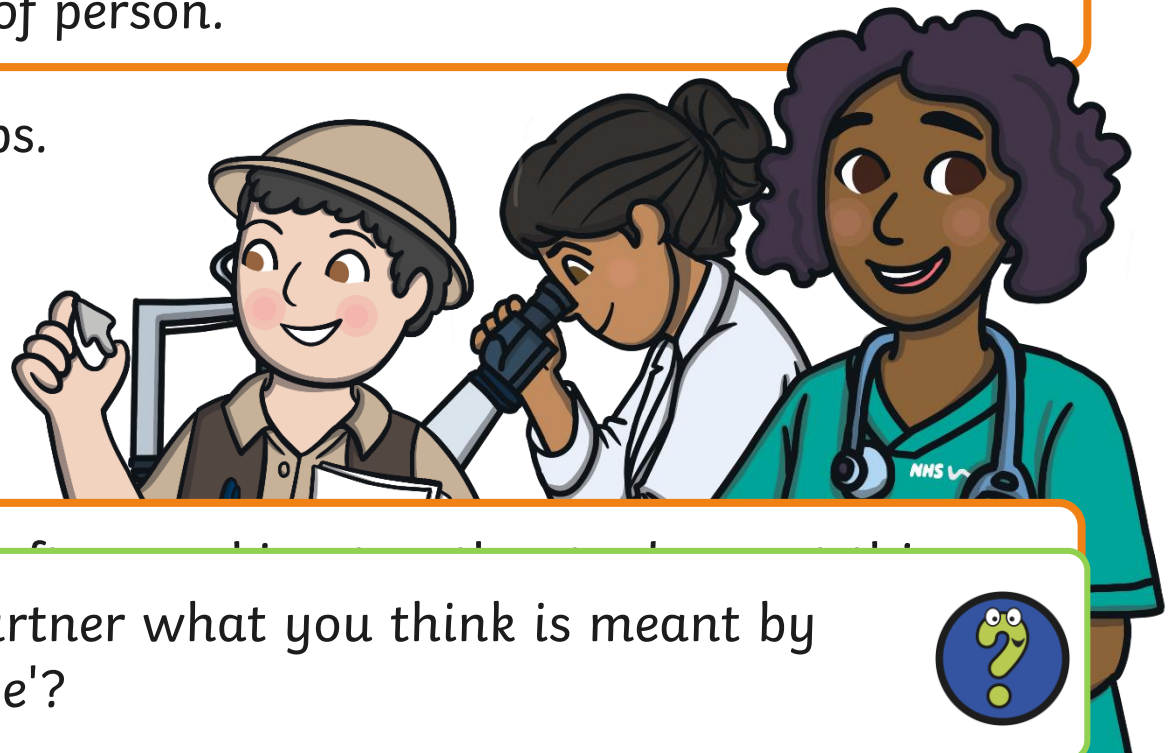


Sometimes people have one idea of what a scientist looks like - a **stereotype**.

One theme of British Science Week this year is 'Smashing Stereotypes' and celebrating how **diverse** scientists are!

Scientists aren't just one type of person.

- They do lots of different jobs.
- Many different kinds of people work as scientists.
- They also work in lots of different places and ways.



Scientists  
in the  
of sci



Can you tell your partner what you think is meant by 'smash the stereotype'?





# Types of Scientists



There are lots of different types of scientist. Here are some examples.

