

# **Astronomy**

Review  
and

Reinforce

## **Chapter 3**

### **The Solar System**

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Name

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Homeroom

**The Solar System** ▪ *Review and Reinforce*

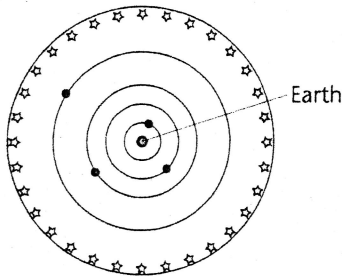
# Observing the Solar System

## Understanding Main Ideas

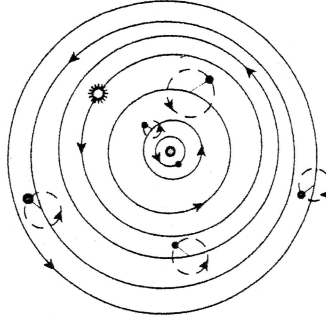
Answer the following questions in the spaces provided.

P 72-77

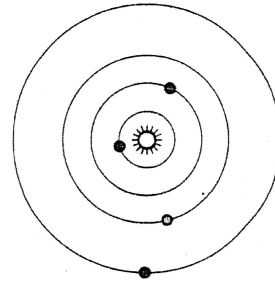
Ancient Greek Model



Ptolemy's Geocentric Model



Copernicus's Heliocentric Model



1. What is the main difference between the geocentric and heliocentric models of planetary motion?

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2. How did the Greek model and Ptolemy's model differ?

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3. How did Galileo's observations of Jupiter and Venus support Copernicus's model?

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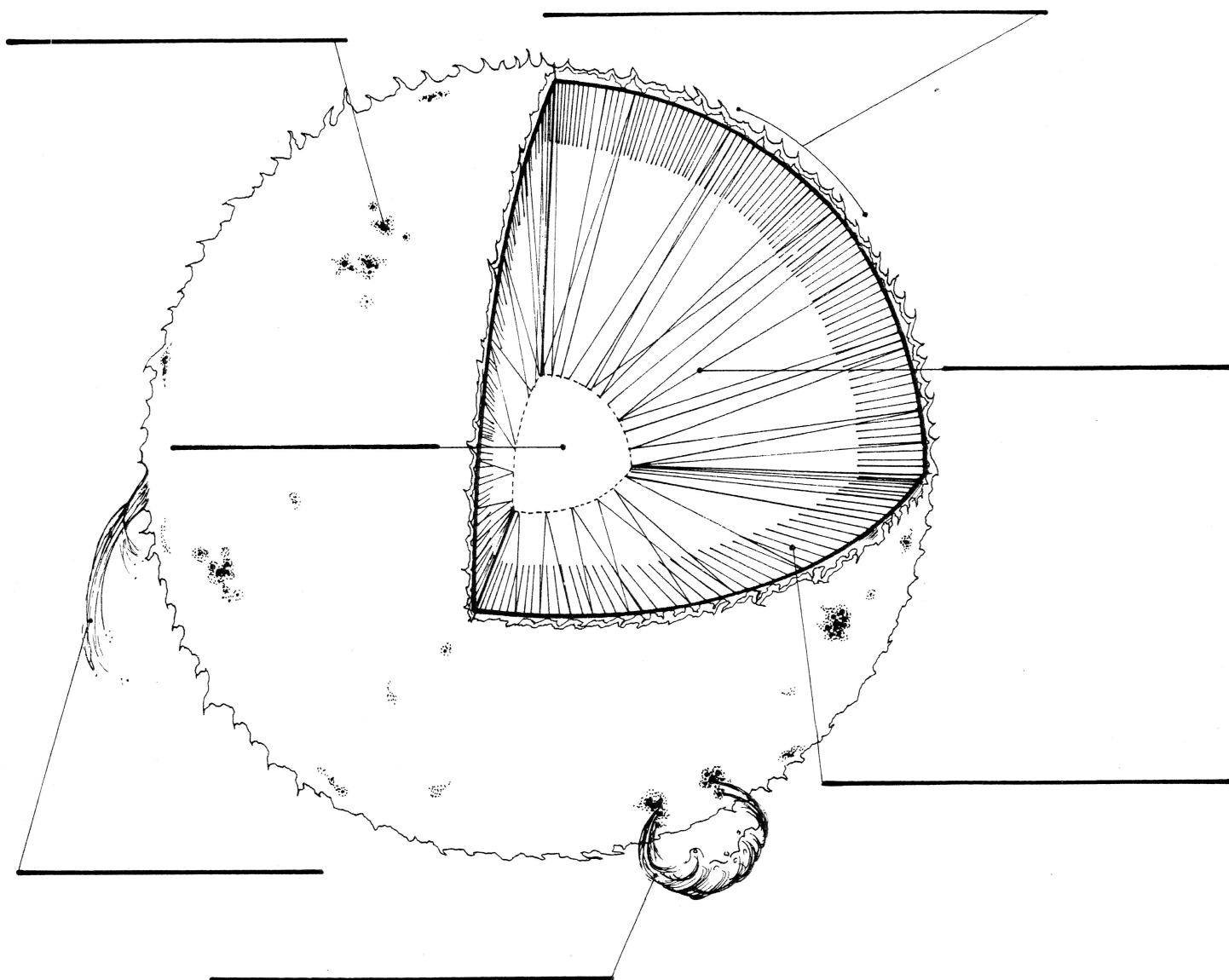
## Building Vocabulary

