

A New Look at the Universe

Did you know NASA has a new space telescope? The James Webb Space Telescope is the most powerful telescope ever built. It's also the largest. As tall as a three-story building, it had to be folded up to fit inside a rocket.

The telescope has a sunshield that's as big as a tennis court. It protects the mirrors and instruments from being damaged by the heat. The sunshield reduces the temperature by over 600 degrees.

One of the coolest parts of the telescope is the giant mirror. The space telescope uses its mirror to collect light from distant stars. Bigger mirrors allow the telescope to see more details. The James Webb's mirror is actually made of 18 smaller mirrors that form a flower shape. The mirrors are coated in gold so that they can reflect infrared light, which is invisible to the human eye. They fold up during the rocket launch and unfurl when the telescope goes into orbit.

The mission of the James Webb Space Telescope is to discover what our universe was like after the Big Bang. The telescope will take pictures of the first galaxies that formed billions of years ago. Because of the way light travels in space, the pictures it takes are like looking back in time.



The telescope will also be able to see through dust by using its infrared cameras. This same technology is used by firefighters to see through smoke in a fire. The telescope will be looking inside dust clouds to search for new stars and planets. It might even help scientists discover other planets that can support life.

The James Webb Space Telescope launched into space from South America on December 25, 2021. In July 2022, it sent back its first pictures. The photographs from the telescope showed us the universe in ways that we'd never seen it before. It will be exciting to see what it discovers next!



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NAME: _____ DATE: _____

1. Why are the mirrors coated in gold?
 - a. To look pretty
 - b. To reflect infrared light
 - c. To see more details
 - d. To fold and unfold
2. Why is it helpful for the telescope to see through dust?
 - a. To search for new stars and planets
 - b. To communicate with aliens
 - c. To reflect light
 - d. To take pictures
3. How did the telescope launch into space?
 - a. It was strapped to the outside of a space shuttle
 - b. It rode on a sunshield
 - c. It folded up inside a rocket
 - d. It unfurled in South America
4. Why is the telescope so big?
 - a. To enable it to see through dust
 - b. To allow it to see more details
 - c. To help it fold and unfold
 - d. To make it look more impressive

Instructions for teachers:

These questions can be used to assess understanding of the reading passage.

The item in bold is the correct answer for each question.

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