

EXPLORING SPACE

A photograph of an astronaut in a white spacesuit floating in space. The astronaut is holding a long, coiled yellow hose and a black bag. The Earth's blue and white horizon is visible in the background.

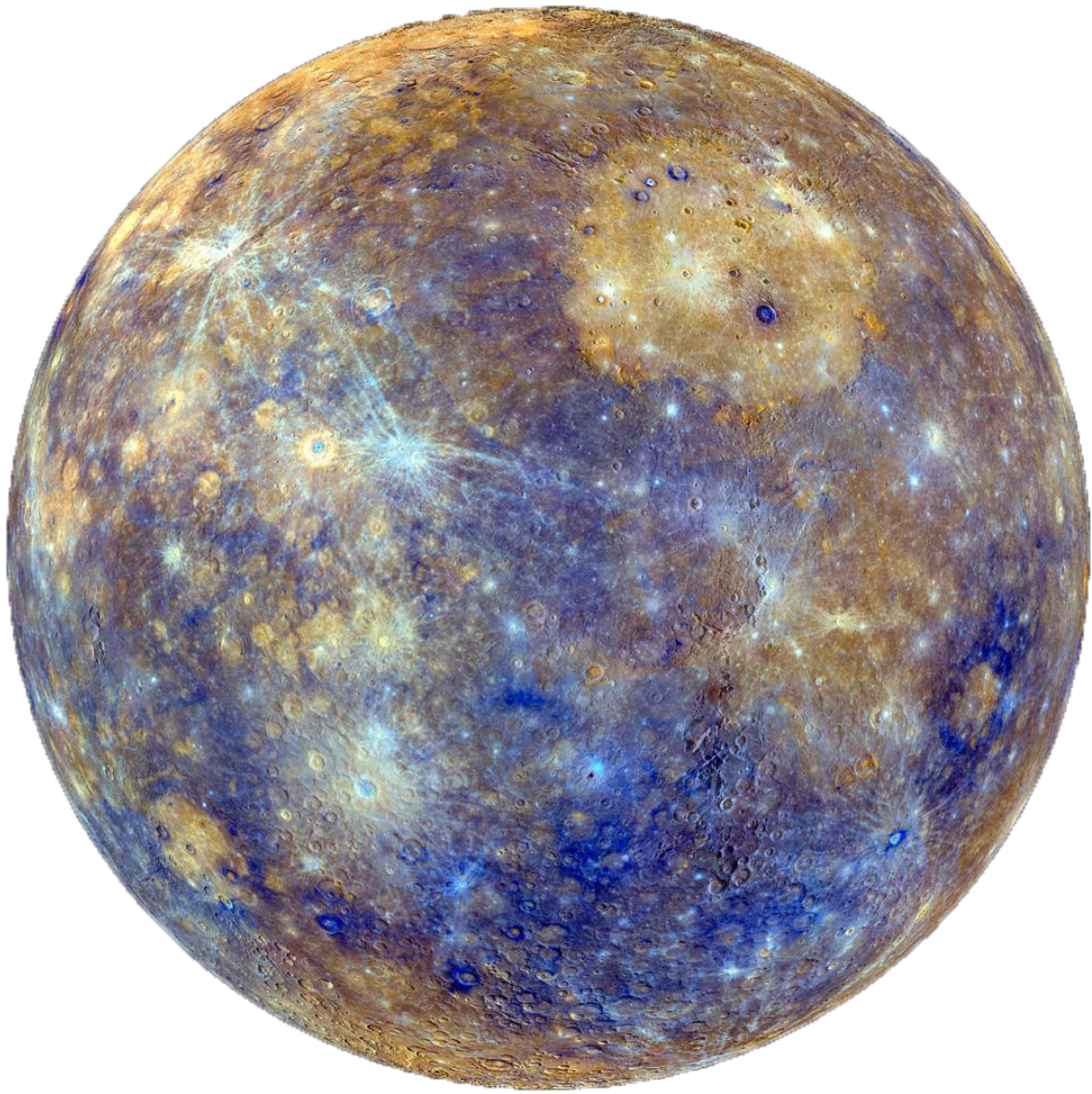
**Reading PI: Nonfiction Comprehension Program
Grade 3**



EXPLORING SPACE



**Reading PI: Nonfiction Comprehension Program
Grade 3**



Reading PI: Nonfiction Comprehension Program

Grade 3

© Fuchs Research Group, 2019

Peabody College, Vanderbilt University

Content Developed by:

Douglas Fuchs (Principal Investigator)

Meagan E. Walsh

Samuel A. Patton

Pamela Lehman

(Unless otherwise noted) Images drawn from:

NASA (NASA.gov)

Jet Propulsion Laboratory-Caltech (jpl.nasa.gov)

European Space Agency (esa.int/ESA)

Special thanks to the research assistants who piloted and provided feedback on these materials: Sarah Raider, Michelle Nagy, Harrison Baker, Hope Wiggs, Lauren Marlar, and Sydney Padula.

This material was prepared for research conducted at the National Center on Accelerating the Academic Achievement of Students with Severe and Persistent Learning Disabilities, which was funded by Grant No. R324D130003 from the National Center on Special Education Research, Institute for Educational Sciences.

