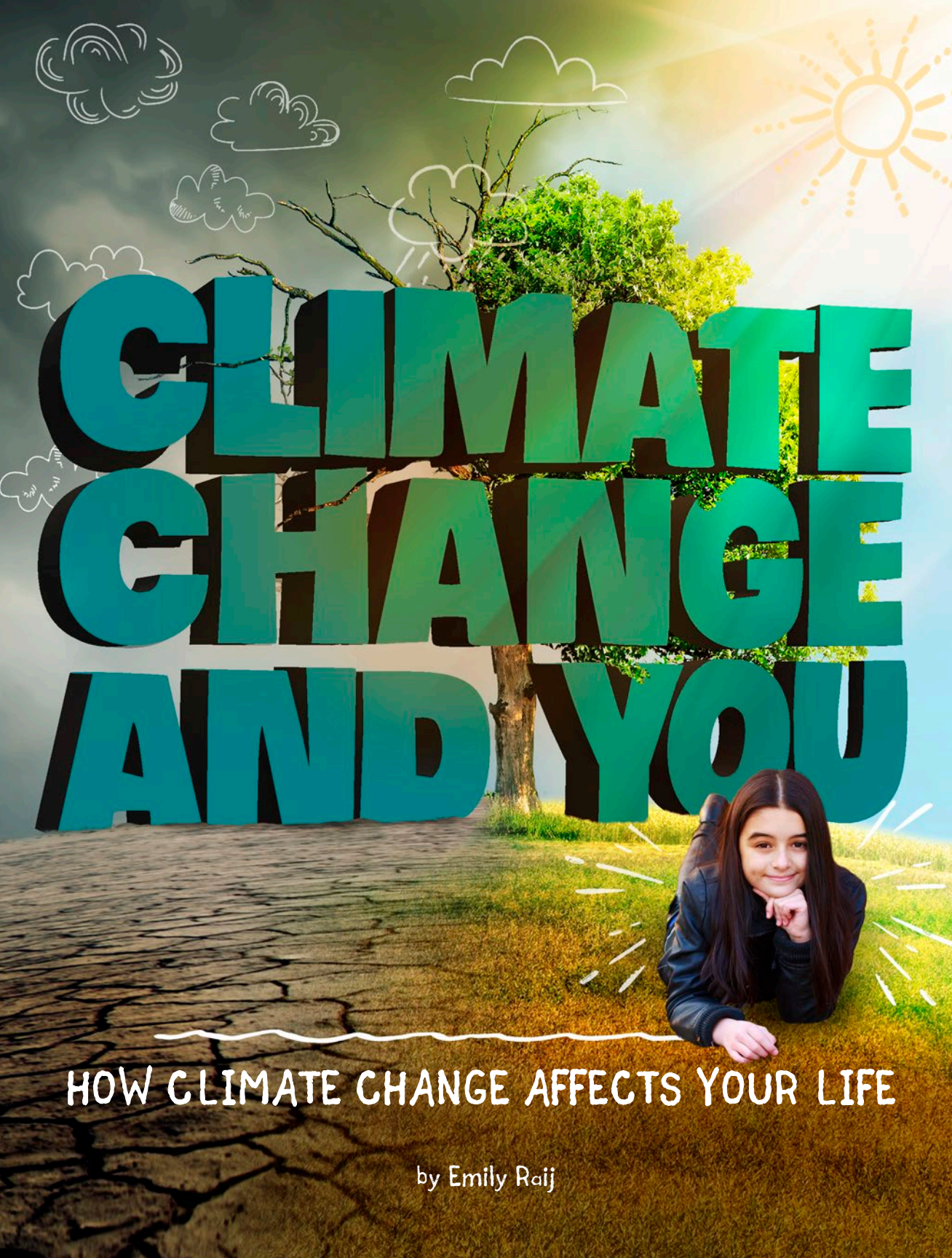




CLIMATE CHANGE AND YOU

HOW CLIMATE CHANGE AFFECTS YOUR LIFE

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TABLE OF CONTENTS

CHAPTER 1

WHAT CAUSES CLIMATE CHANGE?..... 4

CHAPTER 2

**HOW DOES CLIMATE CHANGE
AFFECT US?..... 8**

CHAPTER 3

**WHAT ARE GOVERNMENTS DOING
ABOUT CLIMATE CHANGE? 20**

CHAPTER 4

WHAT CAN YOU DO TO HELP? 24

GLOSSARY 30

READ MORE..... 31

INTERNET SITES..... 31

INDEX..... 32

CHAPTER 1

WHAT CAUSES CLIMATE CHANGE?

Today you splashed in puddles on the way to the bus stop. The day before you needed a hat and sunblock. It was hot and sunny. What changed? The weather!

Weather changes day to day and season to season. Weather includes wind, rain, and snow. It also includes temperature. Temperature tells us how hot or cold something is. The weather is what is happening in the **atmosphere** at a certain time and place.

We expect the weather to change. We can even plan for it. But what about when the **climate** changes? Climate is the average weather in a place over a longer period of time. Earth's climate has always been changing. But now it is becoming harder to predict and more dangerous.

When you know the weather will be rainy, you can grab an umbrella.



Scientists know people are causing climate change in a big way. People started burning coal, oil, and natural gas 200 years ago. These **fossil fuels** are taken out of the ground. Factories, homes, and cars burn them. This releases a gas called carbon dioxide. Burning forests to clear land for farms and buildings does too. Garbage rotting in landfills also releases carbon dioxide.

Scientists have been measuring the carbon dioxide put into the atmosphere. As the number of people in the world has grown, so has the amount of carbon dioxide. This causes hotter temperatures because carbon dioxide absorbs heat given off by the earth. The layer of carbon dioxide and other **greenhouse gases** is getting too thick. Heat cannot get out. This **global warming** is just one part of climate change. Hotter temperatures on land and in water are changing weather patterns around the world. Examples of these changes are some places are getting much less rain while others are getting more.



A power plant that burns coal puts carbon dioxide into the air.

FACT

The average world temperature has increased by about 1 degree Fahrenheit (0.5 degree Celsius) since the year 1900. This may not sound like a lot, but before 1900, a change of 1 degree took 10,000 years. Seventeen of the 18 warmest years have happened since 2001.

CHAPTER 2

HOW DOES CLIMATE CHANGE AFFECT US?

Climate change is causing more dangerous weather than in the past. This extreme weather includes strong storms such as hurricanes. It also includes floods, heat waves, and wildfires. Hotter temperatures cause more **droughts**. When land and plants get too dry, it is easier for fires to start. They burn down forests and homes.

Droughts and warmer weather can change the time of year that plants and crops grow. If food doesn't grow well or at all, some people will not have enough to eat. Farmers have to move to find land with available water.



Crops cannot grow when the weather is too hot and dry.