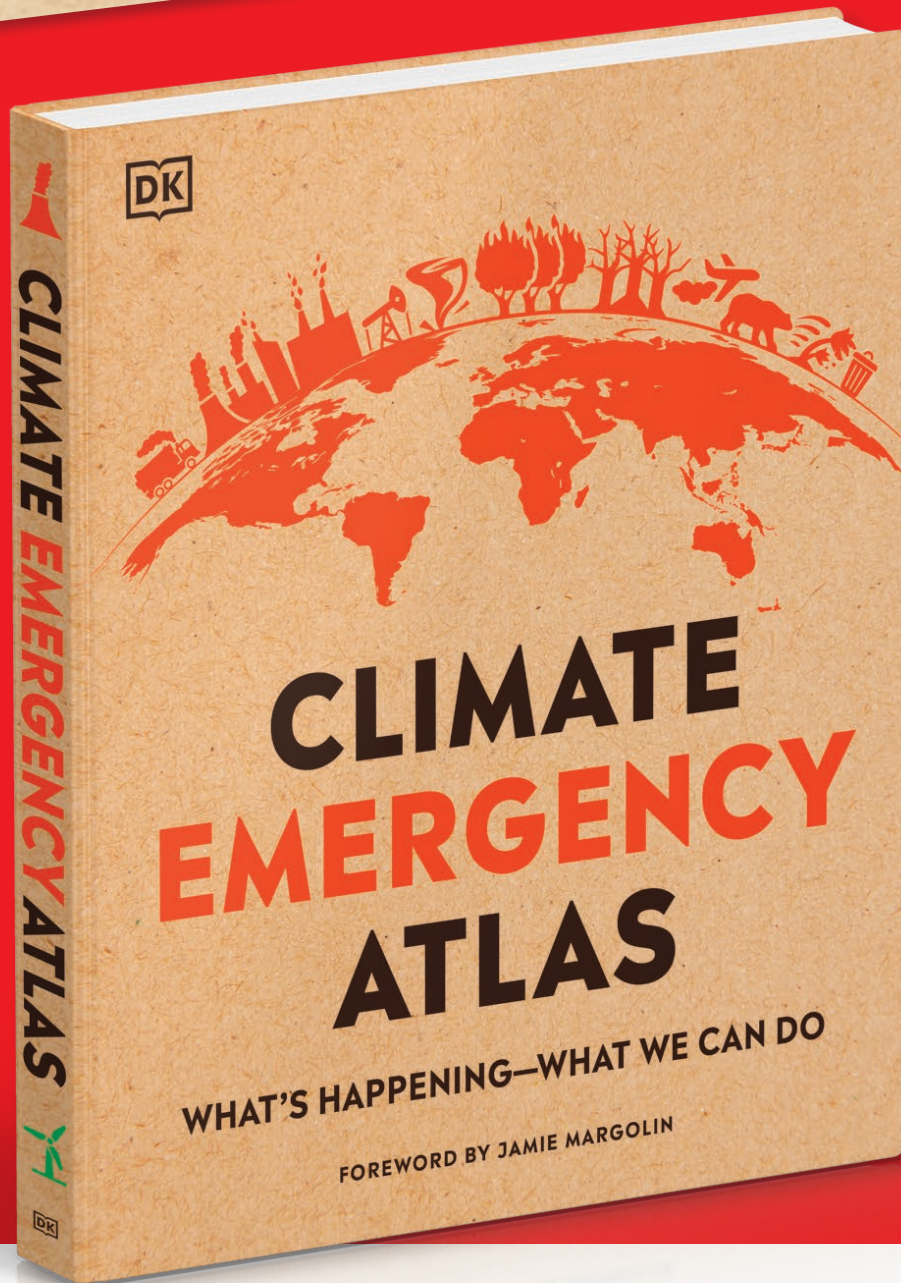


IT'S A **CLIMATE EMERGENCY!**



**DISCUSSION GUIDE FOR KIDS**



For the curious

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# CLIMATE EMERGENCY

## ATLAS DISCUSSION GUIDE FOR KIDS

### HOW EARTH'S CLIMATE WORKS

#### The greenhouse effect

How would you explain the greenhouse effect, shown in the illustration on pages 12-13, to a friend?  
Can you name the main greenhouse gases? What kinds of human activities give off greenhouse gases?