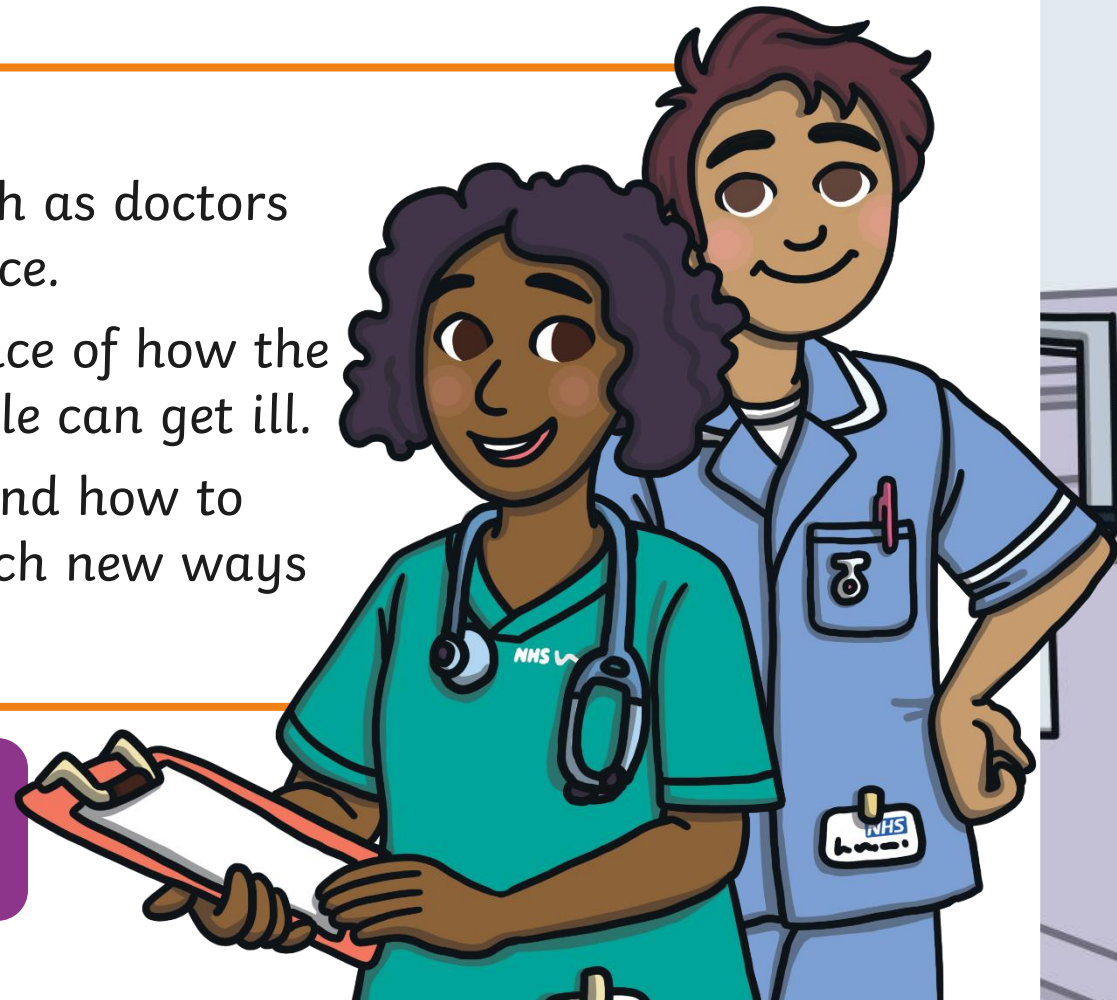
## Medicine

People who work in medicine, such as doctors and nurses, know lots about science.

They need to understand the science of how the human body works and how people can get ill.

They find out why people are ill and how to treat them. They may even research new ways to make people better.

They work in many places including hospitals and GP surgeries.





# Types of Scientists



## Vets and Veterinary Nurses

When animals are poorly, they need to be looked after as well.

Vets and veterinary nurses have to know all about the science of animals and how to make them better.



They work in places such as veterinary surgeries, safari parks, conservation areas and many places you may not expect.



# Types of Scientists



## Sports Scientists

These scientists know all about how the human body works. They use this to help people to try and become healthier and get better at their sport or activity.

They can also help to design sports equipment.



They work in places such as fitness centres, hospitals or outdoor sports fields.

# Types of Scientists



## Meteorologists

These scientists study the weather and put together our weather forecasts. They are also learning more about climate change.

Using computer programs is an important part of their job.

They work in many different places all around the world.





# Types of Scientists



## Materials Scientists

These scientists look at how to make materials better for us to use.

They might find new ways to use materials and even create new materials.



