

**Content Practice A**

# Chapter 19.3

**LESSON 3**

## Recent and Future Space Missions

**Directions:** Use the phrases to complete the diagram on the lines provided. Each phrase is used only once.

Can they support life?

lunar probes

originates outside Earth

satellites in Earth orbits

climate and weather data

Moon housing in the future

plan future outposts

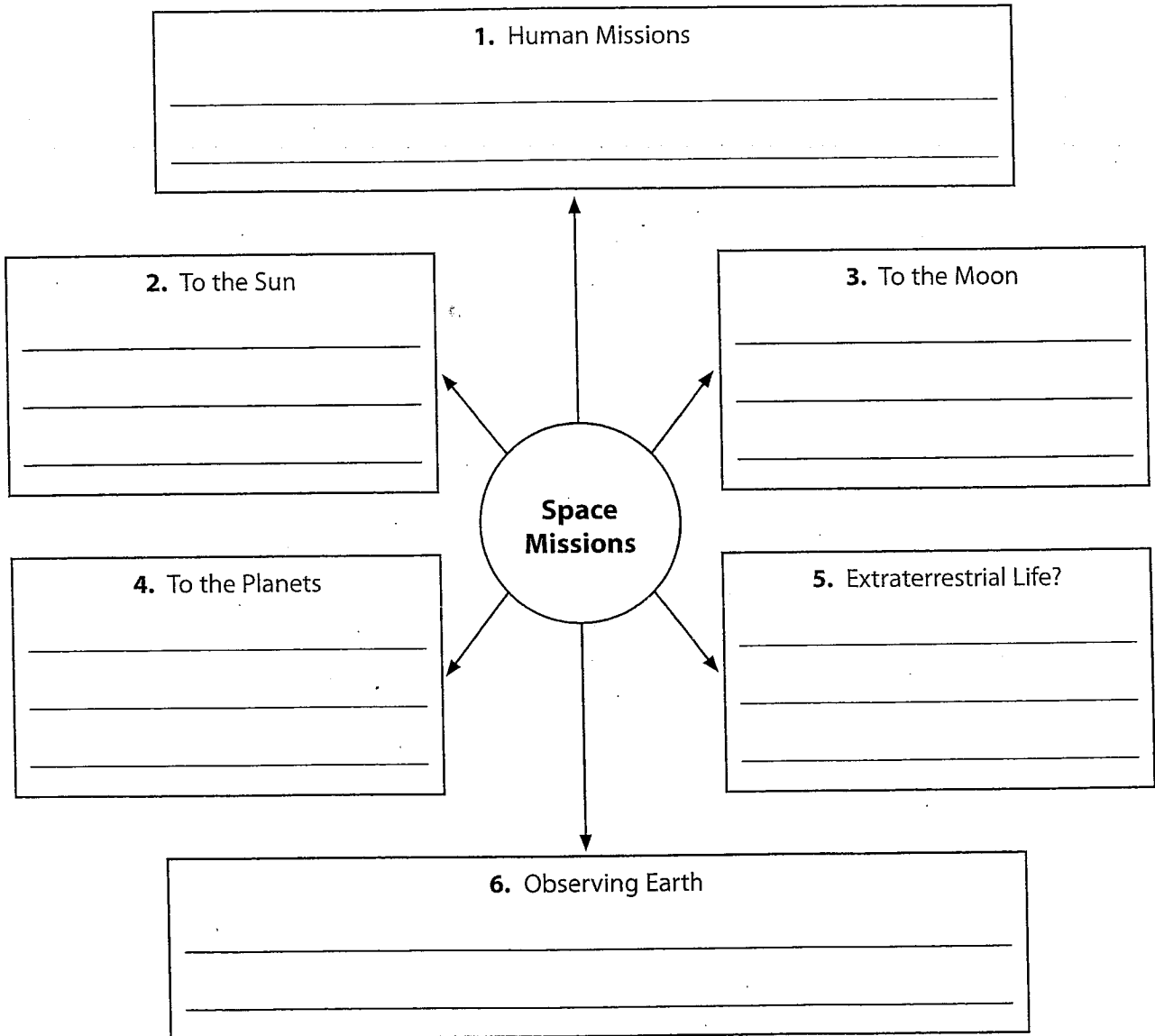
study solar radiation

last Moon landing in 1972

none found so far

rovers on Mars (2003)

*Ulysses* (1990)



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**Key Concept Builder** **LESSON 3****Recent and Future Space Missions****Key Concept** What are goals for future space exploration?**Directions:** On each line, write the letter of the answer that correctly completes each sentence.