Fill in each blank to complete each statement.

4. The sun-centered system of planets developed by Copernicus is an example of a(n) \_\_\_\_\_ model.
5. Kepler discovered that the orbit of each planet is a(n) \_\_\_\_\_, rather than a perfect circle.
6. An Earth-centered system of planets is known as a(n) \_\_\_\_\_ model.

Name \_\_\_\_\_

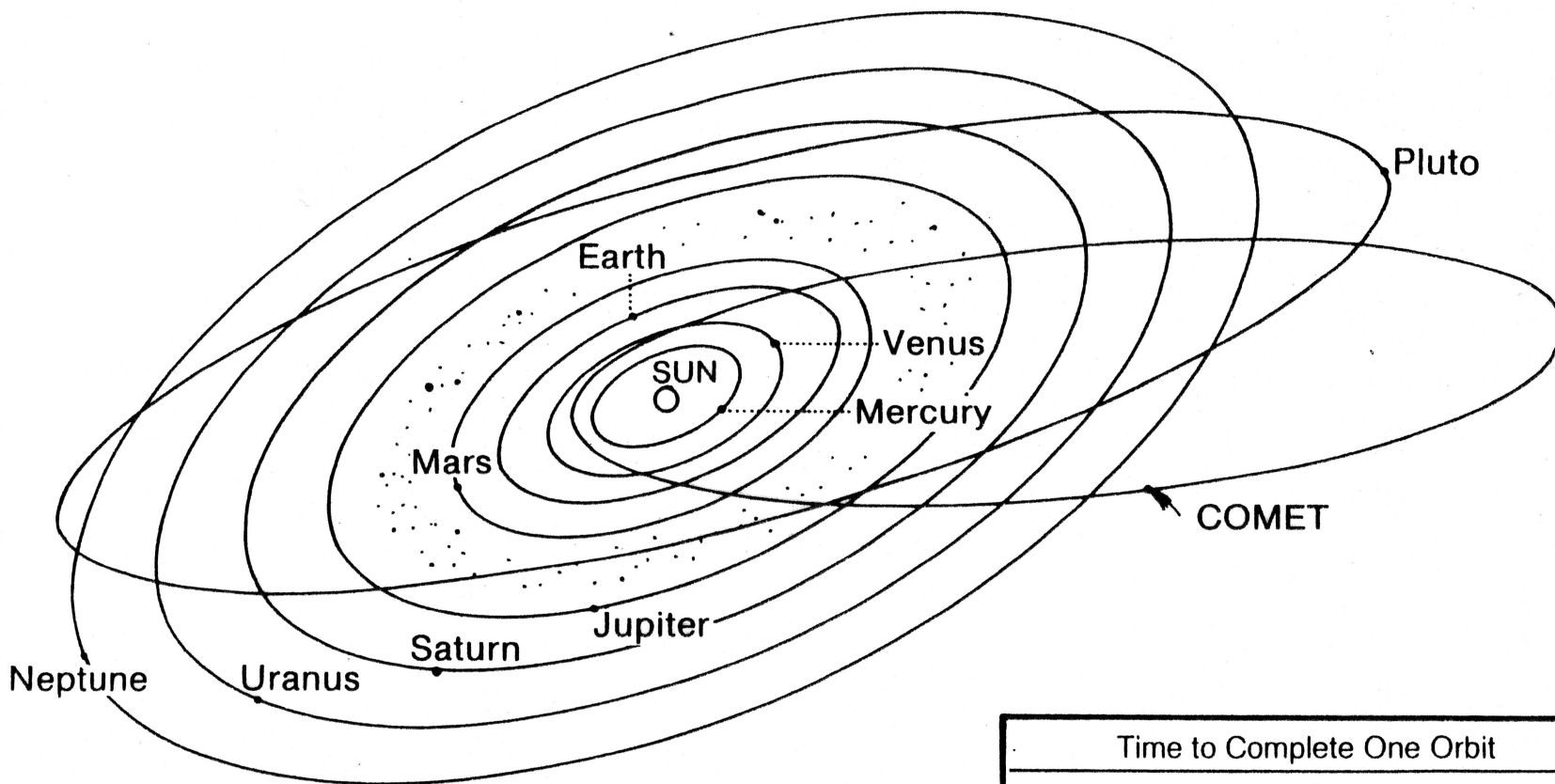
78-82



core  
photosphere  
flare

radiative zone  
chromosphere  
sunspot

prominence



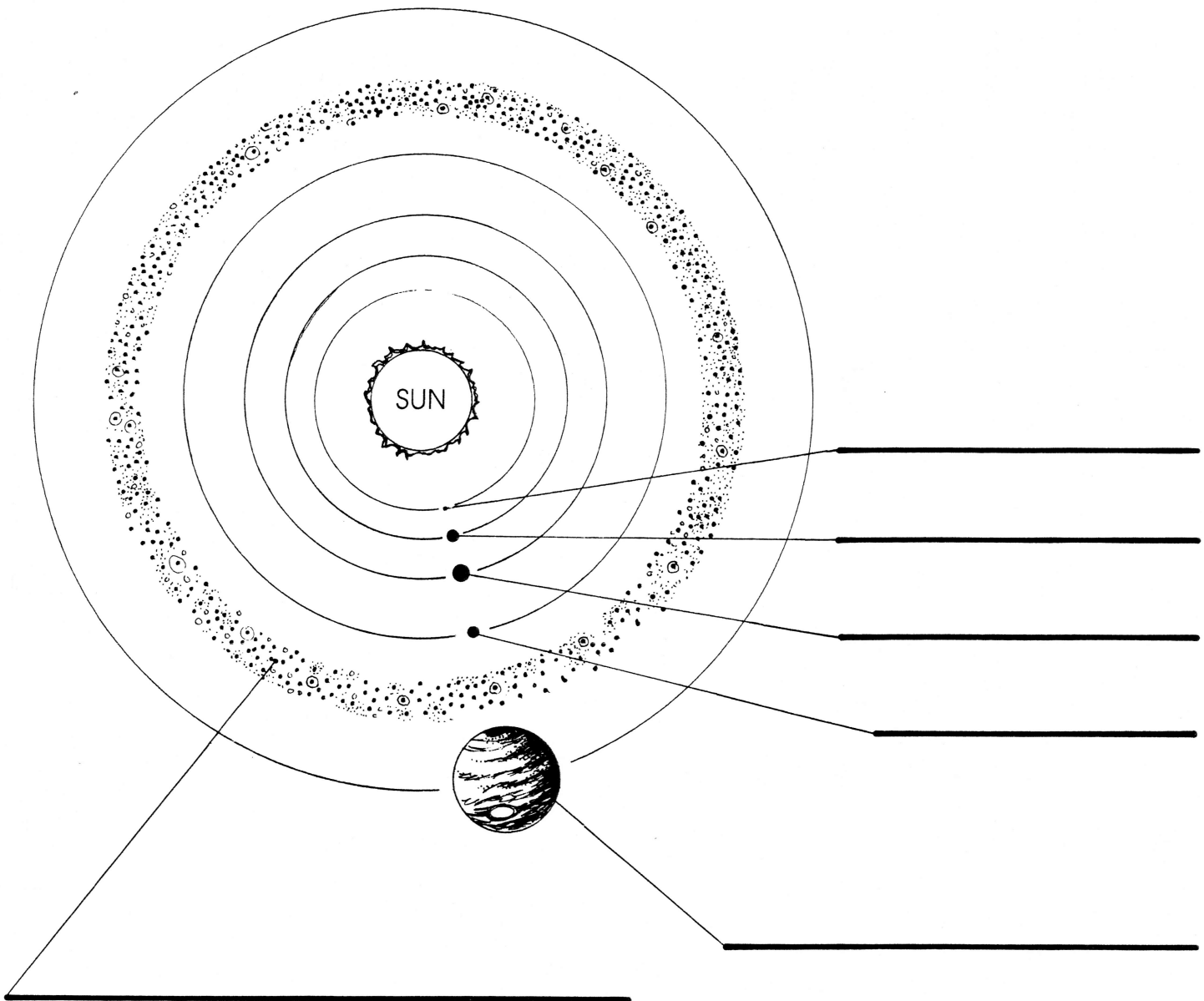
Time to Complete One Orbit		
Mercury	88	days
Venus	224.7	days
Earth	365.25	days
Mars	687	days
Jupiter	11.86	years
Saturn	29.50	years
Uranus	84	years
Neptune	164.75	years
Pluto	248.50	years