#### The carbon cycle

The illustration on pages 14-15 explains the carbon cycle, which is crucial to all life on Earth.  
How has human activity upset the balance of the carbon cycle?

#### What's your carbon footprint

The amount of greenhouse gases that are released as a result of your everyday activities is called your carbon footprint.  
Looking at the footprints on pages 16-17, which activities release the most greenhouse gases?  
The sizes of the carbon footprints vary greatly from country to country. Why do you think this is?

### THE CAUSES OF CLIMATE CHANGE

#### Population growth

Why is the huge growth in Earth's population since 1950, shown by the towers across the top of pages 24-25, an important factor in climate change?  
Which countries have the largest populations?

#### Burning fossil fuels

Coal, oil, and gas—known as fossil fuels—are used to generate the electricity that powers industry and our homes. The chimneys on the map on pages 26-27 compare how much carbon dioxide was emitted by different countries in 1990 (brown chimneys) and in 2018 (gray chimneys).  
Which countries have seen the greatest increase in emissions? Have any countries lowered their CO<sup>2</sup> emissions over this period?

#### Farming emissions

The size of the cows on the map on pages 30-31 represent the amount of the powerful greenhouse gas methane emitted by cattle farming as the animals burp (and fart). This is part of why eating meat has a higher carbon footprint than eating vegetables.  
Which countries here are shown with the biggest cows, and why?

#### Disappearing forests

Trees are vital to Earth's climate because they capture carbon dioxide from the air. For this reason forests are known as "carbon sinks."  
The areas in red on the map on pages 32-33 show where forests once covered the land, but have now disappeared.  
Based on these two pages and what you have learned from the book so far, why do you think forests have been lost in these areas?



# CLIMATE EMERGENCY

## ATLAS DISCUSSION GUIDE FOR KIDS

### THE CAUSES OF CLIMATE CHANGE (CONT'D.)

#### Road transportation

Road transportation contributes more than ten percent of global carbon emissions. The map on pages 36-37 shows the countries of the world with the most cars per population. Which countries have the most cars per person?

The USA and Canada are the same color on the map but the sizes of their cars at the top of the page are very different. Why is that?

#### Air travel

As the map on pages 38-39 shows, we may not be able to see them, but planes cross the planet on thousands of different flight routes every day. People are used to traveling by plane for work and pleasure, but aviation is responsible for two percent of the world's greenhouse gas emissions.

How do you think air travel for both work and pleasure could be reduced?

#### Fast fashion

Ten percent of all greenhouse gases are produced by the fashion industry. The map on pages 40-41 shows the journey of the materials needed to make a pair of jeans. Which stage of the process emits the most GHGs?

Think about the clothes you wear. How many items of clothing do you have and how many times do you wear each one?

What can you do to reduce the impact your wardrobe choices have on the planet?

### IMPACTS OF CLIMATE CHANGE

#### Global warming

The map on pages 46-47 shows that Earth's temperature has been changing. The global average increase is 1.98 degrees F.

Which areas of the world are getting hottest? Why does this matter?

#### Extreme weather

Across the world, extreme weather events have become more frequent; the map on pages 48-49 shows some examples.

Do you know anyone who has experienced an extreme weather event like the ones on this map?

How do you think extreme weather might be linked to climate change?

#### Shrinking polar ice

The map on pages 50-52 shows how fast the sea ice that makes up the Arctic is melting.

Why is this a problem for humans and animals?

