

## Core Skills Analysis

### Science

The student watched the live stream of the Artemis II launch and observed how the rocket lifted off, the stages separating, and the spacecraft entering orbit. They discussed the purpose of each rocket component and why astronauts need a safe launch vehicle. By researching the mission, they learned that Artemis II will be the first crewed flight to travel beyond low Earth orbit since Apollo. This experience introduced them to basic concepts of space travel, gravity, and the engineering challenges of launching humans into space.

### Language Arts

The student took notes while watching the launch and later wrote down questions about the astronauts, the rocket, and the mission goals. They practiced reading informational articles to find answers, then summarized what they learned in their own words. By discussing their findings with a parent or teacher, they used oral communication skills to explain complex ideas clearly. This activity strengthened their ability to locate, comprehend, and convey nonfiction information.

### Social Studies

The student explored the historical context of Artemis II, comparing it to earlier programs such as Apollo and the International Space Station partnership. They identified how the mission reflects current international cooperation and national goals for lunar exploration. Through this research, they understood the role of space exploration in national identity, scientific advancement, and global collaboration. The activity linked past events to present ambitions, highlighting cause and effect in history.

### Mathematics

While researching the Artemis II launch, the student examined data on rocket height, speed, and distance traveled. They performed simple calculations to convert kilometers to miles and estimated how long the spacecraft would orbit before returning to Earth. By creating a bar graph of the three rocket stages' heights, they practiced organizing numerical information visually. This work reinforced measurement, unit conversion, and basic data representation skills.

### Tips

1. Re-watch the launch video and pause at key moments to sketch the rocket's stages, labeling each part and its function.
2. Set up a "Mission Log" journal where the child records daily facts about the astronauts, the spacecraft, and any new discoveries, encouraging regular writing practice.
3. Conduct a simple experiment with a balloon rocket to model thrust and discuss how Newton's Third Law applies to real rockets.
4. Invite a local STEM volunteer or a virtual astronaut interview to deepen understanding of careers in space exploration.

### Book Recommendations

- [The Darkest Dark](#) by Chris Van Dusen: A picture book about a young boy who dreams of becoming an astronaut, inspired by the Apollo moon landing.
- [There's No Place Like Space: All About Our Solar System](#) by Tish Rabe: A Cat in the Hat Learning Library book that introduces basic solar system facts with playful rhymes and vivid illustrations.
- [National Geographic Kids First Big Book of Space](#) by Catherine D. Hughes: An engaging nonfiction

picture book that explores rockets, astronauts, planets, and the history of space travel.

### Learning Standards

- CCSS.ELA-LITERACY.RI.3.1 " Ask and answer questions about key details in a text.
- CCSS.ELA-LITERACY.W.3.2 " Write informative/explanatory texts to convey ideas.
- CCSS.MATH.CONTENT.3.MD.B.3 " Draw a picture graph to represent data.
- CCSS.MATH.CONTENT.4.NBT.B.6 " Perform operations with multi-digit numbers and with decimals to the hundredths.
- NGSS 3-ESS2-1 " Represent data in tables and graphical displays to describe Earth's and space phenomena.
- NGSS 4-PS3-2 " Make observations to provide evidence that energy can be transferred from place to place.

### Try This Next

- Create a worksheet with matching columns: rocket parts → functions; astronauts → mission roles.
- Design a quiz with 5 multiple-choice questions about launch sequence, mission objectives, and astronaut names.
- Draw a comic strip showing the Artemis II crew preparing for launch, then write a short caption for each panel.
- Write a short persuasive paragraph: "Why should kids learn about space?" and illustrate with a poster.