They might work in a factory, a lab or an office.

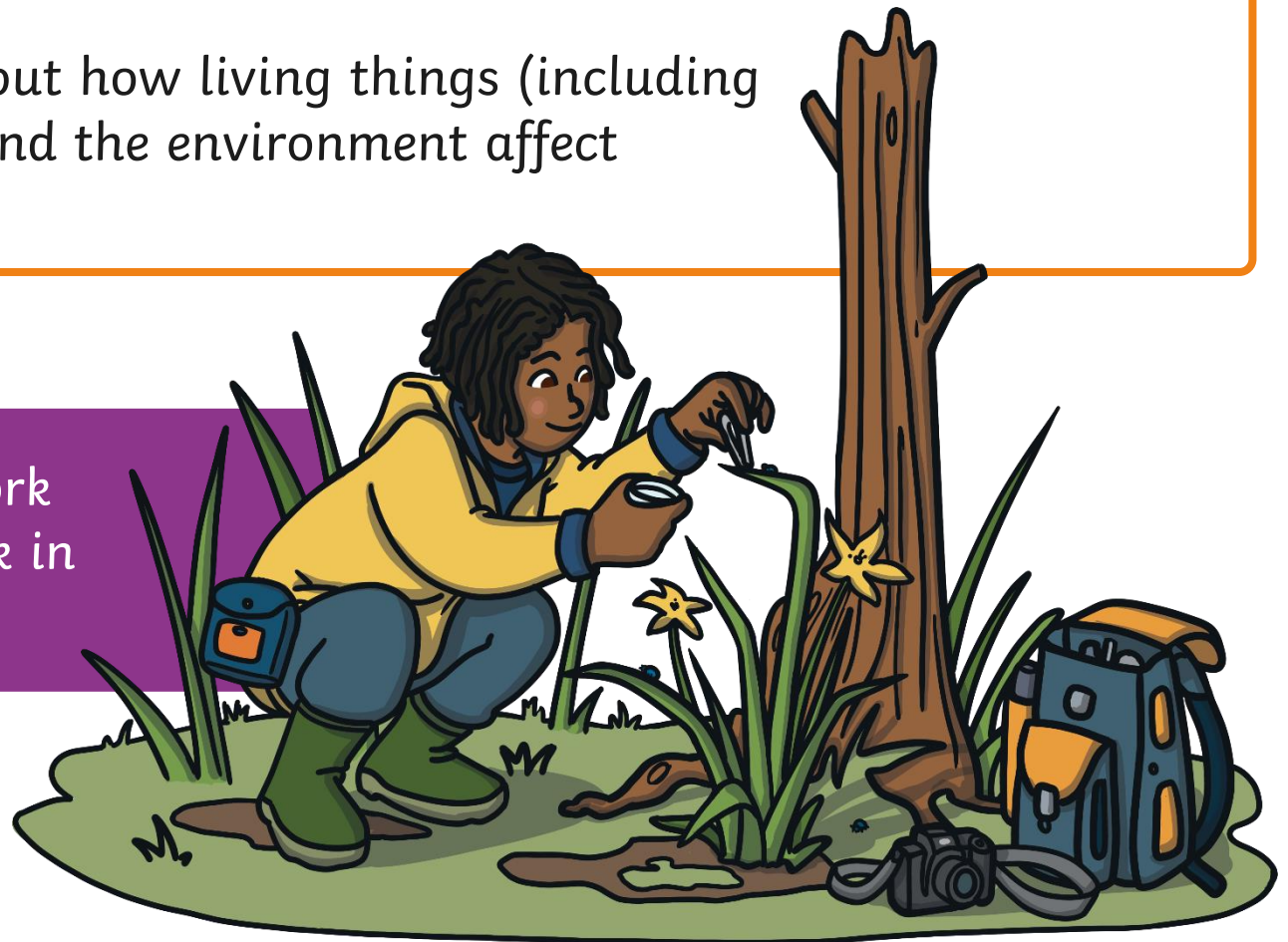


# Types of Scientists

## Ecologists

Ecologists find out about how living things (including animals and plants) and the environment affect each other.

