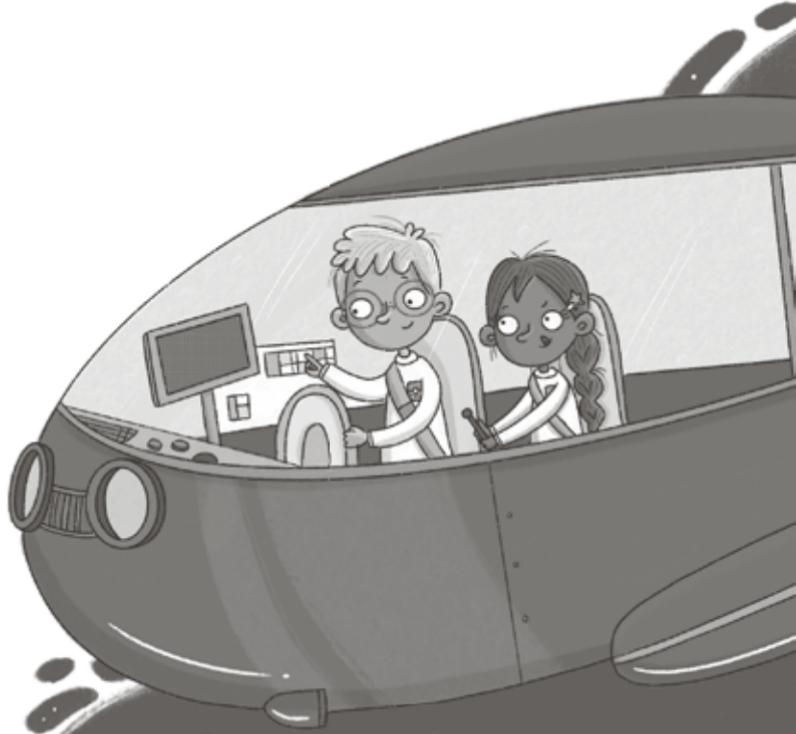


# THE SECRET EXPLORERS® AND THE COMET COLLISION



SJ King

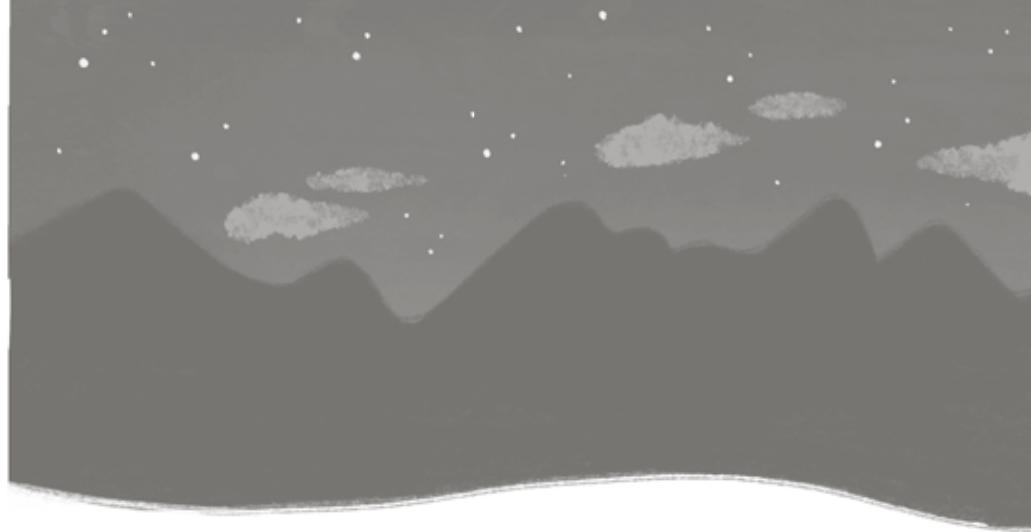
## *Chapter One*

# STARGAZING



Roshni fixed her telescope to its stand. Excitement buzzed through her. "I really hope I see it tonight," she said to herself.

She was on the shore of Pangong Lake in India. The water seemed almost as still and quiet as the surface of the Moon. Roshni's parents were talking in low voices over by the campfire. The vast Himalayan



Mountains loomed in the distance, their great dark shapes blotting out part of the sky. Overhead, thousands of stars shone like glittering dust.

