



Welcome to your Discovery Box

Here you will find an array of exciting activities and fun facts to prepare you for your next unit of study.

Inside this Discovery Box you will find:

- fun facts and information
- craft activities
- puzzles and games

We hope you find these activities engaging and entertaining but most of all that they make you **curious** to learn more.

How is climate change affecting birds and what can we do to help?

Climate change does a lot more than just heat up our planet. Climate change can also cause more intense weather. That could mean more hurricanes, floods, heat waves, droughts, and even cold spells.

This extreme weather can cause trouble for birds. Scientists have noticed that when extreme weather happens, fewer birds show up in the places they call home. Why? One idea is that the birds avoid the extreme weather by moving to a friendlier area.

Want to take a close-up look at the birds in your neighbourhood?

Follow these simple instructions to make a bird feeder that birds won't be able to resist!

What you will need:

- An empty toilet paper roll
- Some string
- Peanut butter
- Bird seed



Instructions

1. Punch two holes on one end of the toilet paper roll using a pencil. Make sure the holes are across from each other so that you can put a string through it.
2. Put a string through both holes. Tie the loose ends of the string together (so that you can hang it later).
3. Spread peanut butter all around the outside of the toilet paper roll.
4. Pour the bird seed onto a plate or other flat surface.
5. Roll the toilet paper roll in the bird seed. Make sure the seeds stick to the outside!
6. Hang your new bird feeder outside near a window so you can see it from inside.
7. Wait for birds to come and feast on your fancy new bird feeder!

Important facts about the world

Our Earth is about 4.543 billion years old!

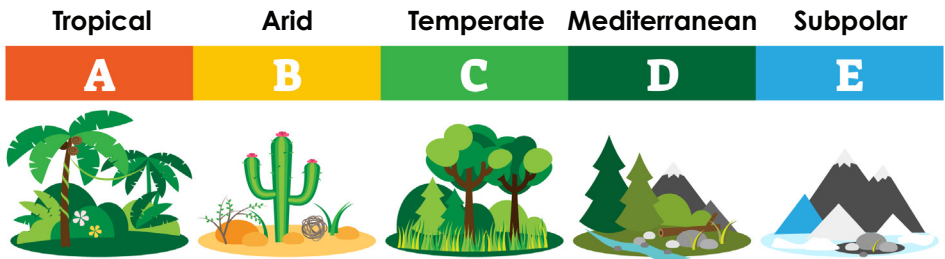
Here are some facts about this amazing planet:

70 per cent of the Earth's surface is covered in water!

Earth is the only place life has actually been discovered.

The world is home to over three trillion trees—with almost half of them living in tropical or subtropical forests. There are roughly 400 trees for every human, but we are losing 15 billion trees a year to deforestation and we only plant 5 billion trees so every year the planet has 10 billion fewer trees.

On Earth, there are roughly five climate zones: tropical, arid, temperate, Mediterranean, and subpolar.

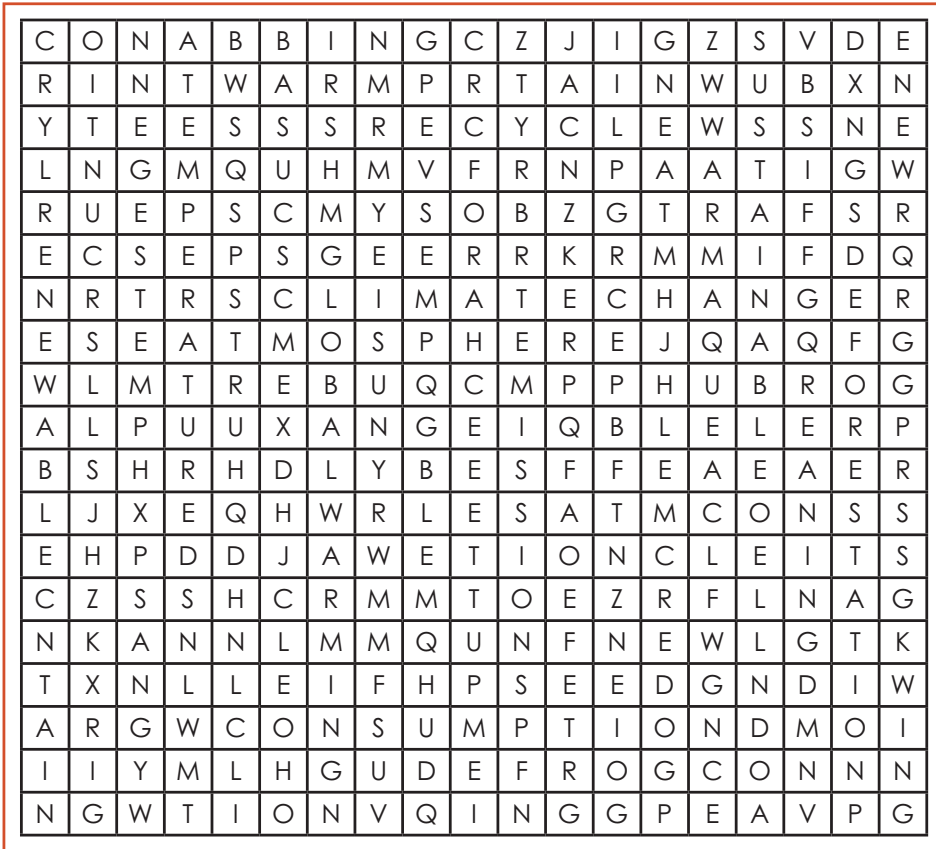


The average temperature of the Earth before mid-1800 was 14°C. Global temperatures have significantly risen from the mid-20th century to present day.

