

AWESOME KIDS

Escola Básica e Secundária de Muralhas do Minho, Valença

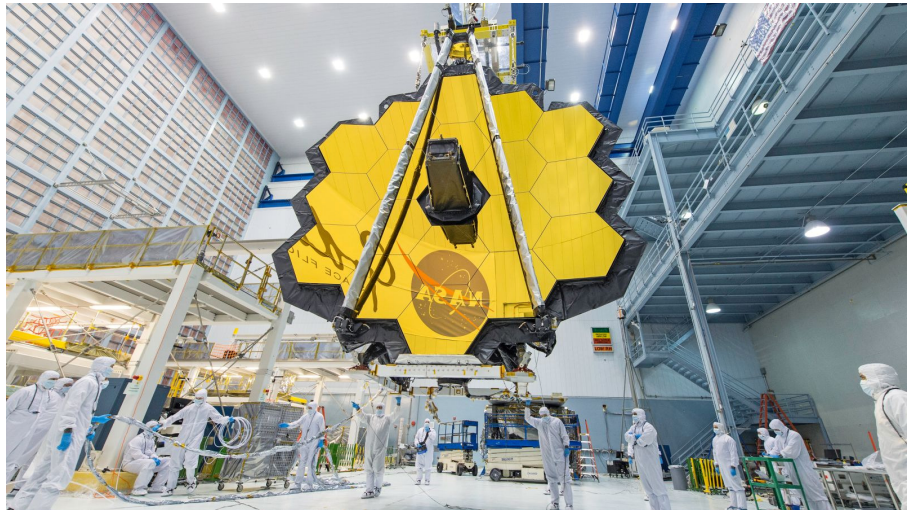
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Science | Engineering

AN EYE IN THE SKY

Scientists are building a powerful telescope. It will help them see deep into space.

More than 400 years ago, Galileo Galilei built a telescope. He was an Italian scientist. He used the telescope to study space. Since then, scientists have used telescopes to make big discoveries. The Hubble Space Telescope was sent to space in 1990. It has sent back more than a million pictures.



Soon, a new telescope will take over for Hubble. It is the James Webb Space Telescope. It is also called JWST, and Webb.

In 2018, a rocket will take JWST into space. The new telescope will explore farther into space than Hubble. It will travel a million miles from Earth. This will give scientists a better view of the universe. "Hubble rewrote astronomy textbooks," Maggie Masetti told TFK. She works on the Webb project. "Webb is going to do the same thing."

On the Hunt

Like Hubble, Webb will look for galaxies far away. The telescope will also hunt for planets that are like Earth. It will do this by looking for light. Webb's mirror will collect light from objects in space. Its special camera and tools will be able to find light that the human eye

cannot see.

In the future, there will be more telescopes like Webb. "By the time kids grow up," says Masetti, "the things they learn about the universe will be totally different from the things we think we know now."

Hubble's View

It has been nearly 26 years since the launch of the Hubble Space Telescope. It has sent back more than a million pictures. Scientists have seen stars being born. They have studied faraway planets. Hubble's powerful eye has helped us understand space. The telescope still has 10 years of life left. What more will it find?

Think!

What skills and knowledge are needed to build this telescope?

A Powerful New Tool

The James Webb Space Telescope will launch in 2018. Read about the telescope. Then answer the questions.

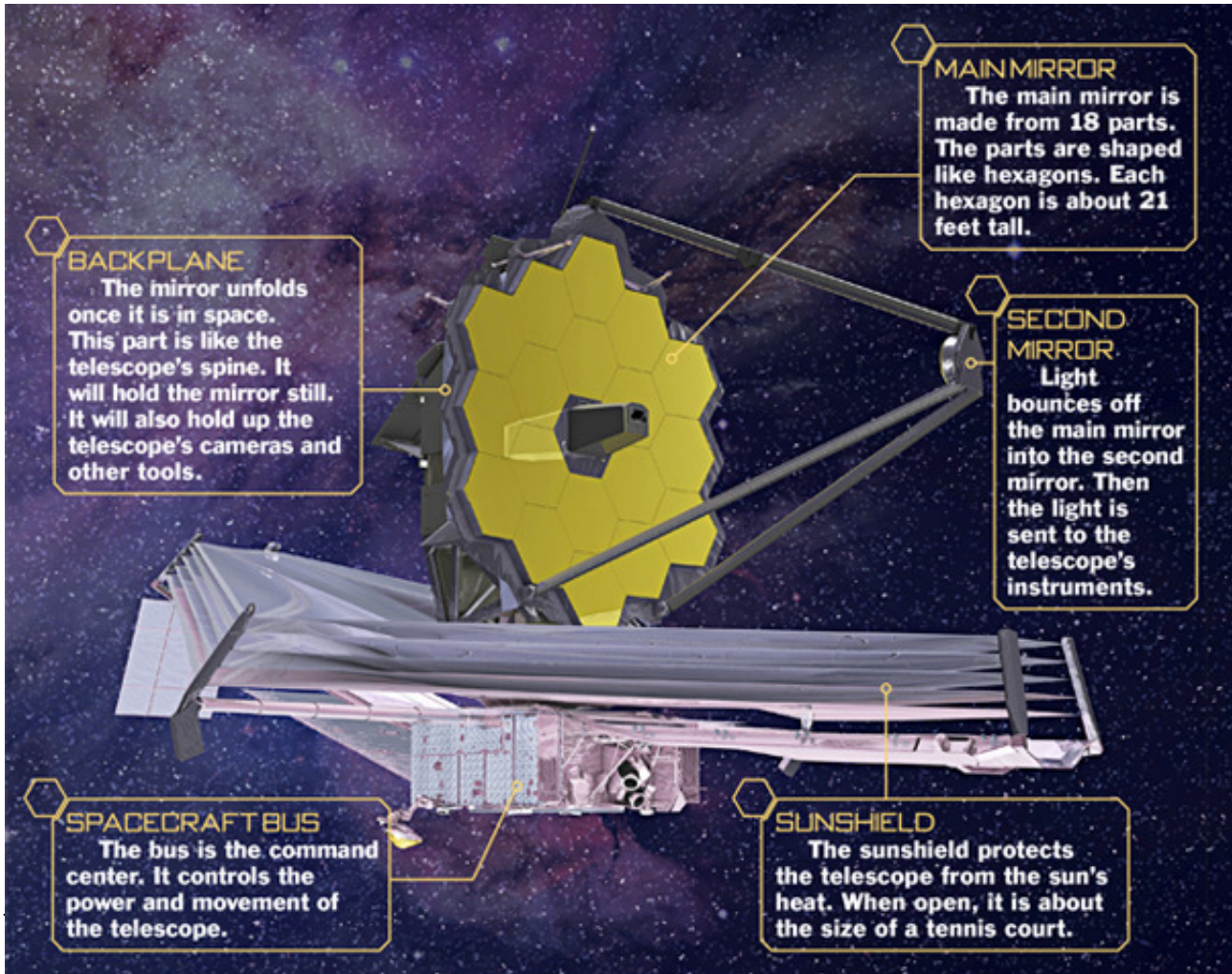
1. What are the parts of the main mirror shaped like?

