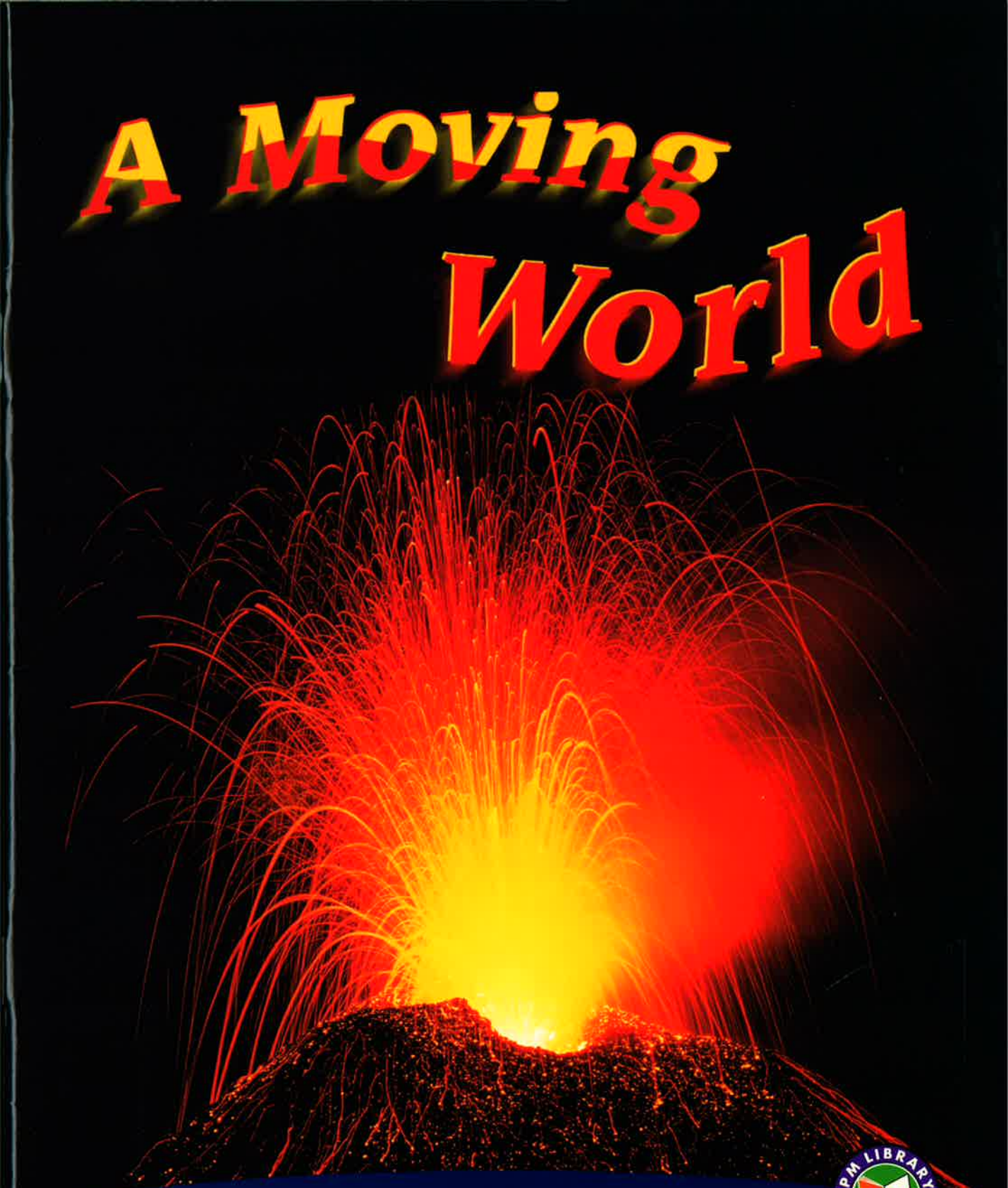
A Moving World



Nicolas Brasch

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A Moving World

Key vocabulary

axis, constant, convection, currents, debris, diameter, earthquakes, experiment, faults, ferocity, fragile, geologist, iron, molten lava, nickel, revolves, science fiction, theory

Grammatical conventions

- Verb tenses: carried, caused, covered, tossed, studied, swirled, travelled, tossed
- Adjectives of comparison: bigger, smaller, faster, furthest

