Teacher Resource

Roman Space Telescope

EPISODE 26
8 September 2026

KEY LEARNING
Students will learn more about the Roman Space Telescope mission.

CURRICULUM
Science – Year 6
Describe the movement of Earth and other planets relative to the sun and model how Earth's tilt, rotation on its axis and revolution around the sun relate to cyclic observable phenomena, including variable day and night length.

Examine why advances in science are often the result of collaboration or build on the work of others.

Focus Questions

As a class, discuss the stories featured in the BTN Book Week 2026 Special. Students will then respond to the following focus questions:

1. Summarise the BTN story in 3-4 sentences. Share your summary with another student.
2. Who was Nancy Grace Roman?
    a. The person who designed the Roman Space Telescope
    b. NASA's first chief astronomer
    c. The first person to discover an exoplanet
3. How does the Roman Space Telescope's field of view compare with Hubble's?
4. What sorts of things will the Roman Space Telescope see? Give 2-3 examples.
5. What is an exoplanet?

Activity: Class Discussion

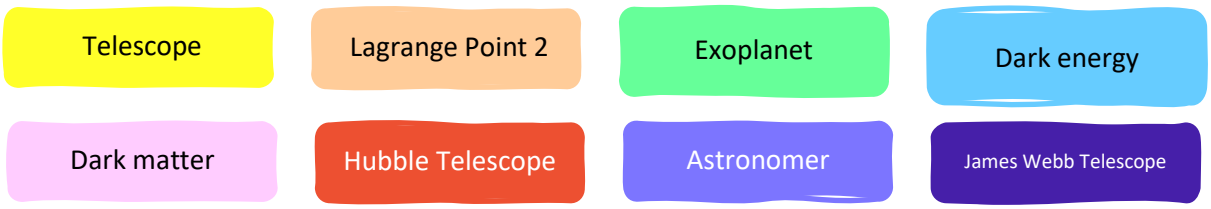
Discuss the BTN Roman Space Telescope story in small groups or as a class. Use the following questions to help guide the discussion:

- What are scientists hoping to discover with the Roman Space Telescope?
- How did the Hubble Telescope change our understanding of the universe?
- How is the Roman Space Telescope different from Hubble?
- What is an exoplanet? Why do scientists want to find them?
- What questions do you have about the BTN story

Where's Roman?
Follow the Roman Space Telescope's three-month trip in real time with NASA's online tracker.

Activity: Key Words

Students will brainstorm a list of key words that relate to the BTN Roman Space Telescope story. Here are some words to get them started.



Ask students to write what they think is the meaning of each word (including unfamiliar words). They will swap definitions with a partner and ask them to add to or change the definition. Check these against the dictionary definition.

Activity: Roman Space Telescope Research

Discuss the information raised in the BTN Roman Space Telescope story. Students will choose one or more of the questions below to research and respond to.

Research Questions

- What is the Roman Space Telescope designed to investigate?
- Why do scientists need different types of telescopes? Compare Hubble, James Webb and Roman.
- Where will the Roman Telescope operate in space? How far from Earth will it be? Why was this location chosen?
- What are exoplanets and what can we learn from them?
- What would make an exoplanet potentially suitable for life?
- What are dark matter and dark energy? What do scientists currently know about them?
- What kinds of evidence could Roman collect?
- What is one question about space that the Roman Telescope might help answer?
- How could the Roman Space Telescope change our understanding of the universe?

Tube Telescopes

Students make their own tube telescopes to compare the fields of view of the Hubble Space Telescope and the Roman Space Telescope.
Download the instructions

Build your own model

Students build their own 3D paper model of the Nancy Grace Roman Space Telescope.
Download the instructions

Who was Nancy Grace Roman?

Find out more about the first chief astronomer at NASA, Nancy Roman. Create a biography of her life and achievements.

Useful Websites

- Nancy Grace Roman Telescope – NASA
- 'A giant leap forward': Nasa telescope will try to uncover the secrets of the universe – Newsround
- Meet Nasa's new super-powerful space telescope - Newsround
- Hubble Telescope – BTN
- James Webb Telescope – BTN