# The Asteroid Belt

Name \_\_\_\_\_

Scientists believe that asteroids may be pieces of a planet that was torn apart millions of years ago. Thousands of large asteroids have been tracked, but hundreds of thousands of smaller asteroids are in the asteroid belt. Label the asteroid belt and the planets in the illustration below.



## WORD BANK

Mercury  
Mars

Venus  
Jupiter

Earth  
asteroid belt

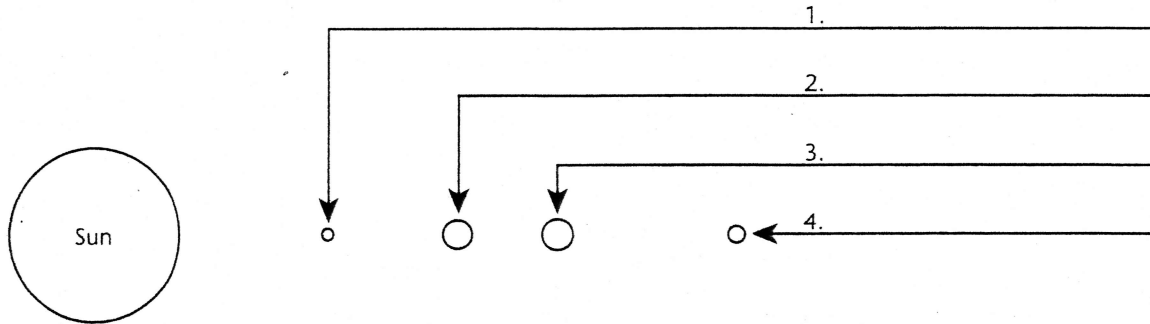
**The Solar System** ▪ *Review and Reinforce*

# **The Inner Planets**

## **Understanding Main Ideas**

*Label the diagram with the names of the inner planets.*

P. 84-91



*Write the inner planet or planets that the statement describes.*

- |       |  |
|-------|--|
| _____ | 5. has a rocky surface   |
| _____ | 6. 70 percent is covered with water                                    |
| _____ | 7. rotates in the opposite direction from most other planets and moons |
| _____ | 8. called the "red planet" because of the color of the dust            |
| _____ | 9. has at least one moon   |
| _____ | 10. similar to each other in size, density, and internal structure     |
| _____ | 11. has almost no atmosphere   |
| _____ | 12. atmosphere is so heavy and thick that it would crush a human       |
| _____ | 13. has a tilted axis that causes seasons                              |
| _____ | 14. atmosphere has low air pressure and is mostly carbon dioxide       |