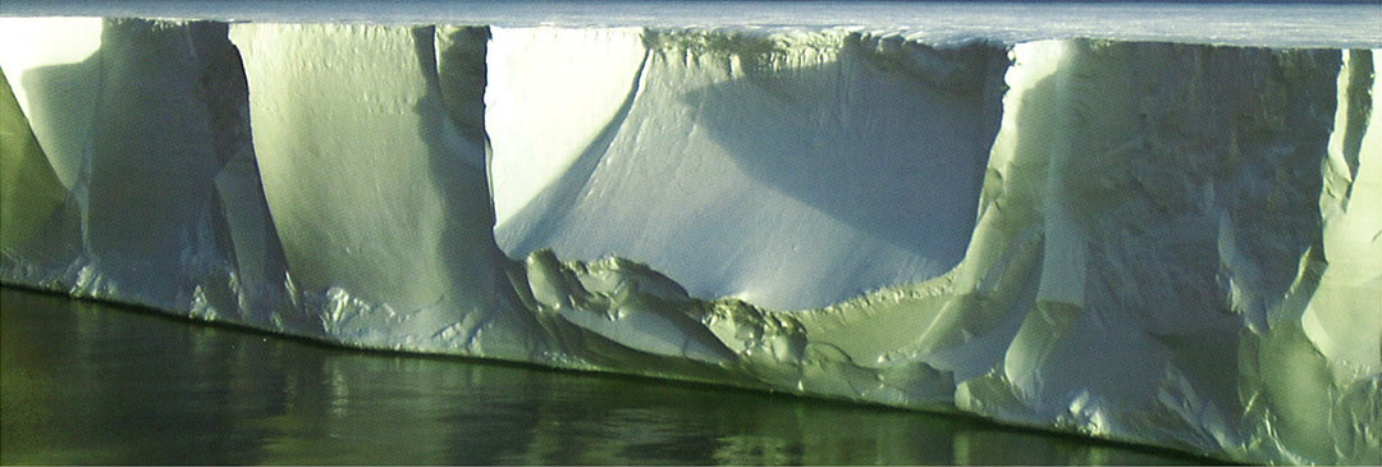
Spelling

- Suffixes: gravity, ferocity; convection, eruption, explanation
- Adding 'ing': spinning, whizzing

Creative thinking task – Knowledge

Make a mind map of all the information you can recall from the text.

Contents



Introduction

Bubbling, whizzing and spinning

If you stand still, totally still, and don't move a muscle, you're not really still. You're actually moving around and around, and from side to side, and up and down. That's because the Earth is constantly moving.

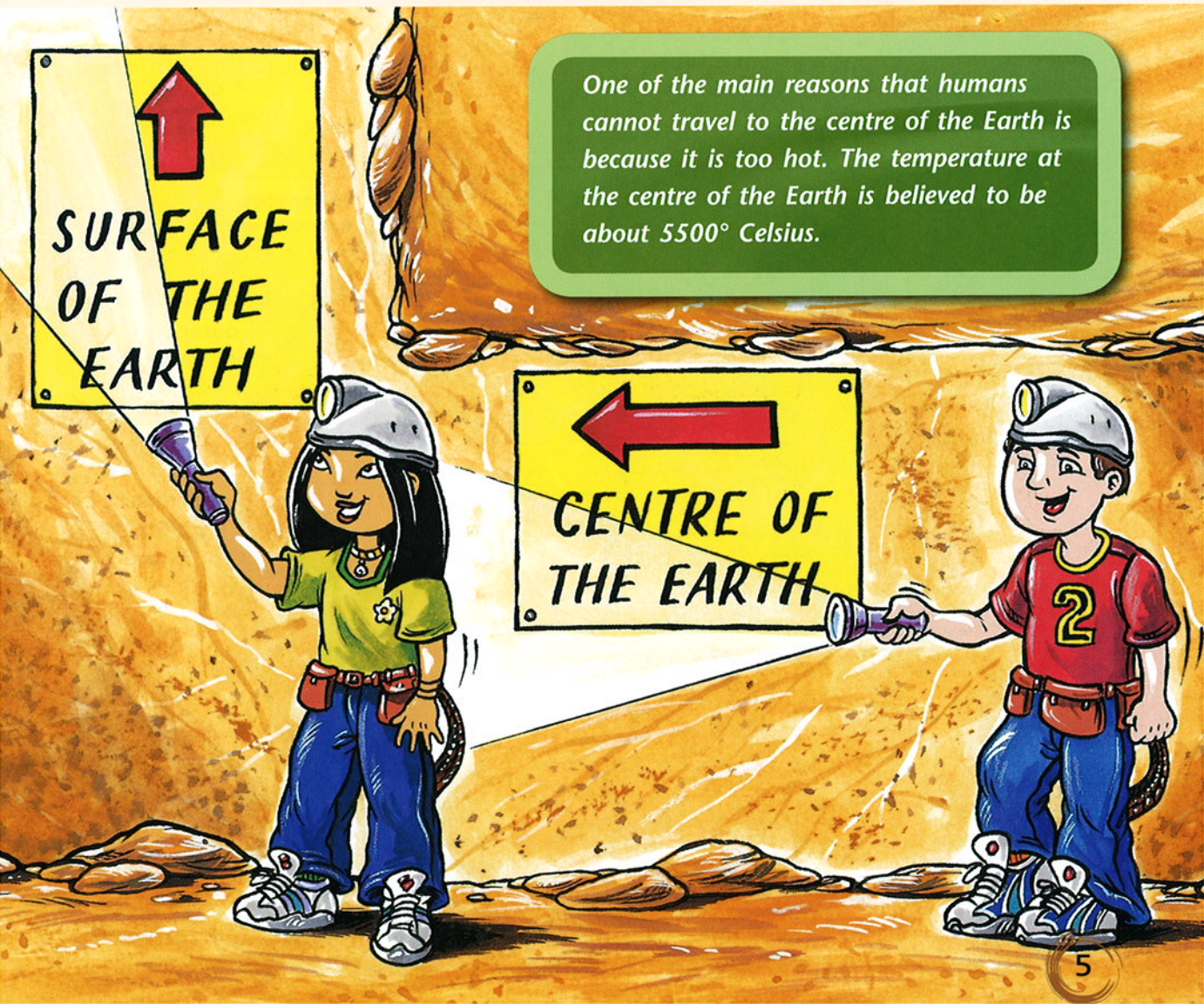
The Earth is bubbling, spinning and crashing together far beneath your feet. It is swirling and colliding all around you. It is even whizzing through space. When it comes to the Earth, there is no such thing as complete stillness.

