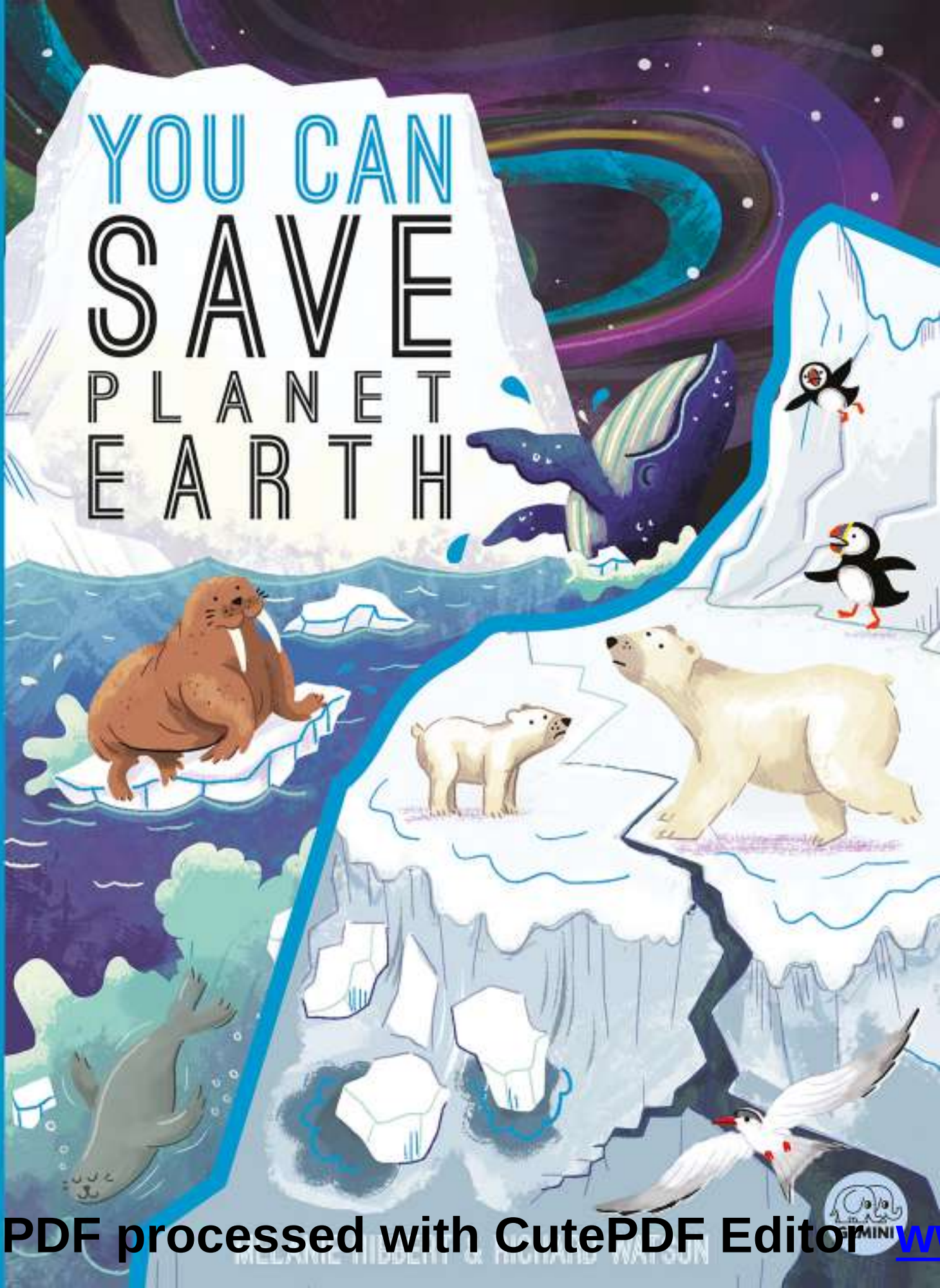
A TRANSFORMING PICTURES BOOK

STEM

YOU CAN SAVE PLANET EARTH



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You Can Save Planet Earth!



Get Ready to Save Planet Earth!

You are about to embark on a thrilling journey of discovery to explore how our planet is at risk and learn the ways that you can help to save Planet Earth.

Before you find out about global warming, pollution, fossil fuels, renewable energy, protecting the rainforests and living sustainably, discover these need-to-know 'In Five' facts.

Global Warming in Five



Climate
The average weather patterns in one place over a long period of time.

Environment
The area and conditions in which an animal, plant or person lives.

Industrialisation
The development of industries and machines in a place or country on a wide scale.

Atmosphere
The envelope of gases surrounding the Earth.

Habitat
The place where an animal or plant lives and grows.

Pollution in Five

Fossil Fuels
Fuels (coal, oil, and natural gas) that are formed in the earth from plants or animals that lived millions of years ago.

Toxic
Containing harmful or poisonous material.

Pesticides
Chemicals which are used to protect crops from being destroyed by harmful insects, plants or diseases.

Ecosystems
An area where plants, animals and other organisms work together with their environment to survive.

Decompose
The process where living things naturally break down into smaller parts.



Energy in Five



Energy
The power we use to create heat, electricity or to work machines.