2. How many parts is the main mirror made of?

3. What does the backplane do?

4. How big is the sunshield?

Source: <https://www.timeforkids.com/g2/eye-in-the-sky/>



WORDS TO KNOW

Telescope

A cylinder-shaped device for making objects that are far away look closer and larger, using combination of lenses, or lenses and curved mirrors

Rocket

A large cylinder-shaped object that moves very fast by forcing out burning gases, used for space travel or as a weapon

Farther

To a greater distance

Mile

A unit of distance equal to 1.6 kilometres

Textbooks

Books that contain detailed information about a subject for people who are studying that subject

Galaxies

Independent groups of stars in the universe

Earth

The planet third in order of distance from the sun, between Venus and Mars; the world on which we live

Collect

To bring something together from different places or over a period of time

Launch

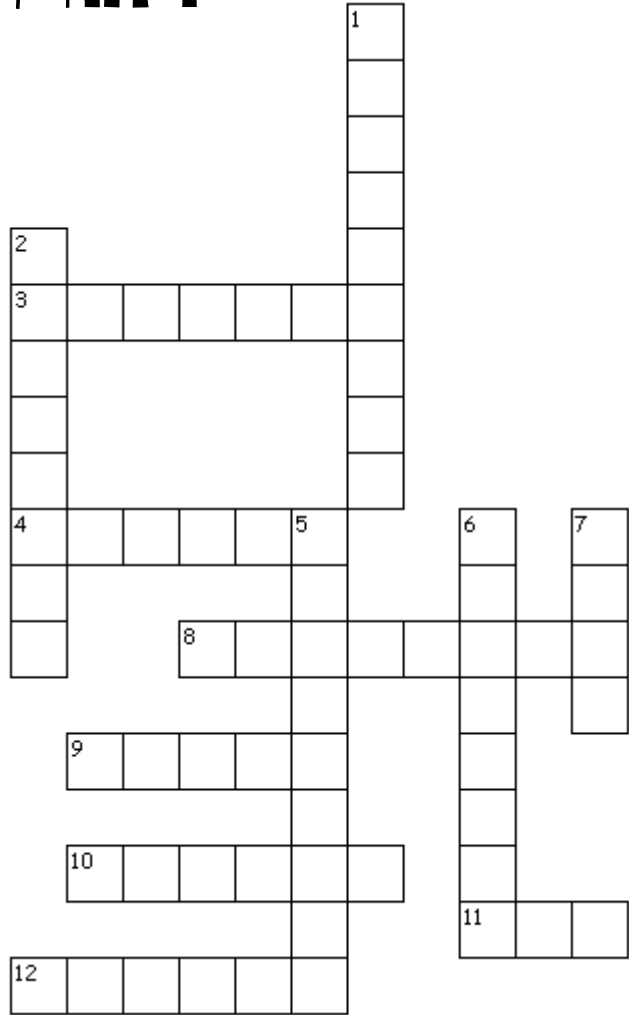
An occasion when a spacecraft is sent into space for the first time

AWESOME KIDS

ACTIVITY KIT 1

Read the article and complete the Criss-Cross.

- Galileo Galilei built one. 5↓
- Galileo's nationality. 3→
- Telescope that was sent to space in 1990. 12→
- The new telescope. 7↓
- This device will take the new telescope into space. 4→
- The scientists will have a better view of this. 6↓
- The scientific study of the universe and of objects that exist naturally in space. 1↓
- They are far, far away. 8→
- It will collect light from objects in space. 10→
- Hubble Space Telescope has sent back to Earth more than a million. 2↓
- Scientists have seen them being born. 9→
- Hubble's has a powerful one. 11→



Find these words in the Word Search.

Earth	Knowledge	Skills
Farther	Launch	Sunshield
Galaxy	Mile	Telescope
Hubble	Rocket	Textbook

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

Answer the questions here.

1. _____
2. _____
3. _____
4. _____