They can do lots of work outdoors but also work in labs and offices.



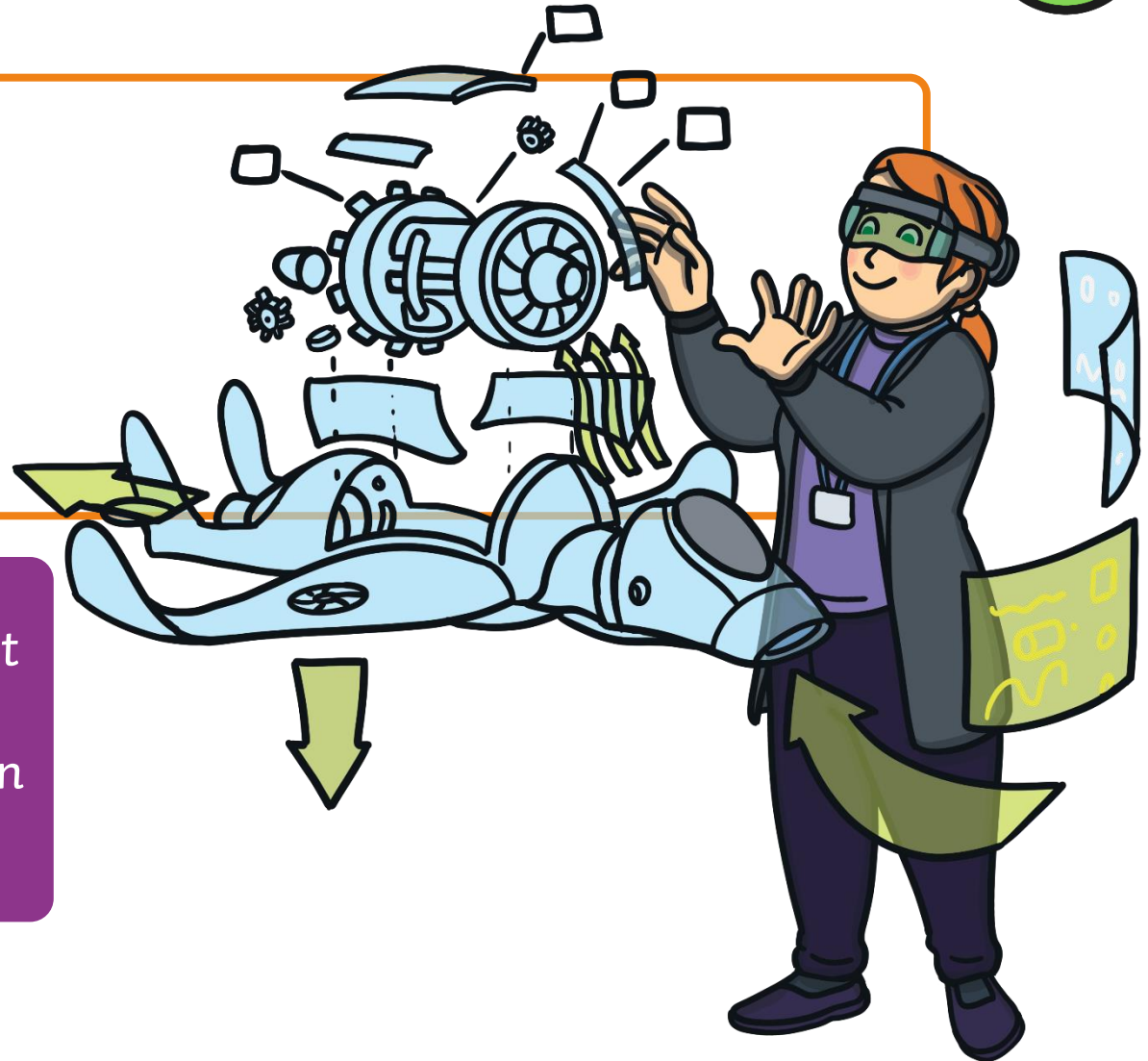


# Types of Scientists

## Engineers

Engineers use their scientific knowledge to design and build things.