It was chilly, but Roshni didn't mind. She wasn't scared of the dark, either. She loved it!

In fact, the less light there was, the better. You couldn't see the stars as well in a city, because of the streetlights. But out here, so far from the nearest town, the stars stood out in brilliant pinpoints. *This is the perfect place to stargaze*, thought Roshni.

She finished setting up her telescope and peered through the lens. It wasn't a toy – it was a real scientific instrument, and almost a metre long. Roshni was very proud of it. Down the side, she'd written her favourite saying: *The night hides a world, but reveals a universe.*

She carefully adjusted the telescope and a planet shone brightly against the dark.



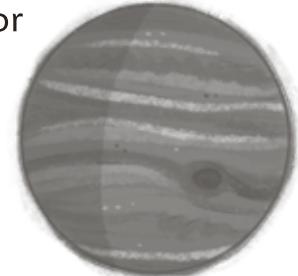
"I can see you, Jupiter!" she whispered, and grinned. "Hi there, big guy."

It was June, the time of year when Jupiter's orbit brought it closest to Earth. Roshni had seen Jupiter before, but never this clearly. She could even make out its coloured bands.

What Roshni really wanted to see was the enormous storm on Jupiter's surface. This was called the Great Red Spot. Roshni imagined that it would look like the eye of an angry giant! But she couldn't zoom in any further.

She sighed. Her beloved telescope just wasn't powerful enough.

"I know!" she said. "My new lens!" Her parents had bought it for her to improve her telescope. Could it make Jupiter's image big enough to see the Great Red Spot?





She jumped up from the telescope, ran over to her little tent – and stopped in her tracks.

A compass symbol had appeared on her tent flap. It was glowing.

Roshni knew that symbol well. Pinned to her jacket was a badge in the exact same shape – the sign of the Secret Explorers!

Grinning to herself, Roshni scrambled through the tent flaps and into brilliant white light. Wind whistled through her hair and ruffled her jacket. She felt as if she was

plunging as fast as a meteor through the sky.

A couple of seconds later, the light faded. Roshni looked around. She was surrounded by the familiar black stone

walls of the Exploration Station, which gleamed like mirrors. A row of computer screens flickered.

"Roshni, here!" she yelled.

The only other person around was Tamiko, who was arranging some fossils in a display cabinet. "Hi!" Tamiko called and waved to her.

Roshni waved back. "Dinosaur bones?"

"Of course!" Tamiko said with a grin. She was the Dinosaur Explorer.

Roshni couldn't wait to find out why the Secret Explorers had been summoned this time. She jumped onto the huge, squashy sofa to watch the others arrive.





Overhead, on the domed ceiling, was an image of the Milky Way. On the floor was a huge map of the world. As the Secret Explorers came running through the glowing doorway, tiny lights flashed up from one country after another, showing where they were arriving from.

"Connor – here!" Connor waved at Roshni and Tamiko. He was the Marine Explorer and knew all about the oceans.

Leah, the Biology Explorer, bounded in after him. She called her name and did her usual snappy salute. Leah knew all about plants and animals. Then came Ollie, dressed in the dark green shorts and T-shirt he wore to explore the rainforests.

"What's the mission?" Ollie asked.

"The Exploration Station hasn't told us yet," Roshni said.

"Kiki – here!" A girl zoomed through the doorway on a powered skateboard. Kiki was the Engineering Explorer, and Roshni knew she had built the skateboard herself.





Cheng, the Geology Explorer, came running in next. He was wearing a T-shirt that featured pictures of various colourful rocks. Gustavo, the History Explorer, followed him in, and the doorway winked shut.

All the Secret Explorers stood in a circle around the map on the floor. Any moment now, the Exploration Station would show them their mission.

Any moment now...

"Nothing's happening," Gustavo said.  
"The Exploration Station isn't broken, is it?"

"No way," Kiki said sternly.

"There's the answer, guys!" said Cheng with a laugh. He pointed up. "We're all looking in the wrong place."