TABLE OF CONTENTS

1. Our Neighborhood.....	6
2. Race to the Moon.....	8
3. Earth versus Venus.....	10
4. How Does the Sun Compare to other Stars.....	12
5. Life in Space.....	14
6. Trailblazers: Mae Jemison and Guy Bluford.....	15
7. Ham the Astrochimp.....	16
8. The International Space Station.....	17
9. Glossary.....	18

OUR NEIGHBORHOOD

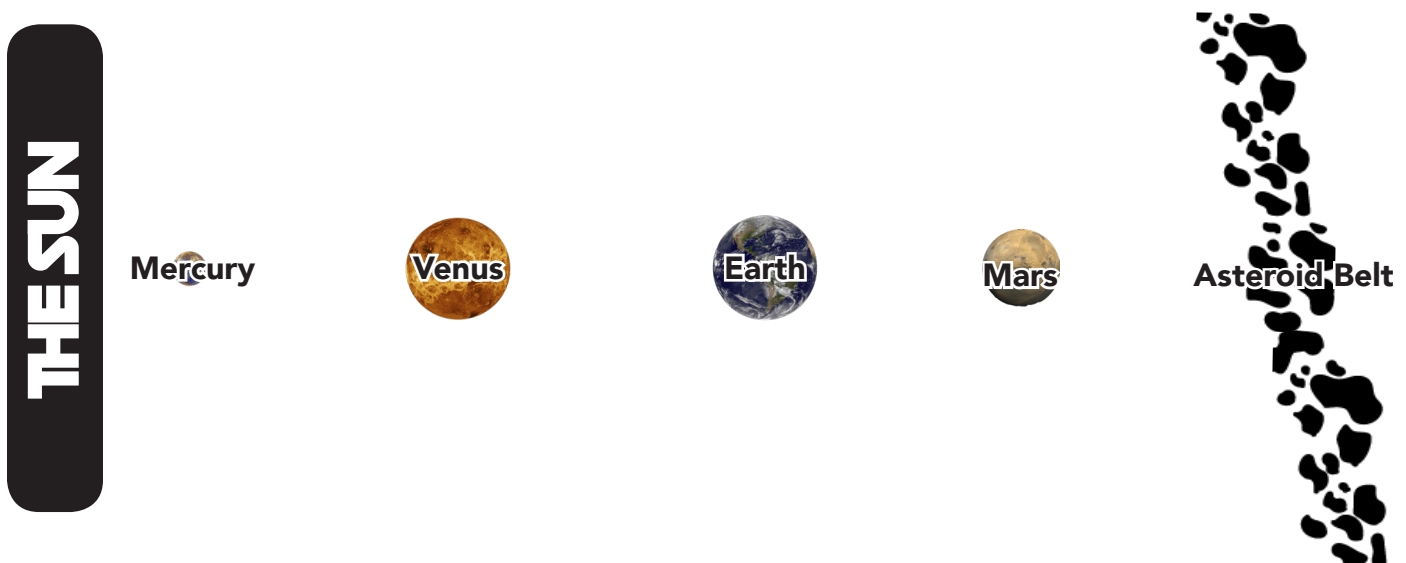
Think of a **solar system** as a neighborhood, or a part of a town. All solar systems have a central star. Our central **star** is the sun. Eight **planets orbit**, or circle, the sun at different distances from it and at different speeds. The sun is a super-hot, super-dense ball of gas. It is the largest and hottest object in our solar system. It provides light and heat to all the planets in our solar system.

The Inner Planets

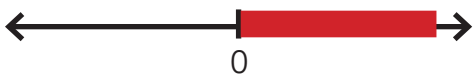
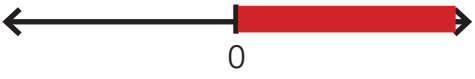
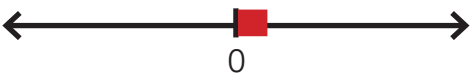
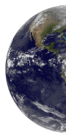
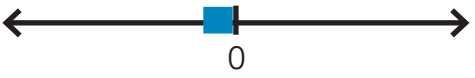
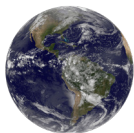
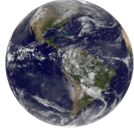
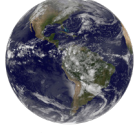
The first group of planets in our solar system, includes the four planets closest to the sun: Mercury, Venus, Earth and Mars. Mercury, the smallest planet, is closest to the sun. Venus is the second planet. It's Earth's closest neighbor and the hottest planet in the solar system! The third planet is Earth. Earth is 93 million miles away from the sun—the perfect distance. On Earth the temperature is just right. Water can stay in its liquid state. That's important because all living things need water. The fourth and last inner planet is Mars. Bits of frozen water have been found on Mars. Scientists think this means there could have once been life on Mars.

The Outer Planets

The next four planets in our solar system, the outer planets, are Jupiter, Saturn, Uranus, and Neptune. A belt of **asteroids** separates them from the four inner planets. All of these planets are "Gas Giants." That means they are mostly made of gases and liquids. Jupiter is the biggest planet in our solar system. It has more than 50 moons! Saturn is best known for its rings. It also has a lot of moons, 53 to be exact. The seventh planet in our solar system is Uranus. The eighth planet is Neptune. Uranus and Neptune are sometimes called "Ice Giants" because they are mostly made of ice. They are also both blue. Temperatures on these planets are extremely cold.



PLANETS BY THE NUMBERS

Planet	Size	Average Temperature	Moons
Mercury		800°F 	0
Venus		864°F 	0
Earth		61°F 	1
Mars		-67°F 	2
Asteroid Belt			
Jupiter	 x 1,300	-234°F 	53
Saturn	 x 764	-288°F 	53
Uranus	 x 17	-357°F 	27
Neptune	 x 17	-353°F 	13