They work in lots of different places including on ships and in factories, construction sites, offices and hospitals.







# Types of Scientists Engineers



**Clinical engineers** design and build equipment for helping people who are ill.



**Aerospace engineers** design and build planes, spacecraft and satellites.



**Civil engineers** work on building projects such as bridges, roads, railways, schools and offices.



**Chemical engineers** turn basic materials into things we can use. They work with fuels, medicines and food and drink.



**Marine engineers** design and build things linked to the sea, such as boats and ships.

# Types of Scientists



## Science Communicators

These scientists share their scientific knowledge and discoveries with people.

They might run science workshops for children, write about science or make television programmes.

They can work in all sorts of places such as schools, universities, museums and TV studios.

Many of the different scientists we have learnt about also do this as part of their job. For example, scientists sometimes visit schools to teach children about their jobs.

**Your teacher is a science communicator too!**





# Types of Scientists

There are many more types of scientists!  
Can you guess what these scientists do? Click on a picture to find out!

Botanists

study plants

Palaeontologists

study fossils

Astronomers

study space

Seismologists

study  
earthquakes

Hydrologists

study water

Zoologists

study  
animals

Audiologists

study hearing

X



Do you know  
any scientists in  
real life? What  
job do they do?

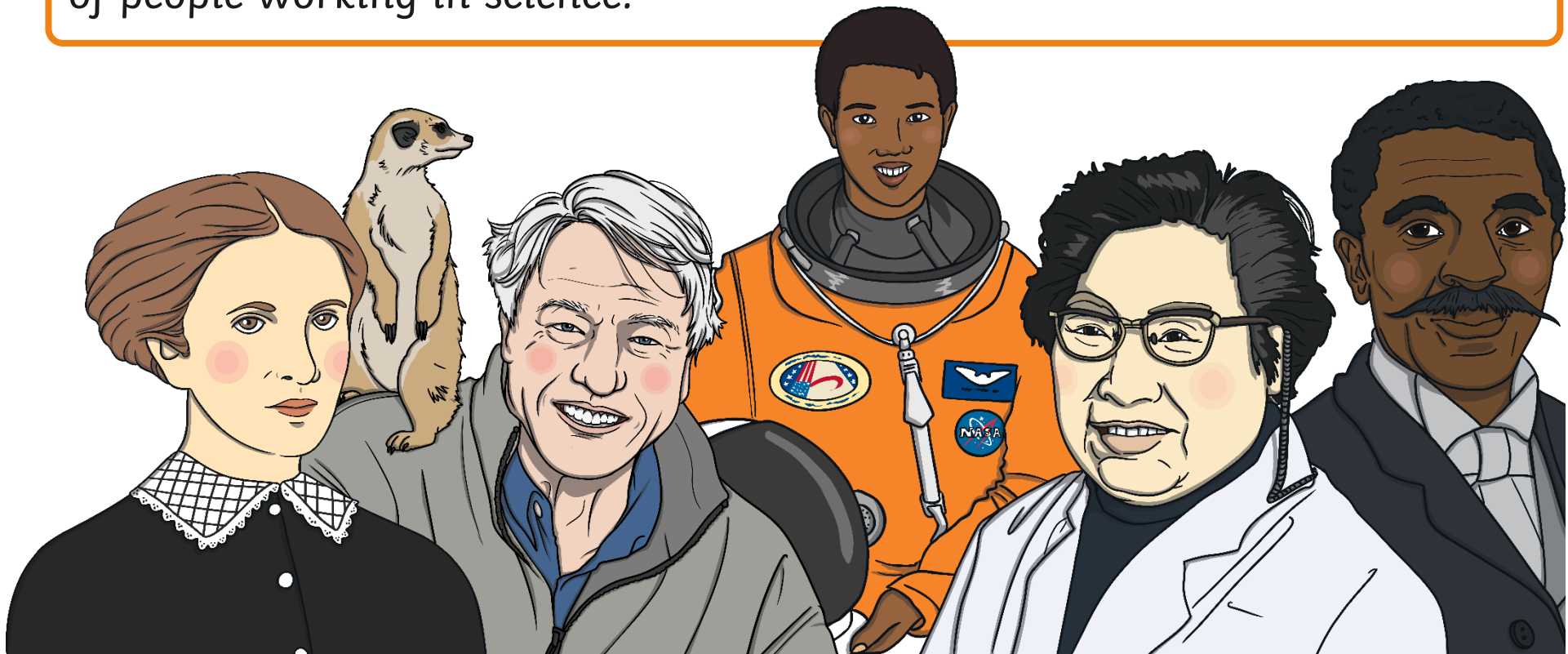




# Inspirational Scientists

As well as studying many different things, scientists come from different backgrounds (e.g. places, homes and families).

Here are some examples of well-known scientists. They show the **diversity** of people working in science.

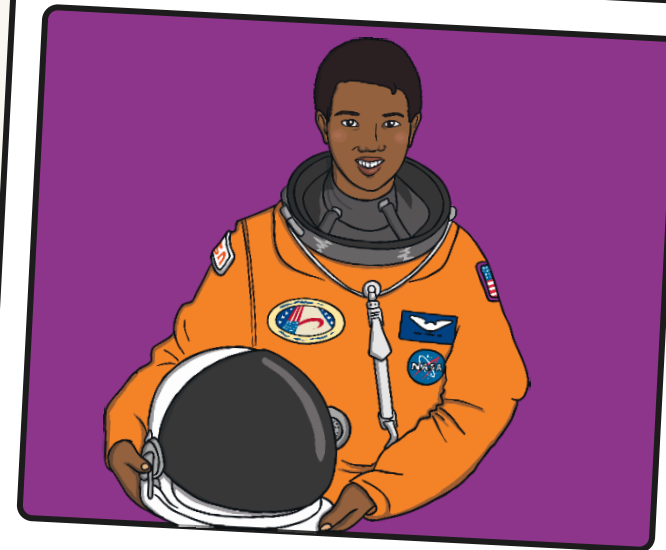


# Inspirational Scientists



- Mae Jemison is a doctor, teacher, inventor and astronaut.
- She was the first Black woman to go into space.
- She first went to medical school and learnt how to be a doctor, then she applied to be an astronaut.