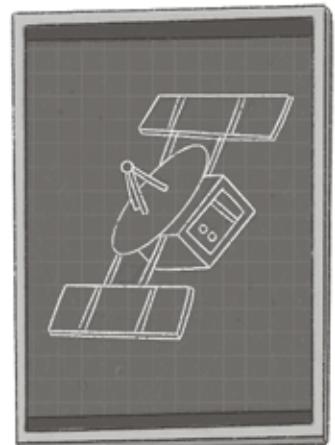
They all gazed up at the Milky Way glowing on the ceiling. Roshni felt a rush of excitement. It was going to be a space mission – and she was the Space Explorer!

An image appeared among the stars, in a little square window. It showed a shiny metal object with a large dish on the front. The object tracked slowly through the starry darkness.

"It's a probe!" Roshni said.

"A what?" asked Leah with a frown.

"A sort of spacecraft with nobody on board. It's remote-controlled from a base back on Earth," Roshni explained.  
"Scientists send probes off into space to find things out. There must be a problem with this one!"



Now that they all knew what the mission was, there was only one more question – who would be picked to go? *I really hope it's me*, thought Roshni. They all stood still, waiting eagerly. Everyone knew that only two lucky Explorers would be chosen.

Roshni's compass badge lit up.

"Yes!" she cheered. "I'm going into space!"

Everyone laughed. "That's no surprise," Tamiko said with a smile. "You are the Space Explorer, after all!"

But it was Ollie whose badge lit up next.

He stared at it. "Uh... Roshni, are there any rainforests in space?"

"Not as far as we know," Roshni said.

"Don't worry," said Connor grinning. "The Exploration Station never gets it wrong. We all know that, right?"

"Right!" they all agreed. Even if they

didn't understand the Exploration Station's choices, it never let them down.

"Okay, guys. Ready to go?" Kiki rubbed her hands together. "I love this part!"

She went to the control panel and pushed a huge red button.

With a shudder of machinery, a platform rose up from below the floor. Sitting in the middle was a battered old go-kart with two plastic seats. It was named the Beagle, after the ship sailed by the great scientist Charles Darwin. The Secret Explorers knew that their Beagle was much more impressive than it looked.





All the Explorers who weren't going on the mission went and sat by their computers. The screens lit up, showing images of the Solar System. Roshni knew that if she and Ollie needed any help during their mission, they could always call upon their friends.

**BEEP-BOOP**, said the Beagle. It seemed to be saying, "Hurry up!"

"Don't worry," Roshni said with a laugh. "We can't wait to get going, either."

She and Ollie climbed into their seats and buckled their safety harnesses. Roshni



took a deep breath and pressed the large, glowing button marked "START".

Instantly there was a dazzling flash of light. With a deep humming, rattling sound, the Beagle began to transform while they were still sitting in it. The hard plastic seats swelled into padded ones. Banks of controls rose up before their astonished eyes.

The Beagle shot forward into a swirling tunnel of light that had appeared in front of them. It picked up speed, going faster and faster. The light became too bright to look at... and just like that, it faded away again.

