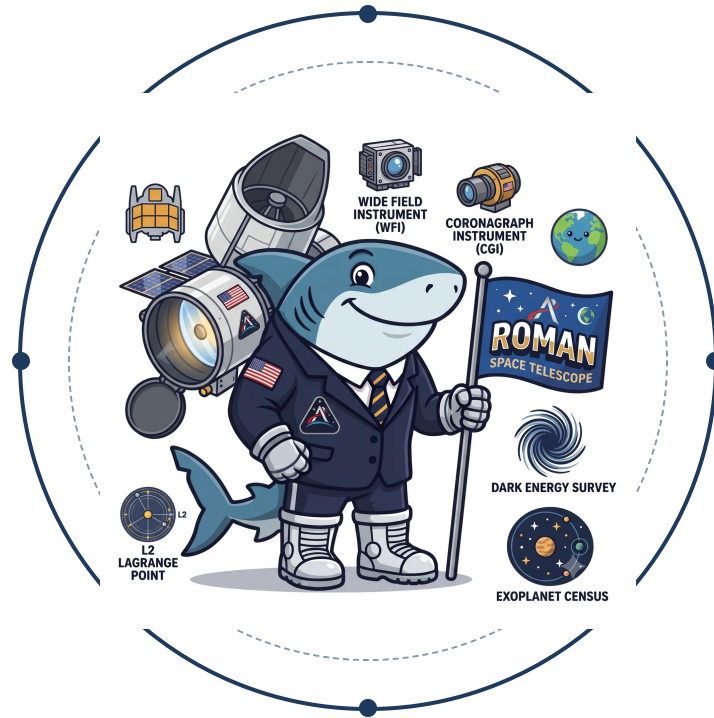


CLASSROOM WORKBOOK



Nancy Grace Roman Space Telescope

Discover the universe's secrets with NASA's next-generation space telescope, offering an unparalleled wide view of the cosmos.

July 21, 2026

Activities

NEW WHAT'S INSIDE?



The Mighty Eye of Nancy Grace Roman



Roman Telescope Reading Check



Cosmic Word Quest



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Math Problems



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Journey to the Roman Telescope



Space Exploration Match-Up



Word Search



Cosmic Crossword Challenge



Secret Space Message



STUDENT INFORMATION

NAME

DATE

CLASS



Get ready for a cosmic adventure! NASA is preparing to launch a brand-new space observatory called the Nancy Grace Roman Space Telescope. This incredible machine is named after Nancy Grace Roman, a pioneering astronomer who was NASA's first Chief of Astronomy and is fondly known as the 'Mother of Hubble.' She helped plan the famous Hubble Space Telescope, and now her legacy continues with this new observatory!

The Roman Space Telescope is scheduled to blast off in 2026, soaring into space aboard a powerful SpaceX Falcon Heavy rocket from the Kennedy Space Center in Florida. Once in orbit, it will begin its mission to unravel some of the universe's greatest mysteries.

What makes Roman so special? Its main camera, called the Wide Field Instrument (WFI), is absolutely amazing! It boasts a whopping 288 megapixels, making it one of the most powerful imagers ever sent to space. To put that into perspective, the WFI can photograph **100 times more sky** in a single shot compared to the Hubble Space Telescope! This wide view will help scientists create enormous maps of the universe, showing us how it grew and changed over billions of years.

Scientists will use the Roman telescope to search for distant exoplanets – planets orbiting other stars – and to study mysterious dark matter and dark energy, which make up most of our universe but are invisible to us. With its powerful 'eye,' the Nancy Grace Roman Space Telescope promises to open new windows to the cosmos and teach us astonishing things about where we come from and where we're going!



Did You Know? The Roman Space Telescope's main mirror is 7.9 feet (2.4 meters) wide, which is the exact same size as the Hubble Space Telescope's main mirror!



Roman Telescope Reading Check 🤔

Nancy Grace Roman Space Telescope

Answer each question using complete sentences.

1. Who is the Nancy Grace Roman Space Telescope named after?

2. What is the name of the powerful rocket that will launch the telescope?

3. What is the special name for the Roman Telescope's main camera, and how many megapixels does it have?

4. How much more sky can the Roman Telescope photograph in a single shot compared to the Hubble Space Telescope?

5. What are two mysteries of the universe that scientists hope to study with the Roman Telescope?



Did You Know? Roman will create images so large that if you printed just one full image at the same resolution as a standard TV, it would be as tall as a four-story building!



Write the definition for each word in your own words.

Observatory

definition

Megapixel

definition

Cosmos

definition

Astronomy

definition

Payload

definition

Orbit

definition



Sharky's Joke! Why did the Roman Space Telescope bring a ladder to space? Because it wanted to get a high-resolution view!

Solve each problem. Show your work in the space provided.

1. The Roman Space Telescope's Wide Field Instrument (WFI) has 288 megapixels. If an older camera only had 15 megapixels, how many more megapixels does the Roman camera have?

Answer: _____

2. The Roman telescope can view 100 times more of the sky than the Hubble Space Telescope in one shot. If Hubble can capture 5 square degrees of sky in a certain time, how much sky can Roman capture in the same time?

