

SPACE ACE



ASK A SPACE SCIENTIST

Curious kids asked questions, and we sent them to space scientists. Send your questions to brilliant@usbnc.org (with your name and age).

I think it would be cool to find out the next big thing that NASA will be exploring. —Suri, age 14

Hi, Suri,
We are building the rockets for returning to the Moon; this program is called Artemis. We are also going to build a lunar base. —Don Pettit, NASA Astronaut



The Artemis II crew with the spacecraft they will use to orbit the Moon (left to right): Jeremy Hansen, Victor Glover, Reid Wiseman, and Christina Koch

Could you show me all the blueprints of how you make a rocket ship? —Kamren, age 13

Hi, Kamren,
A basic rocket ship is pretty simple. It's mostly tanks for propellant (fuel and oxidizer) that are burned in the rocket engines. Because it takes so much energy to escape Earth's gravity, and the more mass you take to orbit the more energy you need, rocket ships have several **stages**. Each stage is another rocket with its own tanks and engines. When one stage uses up its propellant, the next one starts and continues the journey. The old stages are left behind so extra mass isn't carried into orbit. If there's a crew, they're in a small habitat usually found on the front of the rocket ship. The habitat provides everything they need to live and work in space—including food, water, and air. —Steve Scotti, *Brilliant Star's* STEAMS Education Advisor & NASA Distinguished Research Associate

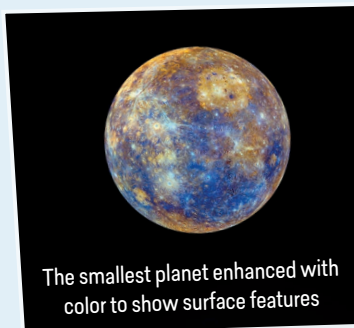


The Space Launch System (SLS) is the most powerful rocket NASA has ever built.

COSMIC QUIZ

Our solar system's smallest planet is also closest to the Sun. But since it has no atmosphere to trap heat, it still gets extremely cold at night! Its name is:

- A) Cupid
- B) Pluto
- C) Vulcan
- D) Mercury



The smallest planet enhanced with color to show surface features

ON THE WEB



Scan the QR code with a smartphone for our interview

with Christina Koch and details about the Artemis II spacecraft.