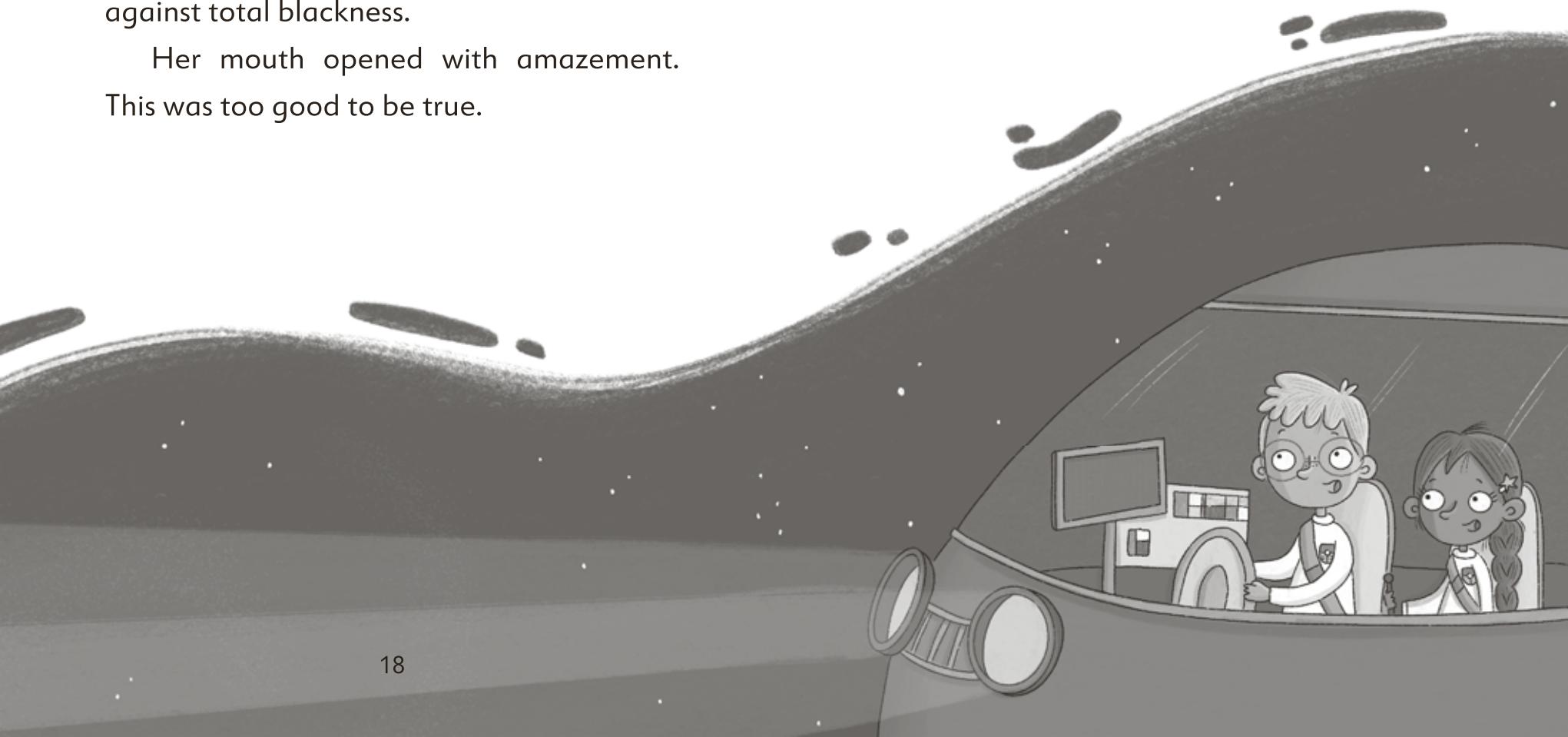
Roshni looked around. Window panels, complicated controls and a joystick had appeared in front of her. Everything was suddenly very quiet. A strange feeling came over her – a sort of floaty lightness.

Outside, stars glinted like diamonds against total blackness.

Her mouth opened with amazement. This was too good to be true.

