

1

Answer the following questions in your own words.

1. In which ways did ancient people rely on the stars, the moon and the planets in everyday life? **they planted crops and held ceremonies according to the location of the stars**
2. What do astronomers do? they study space, the stars and faraway planets; **the structure of the universe**
3. Why couldn't people in earlier times see what we can see today? **they did not have the instruments we have today**
4. What did ancient astronomers think about the position of the Earth, the sun and other objects in the sky? **the Earth was the centre of the universe and everything revolved around it**
5. Who was the first to show that the sun was the centre of the solar system? **Nicolas Copernicus**
6. What did Galileo invent? **the telescope**
7. What did Isaac Newton prove? **planets travel around the sun in elliptical paths; he explained how gravity works**
8. What did astronomers discover between Mars and Jupiter? **an asteroid belt**
9. What did powerful telescopes help astronomers do? **to see things far beyond our solar system**
10. Why can telescopes in space see farther into the universe? **there is no atmosphere and dust that distracts the view**
11. Where are the world's largest telescope located? **in deserts and dry areas**
12. What do unmanned spacecraft send back to astronomers? **data and images as well as rock samples**
13. What is a light year? the distance light travels in a year – **about 6 trillion miles (9.4 trillion km)**
14. What is the name of the star nearest to our solar system? How far away is it? **Proxima Centauri – 4 light years**

2

Match the words on the left with the definitions on the right.

A	explain	G	the sun and the planets that move around it
B	gravity	D	to put things in a special order
C	galaxy	O	picture
D	arrange	A	to make something clear and understandable
E	naked eye	L	to make something feel real
F	revolve	K	to find out how far away or how big something is
G	solar system	P	to say that something will happen in the future
H	telescope	F	to move around an object
I	comet	M	piece of rock from the moon or a planet
J	diameter	Q	when colors, shapes or forms appear regularly
K	measure	E	to see without any machine that helps you
L	simulate	H	tube-shaped object that lets you see faraway things
M	sample	J	straight line from one side of a circle to another
N	surface	B	power that causes objects to fall to the ground
O	image	N	the top part of an object
P	predict	I	object in space with a small tail; it moves around the sun
Q	pattern	C	one of the large groups of stars that make up our universe



4

Fill in the missing words from the choices below.

Astronomers are **(1) scientists** who study the sky and the stars and try to find out more about the universe and our **(2) solar** system. Astronomy goes back to ancient civilizations, like Egypt or Greece. In those days people depended on the stars to **(3) navigate** and plant crops. They saw that stars were **(4) arranged** in patterns that looked like animals or other creatures.

While in ancient times people thought that the Earth was the **(5) centre** of the universe, this way of thinking changed in the Middle Ages. Nicolas Copernicus **(6) proved** that the Earth and other planets orbited the sun. Galileo Galilei was the first astronomer to use a telescope, an **(7) invention** which changed the way astronomers could observe the skies.

Today **(8) modern** telescopes can see objects far away from our solar system. In order to get even clearer images, the Hubble Space Telescope has been **(9) orbiting** the earth for 35 years and has sent millions of clear pictures and other data back to scientists.

Modern astronomers also rely on computer **(10) simulations** to examine what events may happen in the future, or, for example, how close a **(11) comet** may come to our planet.

Astronomers **(12) measure** distances in light years, which is how far light travels in a year. They have found out that the nearest star, Proxima Centauri, is about four light years away from Earth.

1	discoverers	scientists	explorers	navigators
2	planet	orbital	star	solar
3	navigate	guide	pilot	steer
4	put	displayed	connected	arranged
5	centre	edge	inside	point
6	examined	proved	supported	developed
7	imagination	inspiration	invention	origin
8	latest	fresh	current	modern
9	looping	ranging	tracking	orbiting
10	impressions	simulations	imitations	reproductions
11	comet	planet	star	rock
12	compute	determine	measure	degree

5

Complete the text with the words from the list. There are TWO words you will not need.

The James Webb Space Telescope

The James Webb Space Telescope (JWST) is the most powerful space **(1) telescope** ever built. It was **(2) launched** on Christmas Day, 2021 as a project between NASA, the European Space Agency, and the Canadian Space Agency.

Unlike older telescopes, the Webb uses **(3) infrared** light to see through thick **(4) clouds** of space **(5) dust**. This allows it to act like a "time machine," which can **(6) capture** images of the very first stars and galaxies that formed over 13.5 **(7) billion** years ago. It also studies the **(8) atmospheres** of far-away planets to search for water and **(9) signs** of life.

The telescope is famous for its massive golden **(10) mirror**, which is over 21 feet wide and made of 18 smaller parts. Because it is so large—about the size of a tennis court—it had to be **(11) folded** up like origami to fit inside its rocket. It now orbits the Sun about one million miles away from Earth. Its sensitive **(12) instruments** are kept cold with a giant sunshield.

Because the JWST can show us distant areas in space it can help scientists answer questions about the **(13) beginnings** of the universe.

atmospheres

beginnings

billion

capture

clouds

dust

folded

infrared

instruments

launched

mirror

rocks

scientist

signs

telescope



The James Webb Space Telescope

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