- |  |  |
|--|--|
| _____ 1. A major goal is to expand human space travel                                  | <b>A.</b> the hazards of solar radiation.  |
| _____ 2. Probes will be sent to the Sun to understand                                  | <b>B.</b> the Moon and Mars.   |
| _____ 3. Probes will be sent to the Moon to help plan                                  | <b>C.</b> the distant outer planets.   |
| _____ 4. Understanding the geologic forces on the inner planets helps scientists learn | <b>D.</b> predict the chances of life elsewhere in the solar system.                   |
| _____ 5. International efforts involving many countries will send missions to          | <b>E.</b> within the solar system.   |
| _____ 6. Gravity assists can be used to shorten  | <b>F.</b> prepare for a visit in several more decades.                                 |
| _____ 7. The first destinations for human space travel are                             | <b>G.</b> suggest the possibility of extraterrestrial life.                            |
| _____ 8. Building a lunar outpost will   | <b>H.</b> the best location for a future lunar outpost.                                |
| _____ 9. Searching for resources on Mars that can support life will                    | <b>I.</b> the time it takes a spacecraft to reach the outer edges of the solar system. |
| _____ 10. Investigating the conditions for life on Earth helps                         | <b>J.</b> whether they can support life.   |
| _____ 11. Locating water vapor or ice on planets or moons might                        | <b>K.</b> enable scientists to do research on the Moon.                                |

**Key Concept Builder** **LESSON 3****Recent and Future Space Missions**

**Key Concept** How can exploring space help scientists learn about Earth?

**Directions:** Complete the solar system diagram by writing the Sun, the Moon, or a planet on each line.

2. \_\_\_\_\_  
*Messenger* made two passes by this planet on its way to Mercury.

3. \_\_\_\_\_  
A gravity assist from this planet is used to send probes to the outer planets.

1. \_\_\_\_\_  
The flyby probe *Mariner 10* gathered data about this planet in 1975.

4. \_\_\_\_\_  
In 2003, the robotic rovers *Spirit* and *Opportunity* began exploring the surface of this planet.

8. \_\_\_\_\_  
NASA plans to send astronauts back here as early as 2020.

5. \_\_\_\_\_  
A future international space mission will visit this planet and its four largest moons.

7. \_\_\_\_\_  
The probe *Ulysses* orbited this star for 19 years.

6. \_\_\_\_\_  
An international effort in 1997 sent the orbiter *Cassini* to this planet.

**Lesson Quiz A****LESSON 3****Recent and Future Space Missions****Multiple Choice****Directions:** *On the line before each question or statement, write the letter of the correct answer.*

- \_\_\_\_\_ 1. Which is a future goal for exploring space?  
 A. sending people to Mars  
 B. sending people to Pluto  
 C. sending people beyond the solar system
- \_\_\_\_\_ 2. \_\_\_\_\_ required for life to exist on Earth.  
 A. Oxygen gas is  
 B. Organic molecules are  
 C. Warm temperatures are
- \_\_\_\_\_ 3. Which telescope is dedicated to searching for other planets like Earth?  
 A. *Kepler*  
 B. *Spitzer*  
 C. *Hubble*

**Completion****Directions:** *On each line, write the term from the word bank that correctly completes each sentence. Each term is used only once.*

Cassini                      Messenger                      New Horizons                      Spirit                      Ulysses

4. \_\_\_\_\_ is a robotic rover that explored the surface of Mars.
5. A probe named \_\_\_\_\_ became the first to visit Mercury since *Mariner 10* in 1975.
6. \_\_\_\_\_ orbited the Sun and gathered data for 19 years.
7. \_\_\_\_\_ is currently heading toward Pluto, using Jupiter's gravity to assist it.
8. The first orbiter sent to Saturn, named \_\_\_\_\_, was launched in 1997.