

# Cyrus

l'encyclopédie  
qui raconte ❶





## Why is the sky blue?

Lying on his back, Nathaniel looked up at the blue prairie sky. It was completely clear, not a single cloud to dull its brilliance.

“Strange,” he said aloud. “Why is the sky blue and not red, yellow, or green?”

He closed his eyes for a moment and tried to imagine what the landscapes he knew so well would look like if their skies turned to yellow, purple, or fuchsia instead of blue, like in a science fiction movie.

After daydreaming this way for a while, he got up, deciding to visit Cyrus to ask him this nagging question.

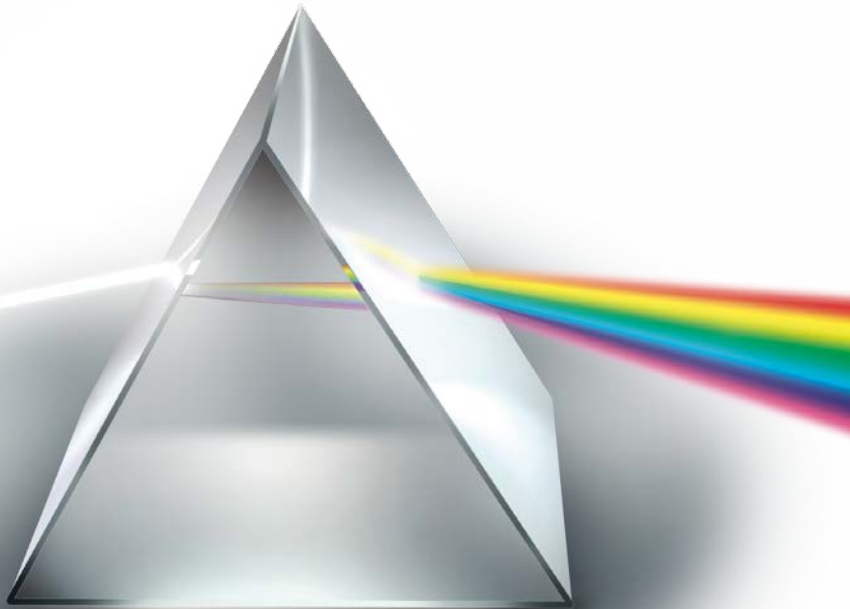
“Why is the sky blue?” repeated Cyrus, scratching his chin. “That’s a good question. It’s because of the Earth’s atmosphere.”

"I don't really get it," admitted the boy looking into Cyrus's eyes, which were as blue as the summer sky.

"Come sit for a minute," said Cyrus.

He motioned to the deck chair next to his own, under the apple tree.

"The blue of the sky is due to a physical phenomenon. The light from the Sun is a mix of all the colours of the rainbow. We can see them all when we look at a ray of light shine through a



prism. A single ray is divided into seven colours when it travels through the prism.”

“Yes,” said Nathaniel, “that’s true. My uncle gave me a prism as a gift. I like watching the light refract through it.”

“When the Sun’s rays go through the atmosphere, they come up against bits of matter suspended in the air.”

“You mean dust?” asked Nathaniel.

“Sort of, yes. They’re particles—air molecules. All the colours can easily reach the surface of the Earth, except blue.”

“What happens to the blue?” asked Nathaniel.



"The blue tends to bounce off the air molecules."

"Like a ball?" said Nathaniel, surprised.

"A bit like that, yes. Like a ball bouncing out of control in all directions."

"But why is the sky a different shade of blue every day?" asked Nathaniel.

"The blue of the sky changes depending on the amount of water vapour and dust in the air."

"Right," said Nathaniel after a moment, "but if our planet had no atmosphere, what colour would the sky be?"

"On the Moon, where there's no atmosphere, the sky is black," explained Cyrus.

"And on other planets?"

"The dust on Mars makes the sky look light orange and pink."

"I'd love to look up at the Martian sky!" said Nathaniel excitedly, "What about on Venus?"

"The clouds that cover the surface of Venus give the sky a yellow colour," answered Cyrus.

"I'd like to go to other planets just so I can see their skies," said Nathaniel dreamily.

"Maybe you'll be able to one day. But for now, would you like some lemonade?"

"Blue, pink, or yellow?" asked Nathaniel with a sly smile.

In 1609, the Italian astronomer Galileo Galilei was the first person to observe the stars through a lens, which would lead the way to the invention of the telescope by the English physicist Isaac Newton in 1671.





## **Why are cats afraid of water?**

The lake was dark and cold, but that didn't stop Iphigenia, who loved wading and swimming in the water. On the dock, Marbles, her little white cat, watched her scornfully with her deep yellow eyes.

"Come back, come back!" the cat seemed to beg. "It's crazy for anyone to spend so much time in the water of their own choosing."

Iphigenia wondered why cats are so afraid of water. After all, Scruffy loved to swim and play in the lake.

Little Iphigenia stepped out of the water and wrapped herself in a large towel. She then slipped into her sandals and skipped over to the bank where Cyrus was fishing for bass.