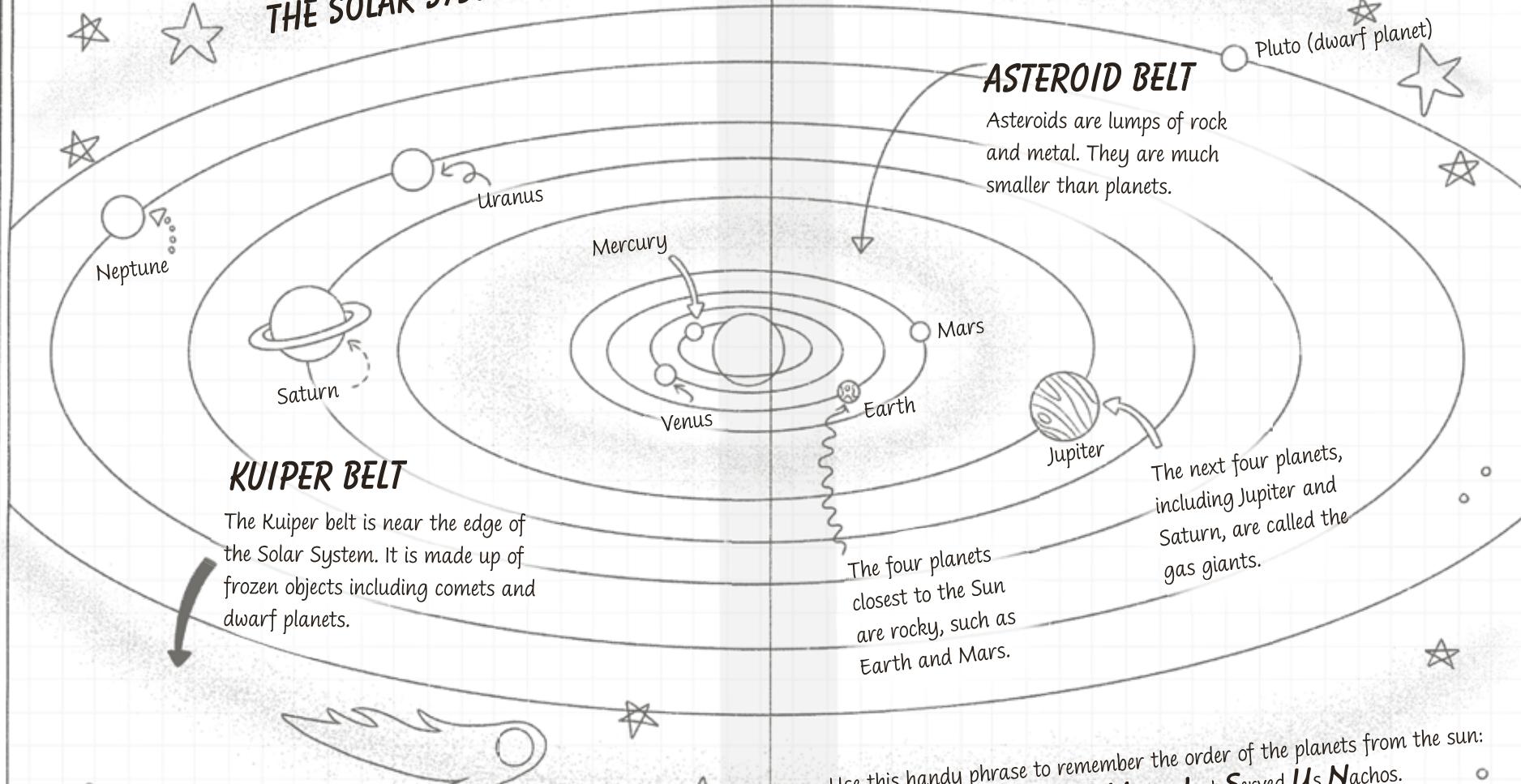
"Is it night-time already?" Ollie asked.  
"I can see stars outside."

"That's because we're in space," Roshni said triumphantly. "The Beagle has changed into a spaceship!"



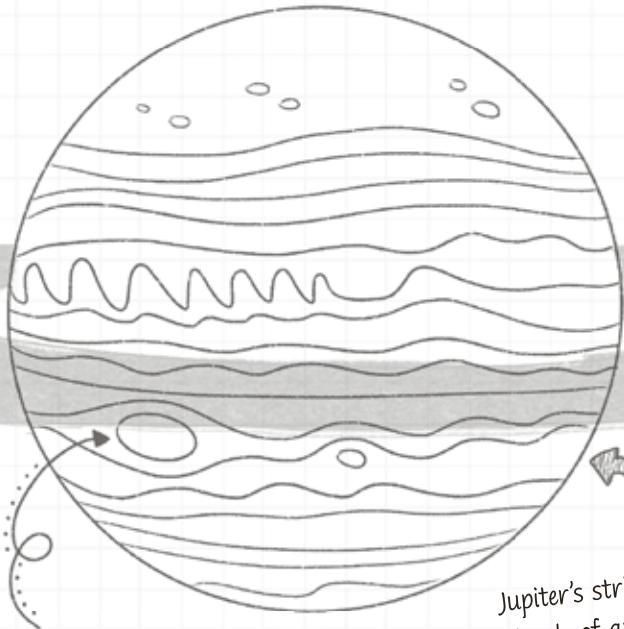
# ROSHNI'S MISSION NOTES

## THE SOLAR SYSTEM



# JUPITER

Jupiter is the largest planet in our Solar System. It is mostly made of the gas hydrogen and does not have a solid surface.



## GIANT RED SPOT

Jupiter's Great Red Spot is a gigantic spinning storm. It's twice the size of Earth and has raged for hundreds of years.

Jupiter's stripes are clouds of ammonia and water. The clouds are very cold and windy.