It's enough to make you dizzy!

A journey

This book is going to take you on a journey. The journey begins far beneath us, at the centre of the Earth. Humans have never set foot here. We are then going to travel through the different parts of the Earth towards the surface, looking at the different types of movement that occur. Once on the surface, we will look at the world around us. From there, we will travel into space and see how the Earth moves through space.

So buckle up tight! It's going to be a rough journey!



CHAPTER 1

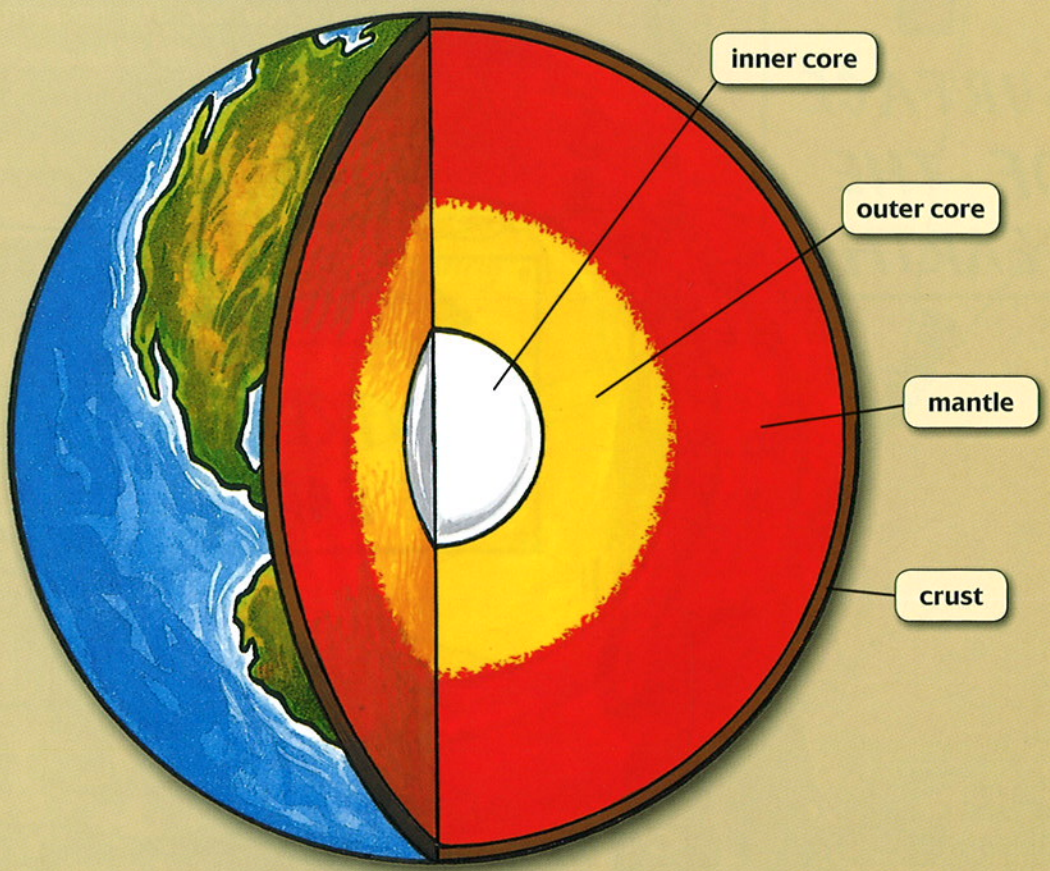
The Centre of the Earth

Constant movement

No one has ever travelled to the centre of the Earth. However, thanks to the work of scientists, we know what we would be likely to find there. We would be tossed and swirled about from the **constant** movement that takes place.

