ASTRONOMY – EXERCISES

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?_____
   _____
2. What do astronomers do?_____
   _____
3. Why couldn't people in earlier times see what we can see today? _____
   _____
4. What did ancient astronomers think about the position of the Earth, the sun and other objects in the sky?_____
   _____
5. Who was the first to show that the sun was the centre of the solar system?_____
   _____
6. What did Galileo invent?_____
7. What did Isaac Newton prove? _____
   _____
8. What did astronomers discover between Mars and Jupiter?_____
9. What did powerful telescopes help astronomers do?_____
   _____
10. Why can telescopes in space see farther into the universe? _____
    _____
11. Where are the world's largest telescope located?_____
    _____
12. What do unmanned spacecraft send back to astronomers? _____
    _____
13. What is a light year? _____
14. What is the name of the star nearest to our solar system? How far away is it? _____
    _____

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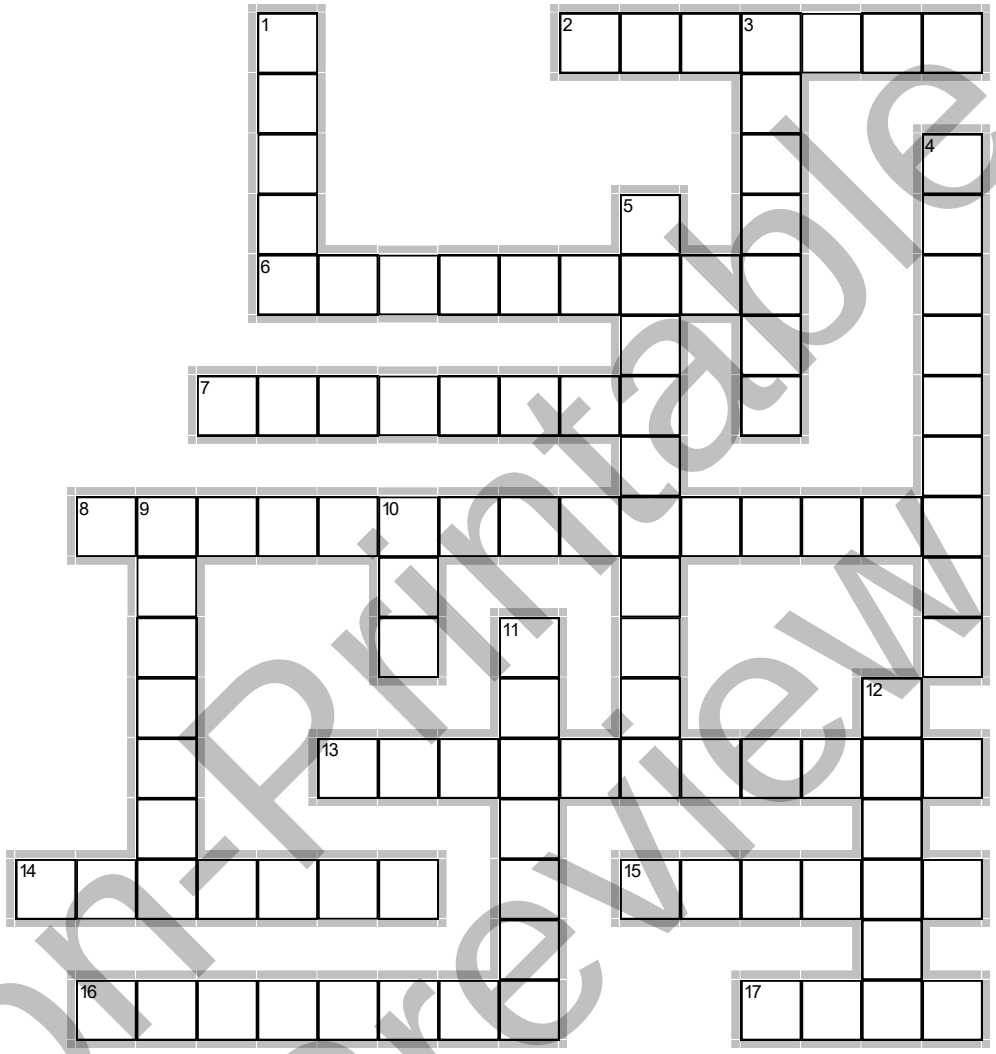
2 **Match the words on the left with the definitions on the right.**

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

3 Crossword



Across

2. to put or move into a special order
6. instrument that helps you observe the skies and planets
7. to find out which way you need to go
8. nearest star (2 words)
13. sun and the planets that move around it (2 words)
14. to be able to say what will happen in the future
15. orbiting telescope that has been sending images to Earth for over 35 years
16. galaxy our solar system is located in (2 words)
17. one of our nearest planets

Down

1. object in space that looks like a bright ball and has a tail
3. a long time ago; very old
4. person who is trained in science and works in a lab
5. Polish astronomer of the Middle Ages (last name)
9. move around an object
10. to draw a plan of a planet's surface
11. power that pulls objects towards a planet
12. German mathematician who proved that planets move around the sun (last name)

4 Fill in the missing words from the choices below.

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

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

Today **(8)** _____ telescopes can see objects far away from our solar system. In order to get even clearer images, the Hubble Space Telescope has been **(9)** _____ 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)** _____ to examine what events may happen in the future, or, for example, how close a **(11)** _____ may come to our planet.

Astronomers **(12)** _____ 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

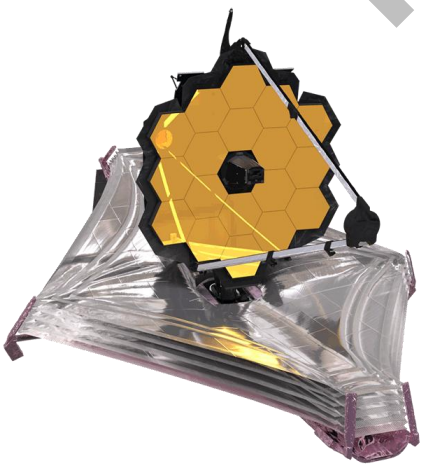
The James Webb Space Telescope (JWST) is the most powerful space **(1)** _____ ever built. It was **(2)** _____ on Christmas Day, 2021 as a project between NASA, the European Space Agency, and the Canadian Space Agency.

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

The telescope is famous for its massive golden **(10)** _____, 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)** _____ up like origami to fit inside its rocket. It now orbits the Sun about one million miles away from Earth. Its sensitive **(12)** _____ 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)** _____ 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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