

Telescopes

How have telescopes changed our understanding of the universe?



Image credit: ESA



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Learning Objectives

Understand how telescopes collect light to observe distant objects

Recognise how telescope discoveries have changed scientific theories



Image credit: Science Museum



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Discussion

What do you think people thought about space 500 years ago?

What did they use to look up at the sky before telescopes existed?



Image credit: Science Museum



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Clue one

“I’m not a planet, but I go around one. Galileo saw four of me near Jupiter”



Image credit: Science Museum



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Clue one

Answer: A Moon



Image credit: NASA



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Clue two

“I am a dark spot on the surface of the Sun.

I was first seen by an English astronomer Thomas Harriot in 1610, through one of the first telescopes”



Image credit: Science Museum



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Clue two

Answer: A Sunspot

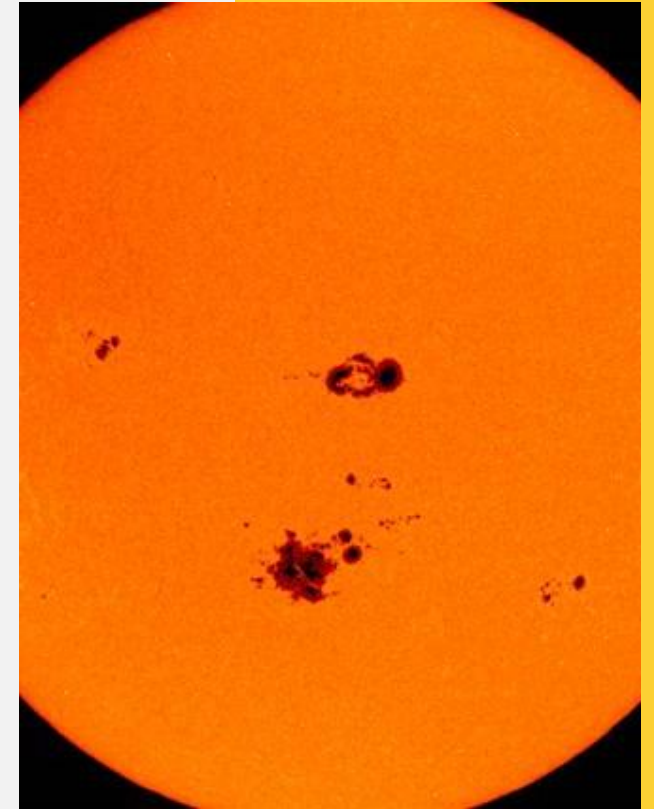


Image credit: NASA



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Clue three

“I have been called the Evening Star, but I am not a star.

I show phases like the moon, but I am not a moon.”



Image credit: Science Museum



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Clue three

Answer: the planet Venus

One of the first planets identified by ancient astronomers more than 2,000 years ago.

But the phases of the planet were not recorded until the invention of the telescope.

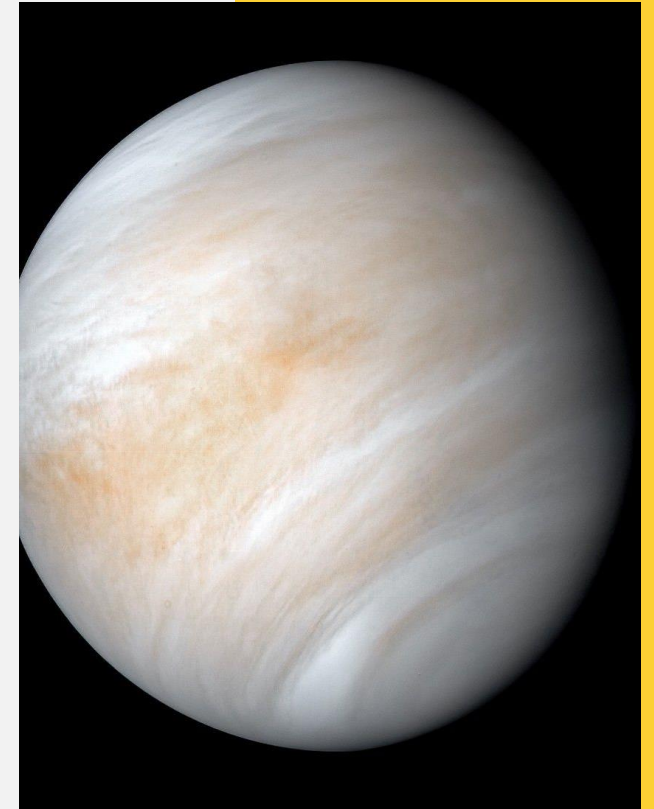


Image credit: NASA



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Clue four

“I’m not just a star – I’m a huge collection of stars, gas, and dust.

The Hubble Telescope helped take pictures of me.”



Image credit: Science Museum



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Clue four

Answer: a galaxy

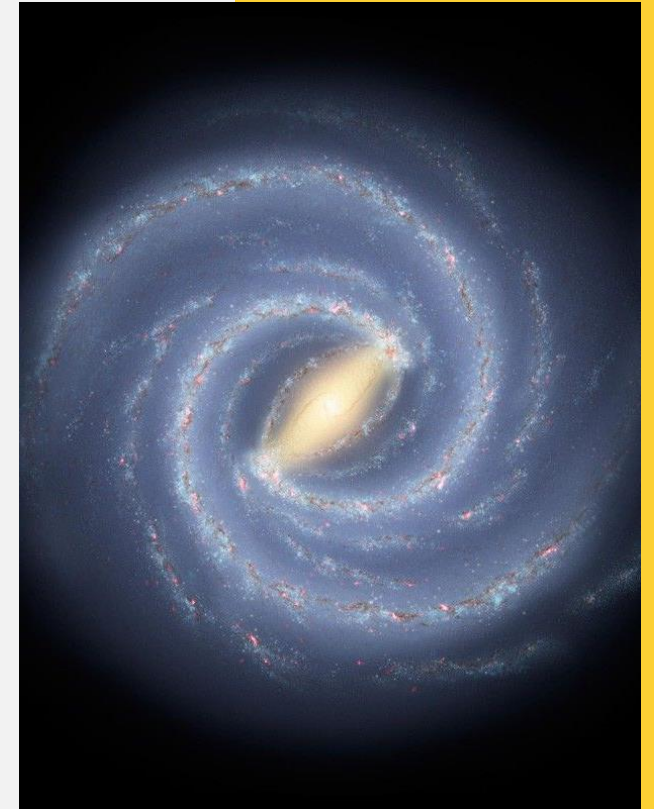


Image credit: NASA



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Clue five

“I’m bright and have a long tail.

Telescopes can track me as I fly through the Solar System.”



Image credit: Science Museum



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Clue five

Answer: a comet



Image credit: NASA



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Wrap up

What do you think we might discover next with telescopes?

Why do you think telescopes are important for science?



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