Answer: _____

3. The Nancy Grace Roman Space Telescope is scheduled to launch in 2026. Nancy Grace Roman started working at NASA in 1959. How many years after she started at NASA is the telescope named after her scheduled to launch?

Answer: _____

4. Nancy Grace Roman worked at NASA for 21 years as the first Chief of Astronomy. If she started in 1959, in what year did she finish her work as Chief of Astronomy?

Answer: _____



Did You Know? Nancy Grace Roman was known as the 'Mother of Hubble' because she helped make early plans for the Hubble Space Telescope decades before it launched.



Comparing Famous Space Telescopes



Nancy Grace Roman Space Telescope

Telescope Name	Launch Year	Primary Focus	Amount of Sky Seen (relative)
Hubble Space Telescope	1990	Visible Universe, Deep Views	Normal
James Webb Space Telescope	2021	Infrared Universe, Early Galaxies	Deep but Narrow
Nancy Grace Roman Space Telescope	2026	Dark Energy, Exoplanets, Wide Views	100x Hubble

Use the table to answer these questions.

1. Which telescope was launched first, according to the table?

2. Which two telescopes listed in the table have 'Deep Views' as part of their primary focus?

3. How many years separate the launch of the Hubble Space Telescope and the Nancy Grace Roman Space Telescope?



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Writing Prompt

Nancy Grace Roman Space Telescope

Imagine you are a space scientist about to use the Nancy Grace Roman Space Telescope for the first time. Write about what you hope to discover with its powerful Wide Field Instrument and how it will help us understand the universe better. What new questions might it answer?



Sharky's Joke! What's the Roman Space Telescope's favorite kind of cookie? An orbit-O!



These events are out of order. Number them 1, 2, 3... in the box to show the correct chronological order.

?

The Hubble Space Telescope, which Nancy Grace Roman helped plan, is launched into orbit.

?

The Nancy Grace Roman Space Telescope is scheduled to launch from Kennedy Space Center.

?

NASA officially names the new observatory the Nancy Grace Roman Space Telescope.

?

Nancy Grace Roman starts working at NASA as the first Chief of Astronomy.

?

NASA begins developing a new space telescope, originally called WFIRST, to study dark energy.



Did You Know? Roman will create images so large that if you printed just one full image at the same resolution as a standard TV, it would be as tall as a four-story building!

Match each item on the left with the correct item on the right. Write the matching letter in the blank.

1. _____ Nancy Grace Roman
2. _____ Roman Telescope
3. _____ Falcon Heavy
4. _____ Wide Field Instrument
5. _____ Hubble Space Telescope
6. _____ Kennedy Space Center
7. _____ 288 Megapixels
8. _____ Dark Energy
9. _____ Astronomy

- A. Launch rocket
- B. First Chief of Astronomy
- C. High-resolution camera
- D. Florida launch site
- E. Takes narrower, deeper pictures
- F. Universe expansion mystery
- G. Main camera on Roman
- H. Studies dark energy and exoplanets
- I. Study of space



Did You Know? Nancy Grace Roman was known as the 'Mother of Hubble' because she helped make early plans for the Hubble Space Telescope decades before it launched.





Word Search

Nancy Grace Roman Space Telescope

Find and circle all the hidden words in the grid.

H	G	S	C	I	E	N	C	E	Z	U	I	V	Y
P	D	A	R	K	E	N	E	R	G	Y	M	X	M
F	A	L	C	O	N	H	E	A	V	Y	S	T	P
F	W	N	L	Z	P	R	E	B	E	Z	D	U	S
V	Y	R	A	V	C	L	U	X	T	R	B	R	P
T	B	D	Z	N	B	E	O	P	E	C	O	R	A
H	E	X	E	B	C	P	T	T	F	C	X	O	C
H	H	L	U	N	L	Y	T	A	K	W	F	M	E
Y	T	H	E	A	N	A	G	E	S	V	Y	A	X
C	W	I	N	S	M	E	T	R	W	A	D	N	F
P	I	E	B	K	C	V	K	G	A	Y	N	I	S
N	T	L	R	R	G	O	K	T	X	C	E	Z	D
S	N	A	E	R	O	E	P	L	U	J	E	A	Y
Z	D	T	O	Y	S	I	P	E	I	E	N	Z	X