- She went to space in 1992 on board the Endeavour space shuttle.
- In space, she carried out experiments into weightlessness.

**Scientists have hobbies too - Mae likes reading and dancing!**



**Mae Jemison**

# Inspirational Scientists



**Sir David  
Attenborough**

- Sir David Attenborough is a wildlife filmmaker and naturalist.
- A naturalist is a scientist who studies the natural world, including animals and plants.
- He has taught people about science on television for over 60 years.

Have you seen any of his programmes?



# Inspirational Scientists



- She was the first Englishwoman to qualify as a doctor in Britain, in 1865.
- She wasn't allowed to study medicine at university. Instead, she studied science in the evenings.
- Even when she was qualified, she was still not allowed to work as a doctor in any hospital.
- So, she decided to open her own doctor's surgery which became very popular.
- She went on to open a hospital in London, which still treats patients today.



**Elizabeth Garrett  
Anderson**

# Inspirational Scientists



George Washington  
Carver

- George was the first Black American to receive a PhD in Botany.
- He was the first Black student to attend the Iowa State College of Agriculture and Mechanic.
- He helped farmers grow crops like soybeans and sweet potatoes.
- He loved learning but wasn't allowed to attend any of the schools near his home because they were for white children only.
- So George travelled to lots of different cities to find schools that would allow him to study.

**Racism:** Treating people differently because of the colour of their skin or because they or their family members come from a different country or area.

# Inspirational Scientists



- Tu Youyou is a Chinese scientist.
- After having a disease called tuberculosis as a teenager, she learnt about medicine so that she could help other people who were ill to get better.
- She is known for discovering a substance from a plant that has been used as a medicine to treat a disease called malaria.
- This has helped millions of people to get better.

**Substance:** A material that something is made from.



Tu Youyou