"Why are cats afraid of the water?" whispered Iphigenia into his ear.



Her father had taught her that discretion is always appreciated when fishing.

“Cats aren’t afraid of water,” answered Cyrus casually. “They are just afraid of anything new.”

“Like my dad! He always says he hates the unexpected.”

“Some people act very much like cats. They hate new experiences the same as felines.”

“Well I don’t,” said Iphigenia. “I like exploring all the little corners of the lake and the forest that I don’t know yet.”

“Yes, but you’re not a cat,” retorted Cyrus, casting his line into the water again. “You know, cats are very clean animals. They don’t need water to wash since they lick themselves clean. And they don’t need to fish to eat.”

“Do all cats hate the water then?” asked Iphigenia.

“No. Whoa, got a bite!”

Cyrus unhooked the fish and put it into a bucket of water next to him before continuing.

“Some cats like to go out when it rains or jump into the bathtub when it’s draining. Others like to wash their paws in the toilet bowl or play with the stream of water from the tap.”

“It’s true,” thought little Iphigenia. “Marbles loves to play with the stream of water from the faucet.”

“You see,” said Cyrus, “You don’t need to scare your little cat or try to make her like the water. Now you know that Marbles doesn’t need to get wet.”

“But I want her to come swim with me, like Scruffy swims with you!” sighed Iphigenia.

“If you want to swim with a cat,” he replied, “you’ll have to get a pet tiger.”

“Eeep! I’d be too scared!”

“Tigers love the water. It’s part of their natural habitat. They like to swim and catch fish.”

“The problem,” replied Iphigenia shivering, “is that fish isn’t the only thing they eat!”



"That's very true," admitted Cyrus, reeling in his line.

"Are you going home now?" asked Iphigenia.

"Yes, that's enough fishing for today. I've got work waiting for me. Take Scruffy with you," added Cyrus. "Bring him for a swim. He needs some exercise, he's getting out of shape."

"Really? I can?!" exclaimed Iphigenia.

"You'd be doing us both a favour," replied Cyrus.

Then he picked up the bucket and threw the bass back into the water, taking large steps towards the house.

Why do we say that cats have velvet paws? Because their claws (five for the front paws and four for the rear paws) are retractable. This means that they draw back into the skin when the cat is not using them. The cat can then walk on the pads of their feet, without making a sound.

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## **Were the continents really once all connected?**

Alexandria, Cyrus, and Scruffy finished their picnic. At the top of the mountain where they were sitting, they looked out onto the yellow fields and the blue bay.

“It’s so pretty!” sighed Alexandria. “Look at the bay, Cyrus, it looks like a rip in the landscape...”

“It does, you’re right,” said Cyrus, amazed by the image. “It is in fact a kind of rip.”



"The Earth is ripping apart!" yelled Alexandria.

"Did you know that 200 million years ago, all of the planet's continents were connected?"

"No! The continents move?"

"They're always moving. Their current speed is 10 centimetres per year. We live on a magic carpet!" said Cyrus, laughing. "Listen to this, it's fascinating..."

"I'm listening, go on."

"Underneath the continental crust and oceanic crust there are six plates. They're solid, but they move. They cover tens of millions of square kilometres and are a hundred kilometres thick."

"And there are six of them, and that's it?" asked Alexandria.

"Yes, six major plates: the Pacific Plate, American Plate, African Plate, Eurasian Plate, Indo-Australian Plate and Antarctic Plate."

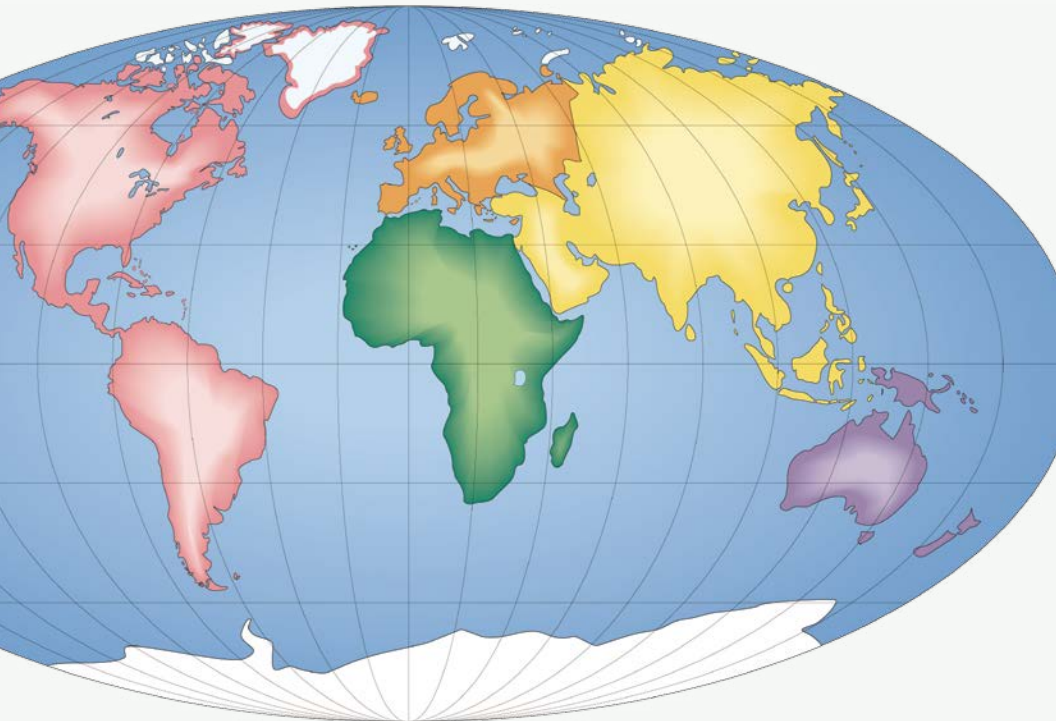
"And the plates move and make the continents move too?"