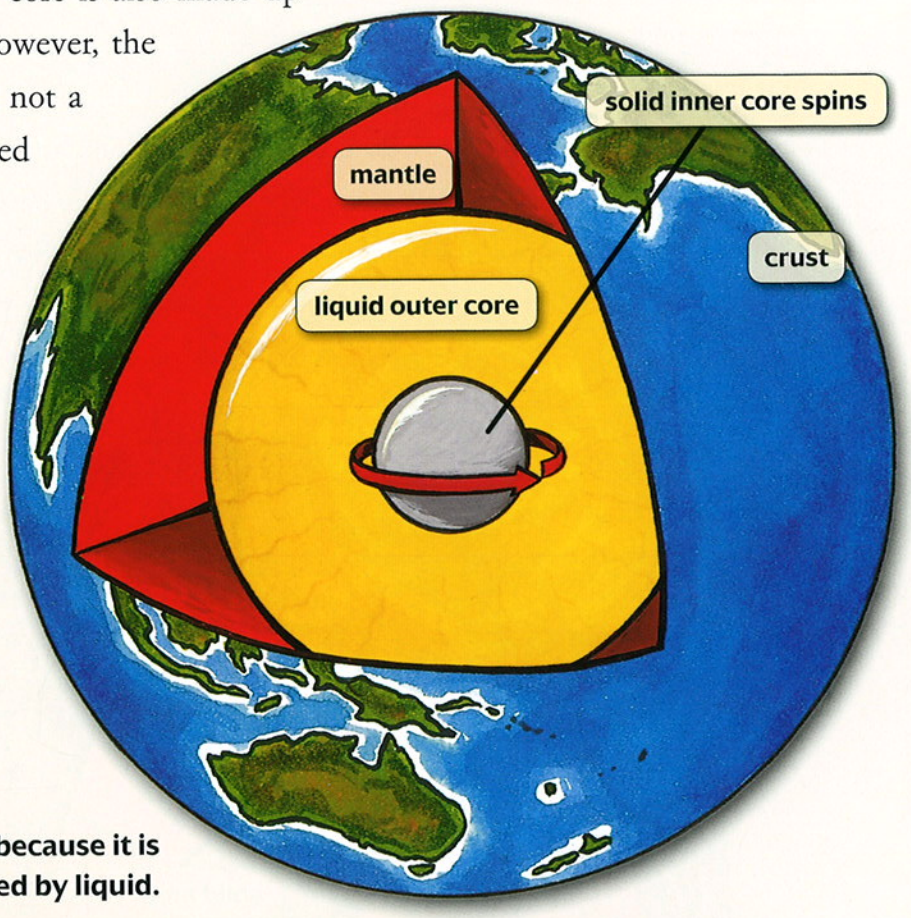
There are four main sections that make up the Earth beneath the surface. They are the:

- inner core
- outer core
- mantle
- crust.



The inner core

The very centre of the Earth is called the inner core. The inner core is a solid ball of **iron** and **nickel**. It is about 2300 kilometres in **diameter**, which is about three-quarters the size of the Moon. Surrounding the inner core is the outer core. The outer core is also made up of iron and nickel. However, the outer core is a liquid, not a solid. Being surrounded by liquid allows the inner core to spin around and around. The inner core spins in the same direction as Earth is spinning, but a little bit faster.



The inner core spins because it is surrounded by liquid.

Journey to the Centre of the Earth

In 1864, a French writer named Jules Verne wrote a ***science-fiction*** *book called* **Journey to the Centre of the Earth**. *The book describes a journey through a hole in the Earth and down to the Earth's centre.*

The outer core

The outer core is about 2300 kilometres thick. The movement of the iron in the outer core creates electricity. This causes **currents** to travel through the Earth. These currents form the Earth's magnetic field. The magnetic field is an area around the Earth that attracts materials towards it.

The mantle

The mantle surrounds the outer core. The mantle is about 2900 kilometres thick and is made up of iron, magnesium, aluminum, silicon and oxygen. The mantle is solid in most places, but is sticky or like plastic in places where it is very hot. There is constant heat running through the mantle from the inner and outer cores. This heat causes movement known as **convection** currents.