Throughout Earth's history, climate has continually changed. When occurring naturally, this is a slow process that has taken place over hundreds and thousands of years. For example, 20,000 years ago, much of the United States was covered in glaciers. In the United States today, it has a warmer climate and fewer glaciers.

Human activities such as deforestation, land use, and burning of fossil fuels have released greenhouse gases. The more greenhouse gases there are in the atmosphere the more the heat gets trapped, which increases the Earth's temperature.

Can you solve this wordsearch?



ATMOSPHERE

GLOBAL WARMING

CLIMATE CHANGE

DEFORESTATION

TEMPERATURE

EMISSIONS

CONSUMPTION

SUSTAINABLE

RENEWABLE

RECYCLE

Carbon footprint calculator

Your carbon footprint is the amount of carbon dioxide released into the atmosphere because of your own energy needs. This might be from not turning off appliances, using the car, taking flights, and wasting food.



Use the web link below to access the WWF carbon footprint calculator. You can find out just how big your 'footprint' is and what you can do to improve it.

<https://footprint.wwf.org.uk>

My carbon footprint is equal to:

Click on 'reduce this score' to find out what you can do to improve your carbon footprint.

I can improve by:

Environmental activists

An environmental activist is someone who wants to stop global warming. They will go to protests to raise awareness about the cause and spread awareness of the issues facing our people, animals, and planet. At school you will learn about Greta Thunberg who became famous for protesting against global warming when she was just 15 years old.

You might see environmental activists holding signs like these:



Can you create your own global warming protest sign?

DiscoveryBox

Take a trip through time with NASA

In this unit you will learn lots about how global warming and climate change has changed our planet over time.

Use this link to access the NASA 'Climate Change Time Machine', where you can see changes with your own eyes!

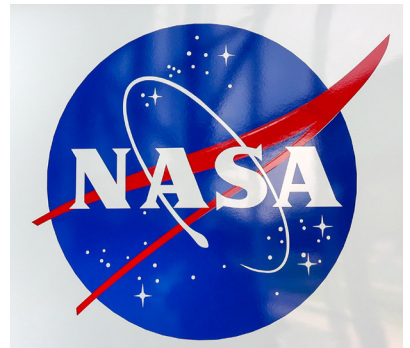
<https://climate.nasa.gov/interactives/climate-time-machine>

What is the difference?

Using NASA's Climate Change Time Machine, choose one of the following:

- sea ice
- sea level
- carbon dioxide
- global temperature.

Then draw the differences between the earliest date and the latest date.



Create a polar habitat!

With rising temperatures, the polar ice is starting to melt. Not only does this cause rising sea levels and flooding, but it also puts polar animals' habitats in danger. Polar bears live on the ice and as it melts, they have less and less space to hunt for food.

Can you create a polar habitat by reusing an old shoebox or cereal packet? You could also use any other used packaging in your house, such as yogurt pots for icebergs.

You will need:

- Cardboard
- Blue and white paint
- Cotton wool
- Bubble wrap
- Paper bowl/cup
- Glue
- Any extra materials you have at home!

Instructions

1. Gather your equipment
2. Paint the shoebox blue for the ocean and white for the ice. Don't forget to paint some icebergs in the ocean!
3. Stick the cotton wool around the outside of your paper bowl to make an igloo!
4. Stick the bubble wrap to your ocean to create waves—you may wish to add more blue paint!

Environmental activists



Isatou Ceesay is a Gambian activist, popularly referred to as the 'Queen of Recycling'. She started a recycling movement called One Plastic Bag. Ceesay aims to educate people about recycling and how we need to reduce the amount of waste that is created.



Wangari Maathai worked tirelessly for both land conservation and women's rights. In her native country of Kenya, she founded the Green Belt movement, focusing on environmental conservation and women's rights. She was awarded the Nobel Peace Prize in 2004 for her approach to sustainable development, democracy, and peace.

How could you help educate people about recycling?

How might you reduce the amount of waste that you create?

DiscoveryBox

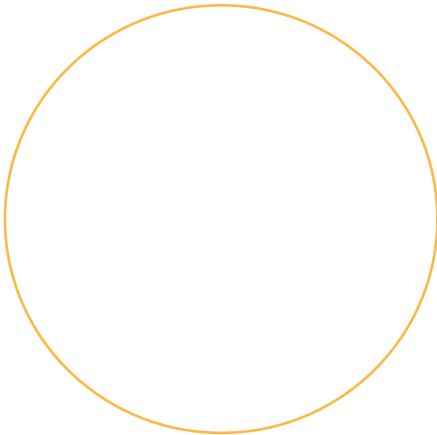
Create your own planet

Currently, scientist have not found another planet like Earth that is inhabited and a place where human life could exist. However, some people dream of finding another planet to live on!

This is your opportunity to create your own planet where people and animals could live.

- 1. Draw the outline of your planet
- 2. Add the different continents and countries
- 3. Mark the cities, mountains, and rivers
- 4. Finally, label your planet with the different climate zones it will have, such as arid (very hot) or subpolar (very cold).

Name of your planet:



Now write a short description about your planet and why it is safe for people and animals to live there.