“Exactly. The continents have been drifting apart from one another for millions of years.”

“But how do we know they were connected once?” asked Alexandria, curious.

“There’s a very fascinating explanation, in fact. There were striking similarities found between certain animal and plant species from the same time periods on different continents. Geological similarities were also noted in Africa and South America.”





“Like as though a big piece had been cut into two?” asked Alexandria, bright-eyed.

“Precisely. It was at first believed that the plants and animals had managed to cross from one continent to the other, on drifting icebergs, for instance. It was also thought that plant seeds had managed to travel through the air. But when it was discovered that Africa and South America possess the same geology, that the ground of one is in some ways the continuation of the other, it was then realized that the two continents were in fact one at some point. Look at the map closely: you can see that the two continents fit together.”

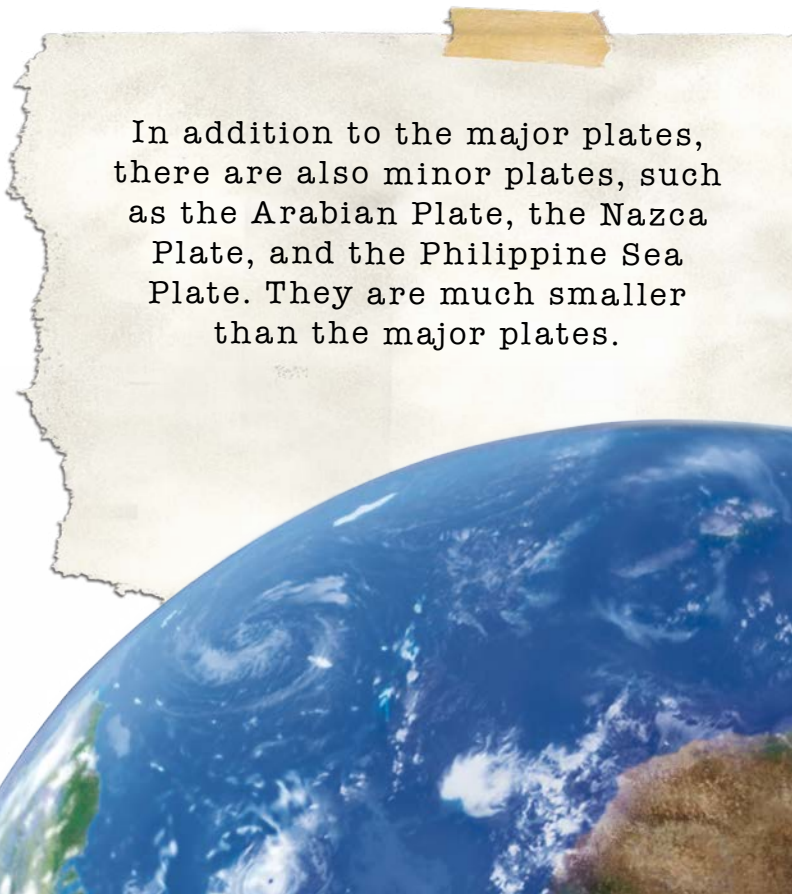
“Amazing!” exclaimed Alexandria.

“We call these movements continental drift. It’s estimated that in 50 million years Australia will have drifted up to the equator.”

“And by studying the movement of the plates we can predict the planet’s future?”

“Yes, by studying what we call plate tectonics. We started off with one big continent and then, over 200 million years, broke apart, leaving us with the Earth’s geography as we know it.”

Alexandria stared at Cyrus wide-eyed. Then she looked out onto the blue bay, thinking to herself that in 50 million years the bank opposite might be on the other side of the world... Or maybe the bay wouldn't exist at all.

A piece of torn, aged paper with a ragged left edge and a small piece of yellow tape at the top center. The paper is placed over a view of Earth from space, showing the blue ocean, white clouds, and brown landmasses. The text on the paper is in a typewriter-style font.

In addition to the major plates, there are also minor plates, such as the Arabian Plate, the Nazca Plate, and the Philippine Sea Plate. They are much smaller than the major plates.