## FACT FILE

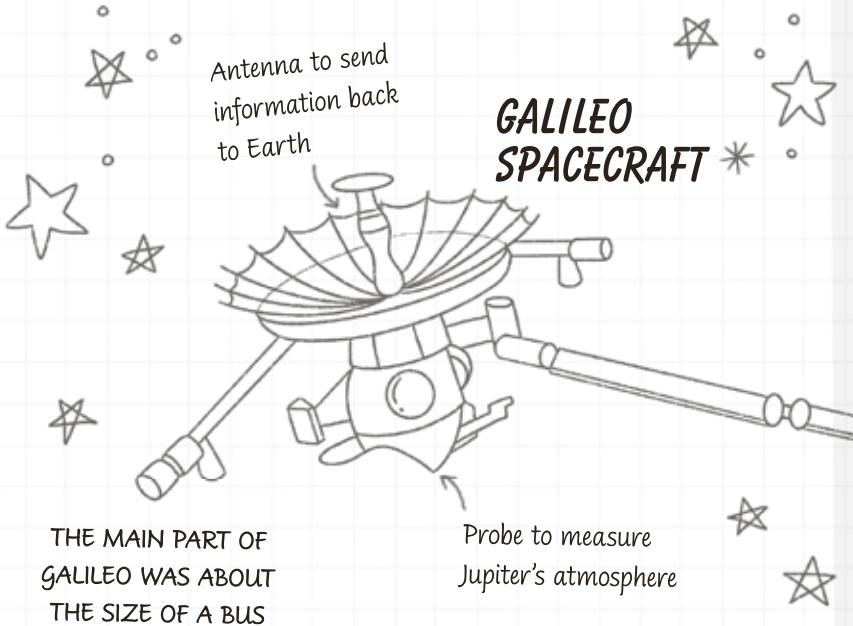
\* **Size:** Jupiter is the largest planet in the solar system. You could fit 1,321 Earths inside Jupiter! If Earth were the size of a grape, Jupiter would be the size of a basketball.

\* **Distance from Sun:** Jupiter orbits about 778 million km (484 million miles) from the Sun. Earth is 150 million km (94 million miles) away from the Sun.

\* **Moons:** Scientists now think Jupiter has 79 moons, but they're finding more all the time. The four biggest moons are Ganymede, Io, Callisto, and Europa.

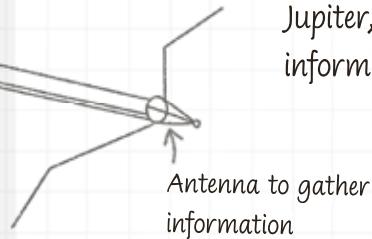


\* **Length of a day:** A day on Jupiter only lasts 10 hours – this is how long it takes to rotate on its axis.



## THE GALILEO MISSION

Four spacecraft had previously flown by Jupiter, but Galileo was the first to orbit the planet. Galileo studied Jupiter and its moons and sent information back to Earth. When a comet collided with Jupiter, Galileo recorded valuable information about the event.



### MISSION TIMELINE

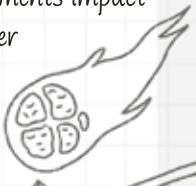
**18 October 1989**  
Galileo launches from Kennedy Space Center, USA

**10 February 1990**  
Slingshots past Venus using the planet's gravity to boost its speed



**8 December 1990**  
Flies by Earth, using its gravity to build speed

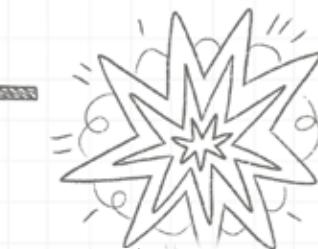
**22 July 1994**  
Observes comet fragments impact Jupiter



**28 August 1993**  
Visits an asteroid called Ida, discovering that it has its own tiny moon

**7 September 1996**  
Discovers that Europa, one of Jupiter's biggest moons, has an ocean of water

**7 December 1995**  
Enters orbit around Jupiter. A probe descends into the atmosphere and sends back data for an hour before it is destroyed.



**21 September 2003**  
Plunges into the blazing hot atmosphere of Jupiter and is destroyed

**15 October 2001**  
Makes closest flyby of Io, passing just 180km (112 miles) above the surface