Electricity
A type of energy that can flow from one place to another to create heat, light and power.

Clean Energy
Energy created from fuel that does not pollute the environment.

Green Energy
Energy created from using natural sources such as the Sun and the wind.

Renewable Energy
Energy created from recyclable sources, like wind, wave and solar energy that will never run out.

Food and Farming in Five

Intensive Farming
A method of farming that uses technology, fertilisers and fast-growing crops to make as much food as possible.

Crops
Plants such as grain, fruit and vegetables that are grown in large amounts.

Deforestation
Cutting down large areas of forest for non-forest use.

Food Waste
Food that is not eaten and is thrown away or recycled.

Food Miles
The distance from where food is grown or made and where it is sold.



Living With Less in Five



Recycle
Turning an old item into something new, instead of throwing it away.

Reduce
Using less in our daily lives to reduce food waste and rubbish.

Reuse
Using an item more than once and avoiding disposable products.

Sustainable
Living and using resources in a way that doesn't harm ecosystems or the environment.

Donation
Giving away an item, like clothing, to a charity shop where others can reuse or recycle it.

Are You Ready?

Now, turn the page to start a reading adventure that will transform the ways in which **You Can Save the Earth!**

Global Warming



Sustained global warming is making our climate more extreme and erratic. This is known as 'climate change'.

Causes of Global Warming
Mass industry, transportation, deforestation and the burning of fossil fuels all increase greenhouse gas emissions.

Fossil Fuels
CO_2 emissions from burning fossil fuels are 50% higher than they were before industrialisation.

Climate Change Effects
As climate change takes its toll, ice melts, oceans swell and extreme weather events are more frequent.

Melting Ice
In the Arctic, sea ice is estimated to be melting by 12.5% every 10 years. Sea levels are forecast to rise 30 cm by the year 2050.

Endangered!
Polar bears are listed as vulnerable because the sea ice that they hunt, breed and rest on is melting.

Danger to Wildlife
Global warming threatens animal habitats and their natural food sources.

What is the Greenhouse Effect?

Some gases in Earth's atmosphere trap in the Sun's heat, just like a greenhouse. This is called the 'greenhouse effect'. Without it, Earth would be an icy, uninhabitable place.

Global Warming

Heat-trapping gases, such as methane and carbon dioxide (CO_2), are known as 'greenhouse gases'. We need some of these to regulate our planet's climate (predictable weather patterns). However, human activity is producing too many greenhouse gases, resulting in dangerous levels of global warming.


Climate Change Action
Taking action to stop climate change would have a huge positive impact on the Arctic. Reducing the amount of greenhouse gases in our atmosphere is a big way in which humans can limit climate change.
How Can YOU Help?
Reduce: Use less energy by switching off lights and electronics when not needed.
Recycle: Recycle paper, plastic and other materials, and avoid disposable packaging.
Reuse: Reuse clothing, toys and other items to prevent creating waste.
Save: Save water by turning off the tap when you brush your teeth.
Plant: Plant trees! Trees absorb CO2 and help to clean the air.
Walk or Cycle: Get active! Walk or cycle instead of riding in a car.
Protect Animals!
We can help protect habitats and reduce the risk of animal extinction.
It's Not Too Late!
We can help stabilise the Arctic climate and avoid potential extreme weather events.
Danger to Wildlife
Global warming threatens animal habitats and their natural food sources.
Slow Down Melting Ice
We can slow down or reverse the melting of the sea ice, helping all the animals who live on the ice in the Arctic.

Pollution

What is Pollution?
When harmful or toxic substances find their way into the environment it is known as 'pollution'. There are three main types of pollution – air, land and water.

Sources of Pollution
Pollution comes from many sources including burning fossil fuels, factory waste, vehicle exhausts, sewage, rubbish and pesticides. Water pollution in our oceans from agricultural waste, industrial chemicals, rubbish and plastics is endangering wildlife and destroying delicate marine ecosystems.

Plastic Isn't Fantastic!
Scientists believe 100,000 marine animals are killed by plastic pollution in the ocean each year. Around half of ocean pollution comes from discarded fishing gear – including plastic nets the size of football pitches!

Industrial Waste
Toxic chemical leaks from industrial plants can be carried into the oceans by rivers.

Overfishing
Overfishing can decrease fish populations and harm habitats where fish live.

Microplastics
Some plastics take 500–1,000 years to decompose. Before then, they gradually break down into tiny microplastics. Scientists estimate around 171 trillion microplastic particles are floating in our seas.

Deadly Plastic
Plastic bags trap and suffocate marine animals. Floating plastic waste is eaten by seabirds and turtles, who mistake it for food.

Plastic Waste
Every year 12 million tonnes of plastic waste ends up in our oceans.

Coral Bleaching
Climate change, pollution and overfishing can cause corals to turn white (bleaching), which can lead to them dying.

Trapped!
Broken or superstored fishing nets trap turtles and other sea creatures.



ARE YOU READY TO SAVE PLANET EARTH?

Discover how you can help to save Planet Earth.

IN THIS BOOK YOU CAN ...

... transform pictures with the turn of each page!

... be inspired by real-life environmentalists and activists!

... challenge your knowledge with the climate change quiz!

... conduct a mini ecosystem science experiment at home!

... learn about protecting the environment, climate change and more!

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