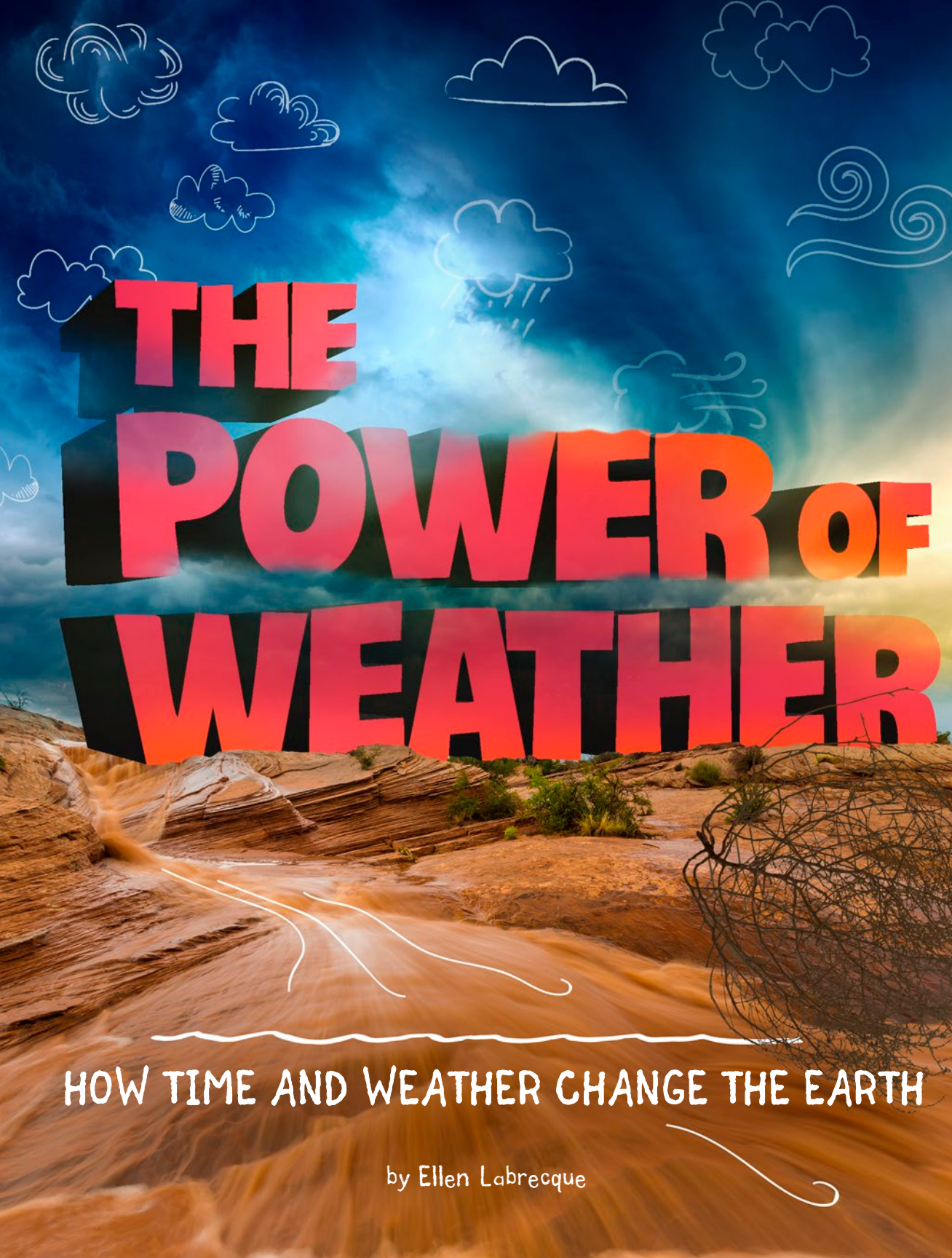




THE POWER OF WEATHER

HOW TIME AND WEATHER CHANGE THE EARTH

by Ellen Labrecque



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CHAPTER 1

EARTH'S MOVERS AND SHAKERS

Imagine spending a day on the beach. In the morning, you build a giant sandcastle. Over the next few hours, the wind blows. It carries away some of your sandcastle. Then people walk by. They step on parts of your castle. They take some of the sand away on their feet. High tide comes. The stronger ocean waves roll over what's left of your castle. The sand goes back out to sea.

What happened to your sandcastle is **erosion**. Erosion is the movement of soil and rock from one place to another. Wind, water, and the actions of people can cause erosion.

FACT

The word "erosion" comes from the Latin word *erosio*. It means to eat away.



Ocean waves erode a sandcastle on the beach.

Weathering and erosion are two processes that help shape the earth. Weathering is the wearing away and breaking down of rock, soil, and sand. Weathering happens through contact with wind, water, air, and humans. Weathering breaks down rock. Erosion moves it to another place. Together these processes carve giant canyons. They wash away beaches and create new ones. They change the shape and size of land.



A stream causes erosion by moving rocks, sand, and soil from one place to another place.

Erosion takes place over thousands or even millions of years. Wind erosion, water erosion, ice erosion, and human erosion have shaped our planet and the way we live on it. These types of erosion will continue to change the earth.



Wind erosion shaped a rocky cliff in the Sahara Desert in Africa.

CHAPTER 2

WIND EROSION

Wind is a powerful force of weathering and erosion. It is especially mighty during storms. Some **hurricane** winds reach speeds of more than 150 miles (240 kilometers) per hour. Forceful gusts speed up erosion.



A weather map shows Hurricane Michael in 2018.

During very strong hurricanes, entire beaches can be washed away in days. In 2018, Hurricane Michael hit Florida. It was so powerful it eroded entire beach towns.



Winds from Hurricane Michael destroyed trees and swept away beaches.