#### Warming oceans

Look at the map on pages 54-55 and think about the impact climate change is having on our oceans and how this affects the people who live on our coastlines and the ecosystems that sustain life in the ocean.



# CLIMATE EMERGENCY

## ATLAS DISCUSSION GUIDE FOR KIDS

### IMPACTS OF CLIMATE CHANGE (CONT'D.)

#### Radical Rainfall

Climate change is affecting rainfall patterns all over the world. As the map on pages 56-57 shows, some places are getting more, and others much less.

How much rain do you have where you live? Would it be better to have more or less rain? How do you think people cope in a drought when there is so little rainfall that food cannot grow?

#### Australian bushfires

The map on pages 58-59 depicts the more than 100 separate fires that raged across Australia after intense heatwaves in 2019 and 2020.

How do you think climate change made the fires more intense and dangerous?

#### Animals in danger

Climate change is having a dramatic impact on the animal life of our planet in many different ways, as you will see from the map on pages 60-61.

What are the different threats to animals and their habitats? What is your favorite animal? Is it being affected by changing temperatures? If not pictured here, do some research to confirm.

#### Livelihoods in peril

The map on pages 64-65 shows the many reasons why people are being forced to change the way they live and even leave their homes because of climate change.

What are the different threats that climate change poses to people's livelihoods? How would you feel if you had to leave your home?

### ACTION

#### International action

The star rating on the map on pages 70-71 indicates whether the effort a country is making to reduce its emissions is enough to meet internationally agreed goals. Which countries are doing the best at this? Which countries are struggling?

Why is it important for the countries of the world to work together to combat climate change? What would you say to someone in charge of making decisions about climate change to encourage them to take action?

#### Solar power

On pages 74-75 you can see which countries are the world's largest users of solar power. What are the advantages of solar power? Have you noticed solar panels in the area where you live? What are they used for?





# CLIMATE EMERGENCY

## ATLAS DISCUSSION GUIDE FOR KIDS

### **ACTION (CONT'D.)**

#### **Winds of change**

The map on pages 76-77 shows the percentage of global wind energy produced by the top 20 users of wind power. Why is wind power a good alternative to fossil fuels?

#### **Restoring forests**

Across the world, initiatives to plant more trees are being launched. Some of these are featured on pages 78-79.

How does planting trees help combat climate change? Are there tree-planting strategies where you live? If you're not sure, see if you can do some research on your community to find out.

#### **Changing how we live**

There are a lot of different ways to reduce the impacts humans are having on the planet. This idea is known as sustainability.

Do the strategies happening across the world and shown on the map on pages 80-81 give you ideas for how you could change your lifestyle to be more sustainable? For example, what methods of transport do you use? How much do you recycle?

#### **Planet-friendly eating**

Pages 82-83 shows how greatly what we eat contributes to greenhouse gas emissions; the food we waste alone makes up six percent of the total.

Think about what you eat. How could you change your diet to be more planet-friendly?

#### **A fairer future?**

The height of the continents on the map on pages 84-85 shows which ones have contributed the most to greenhouse gas levels since the Industrial Revolution, 270 years ago.

What does this reveal? Look at the picture stories about the different ways countries are adapting to the effects of climate change. What do you notice about the strategies being used in different places?

#### **Planet protest**

Across the world, 6 million people took part in the climate strike in September 2019. Individual countries have also seen many local protests, as shown on the map on pages 88-89.

Have you attended any demonstrations? How else could you raise awareness of climate change? If you could speak to your head of government about climate change, what would you say? Write a letter to express these thoughts.

#### **Use your voice**

Imagine you are sitting reading *Climate Emergency Atlas* just before a class when a friend comes up to you and asks about the book. You have only ten minutes to tell them about it, and you decide to show them one feature in particular. It could be the story that made the biggest impact on you. Or perhaps it's the one that taught you something new that you feel your friend needs to know, too. Which feature would you choose and why?