FIND THESE WORDS

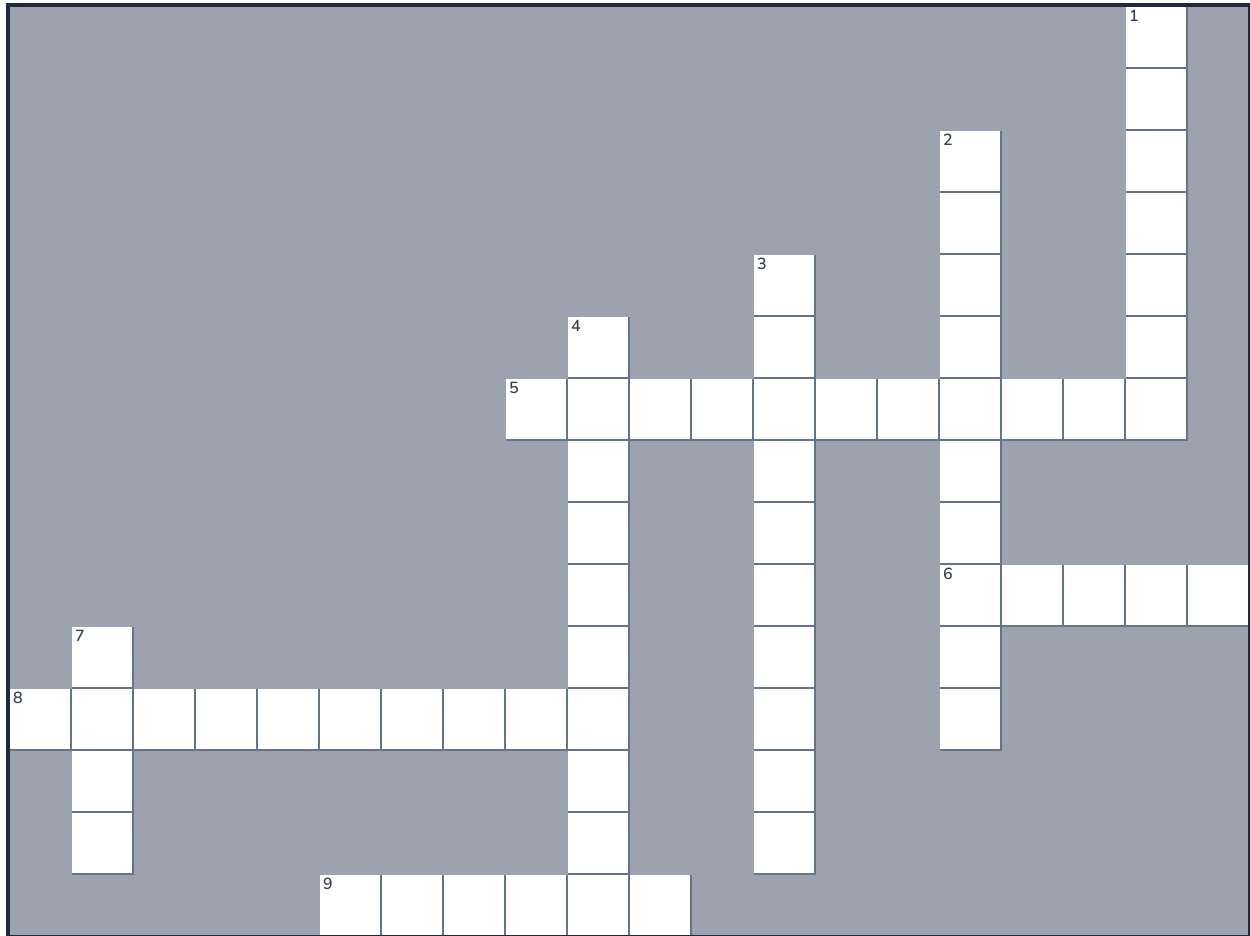
ROMAN NANCYGRACE NASA SPACEX FALCONHEAVY KENNEDY HUBBLE DARKENERGY
DARKMATTER EXOPLANETS TELESCOPE ORBIT SCIENCE ROCKET



Sharky's Joke! Why did the Wide Field Instrument get a promotion? Because it was always looking at the big picture!



Fill in the crossword using the clues below.



ACROSS

- 5. Rocket launching the telescope
- 6. Last name of NASA's first Chief of Astronomy
- 8. Invisible substance that Roman will study
- 9. Launch company for the rocket

DOWN

- 1. Launch center in Florida
- 2. Mysterious force making the universe expand
- 3. Roman will search for these planets beyond our solar system
- 4. The name of the pioneering astronomer the telescope honors



Did You Know? The Roman Space Telescope's main mirror is 7.9 feet (2.4 meters) wide, which is the exact same size as the Hubble Space Telescope's main mirror!



Secret Space Message



Nancy Grace Roman Space Telescope

Use the key below to decode each secret message. Write the letters on the blank lines.

KEY:

1=A 2=B 3=C 4=D 5=E 6=F 7=G 8=H 9=I 10=J 11=K 12=L 13=M

14=N 15=O 16=P 17=Q 18=R 19=S 20=T 21=U 22=V 23=W 24=X 25=Y 26=Z

MESSAGE 1

14-1-19-1

Decoded: _____

MESSAGE 2

18-15-13-1-14

Decoded: _____

MESSAGE 3

8-21-2-2-12-5

Decoded: _____

MESSAGE 4

15-18-2-9-20

Decoded: _____

MESSAGE 5

3-15-19-13-15-19

Decoded: _____

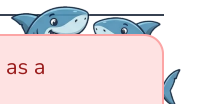
MESSAGE 6

18-15-3-11-5-20

Decoded: _____



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Check Your Answers Online!

Scan the QR code or visit the link below to check your answers and find more fun activities on Shark Learning.



sharklearning.com/workbook/2026-07-21-nancy-grace-roman-space-telescope

or scan the QR code above

 Keep practising — great things take time! ★