## **Building Vocabulary**

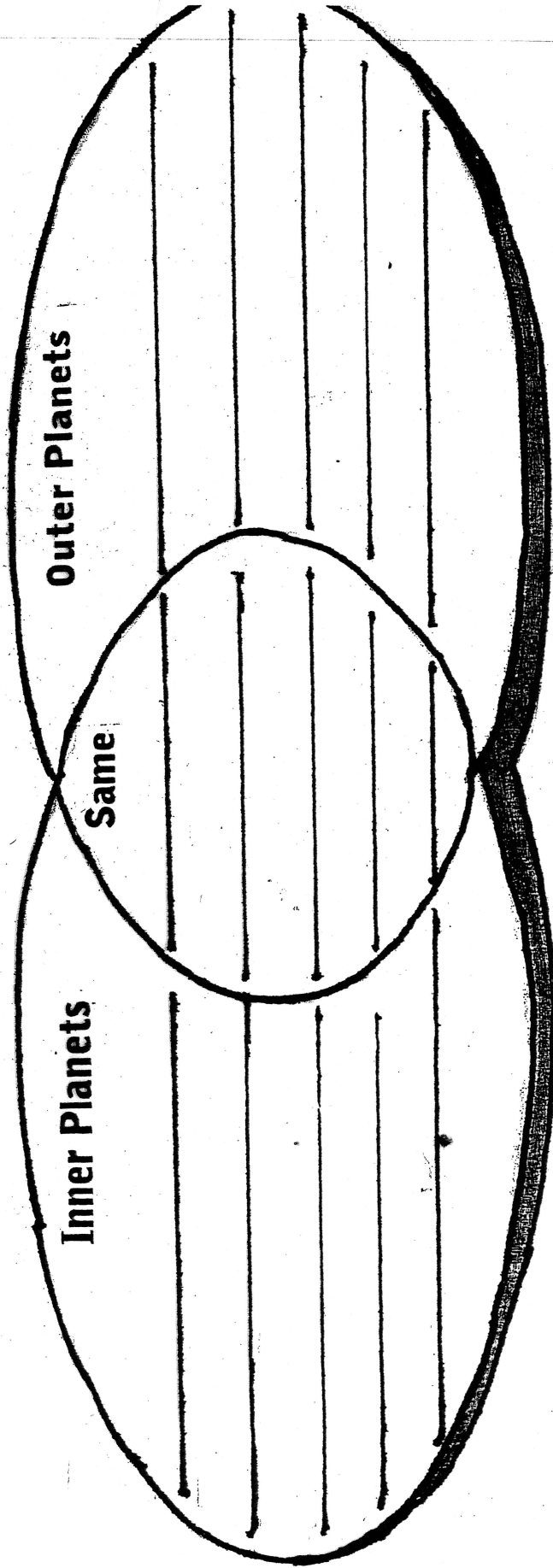
*Write a definition for each of the following terms.*

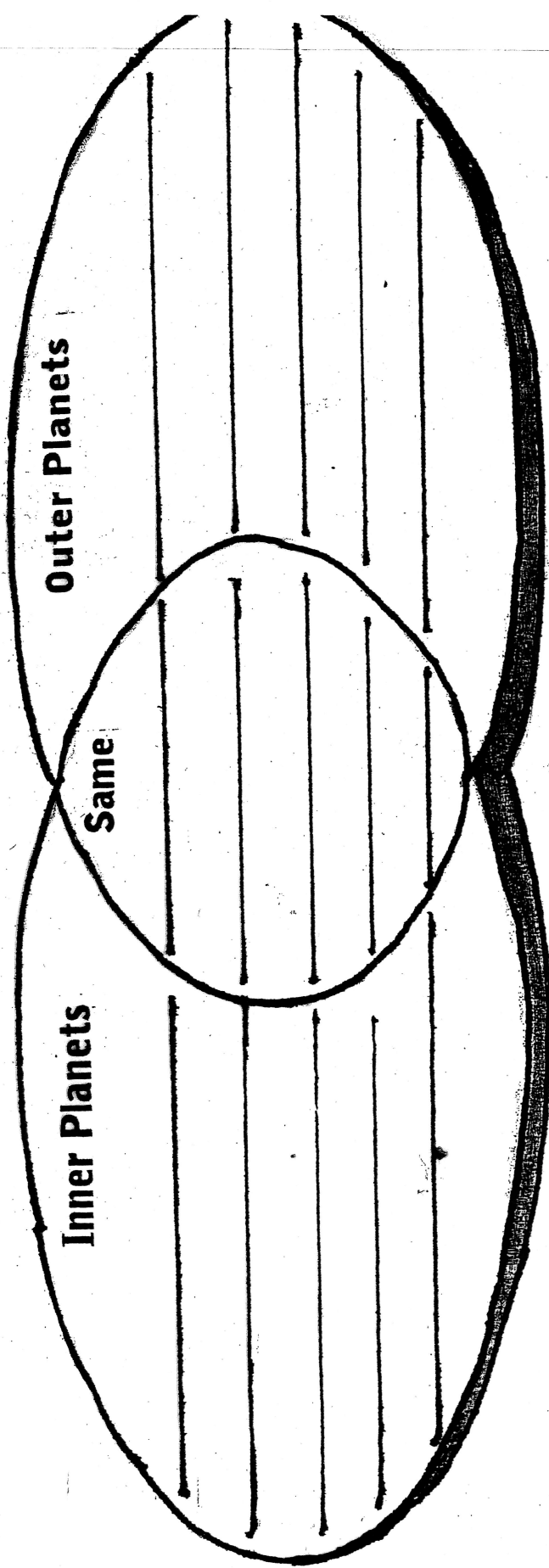
15. terrestrial planets

\_\_\_\_\_

16. greenhouse effect

\_\_\_\_\_



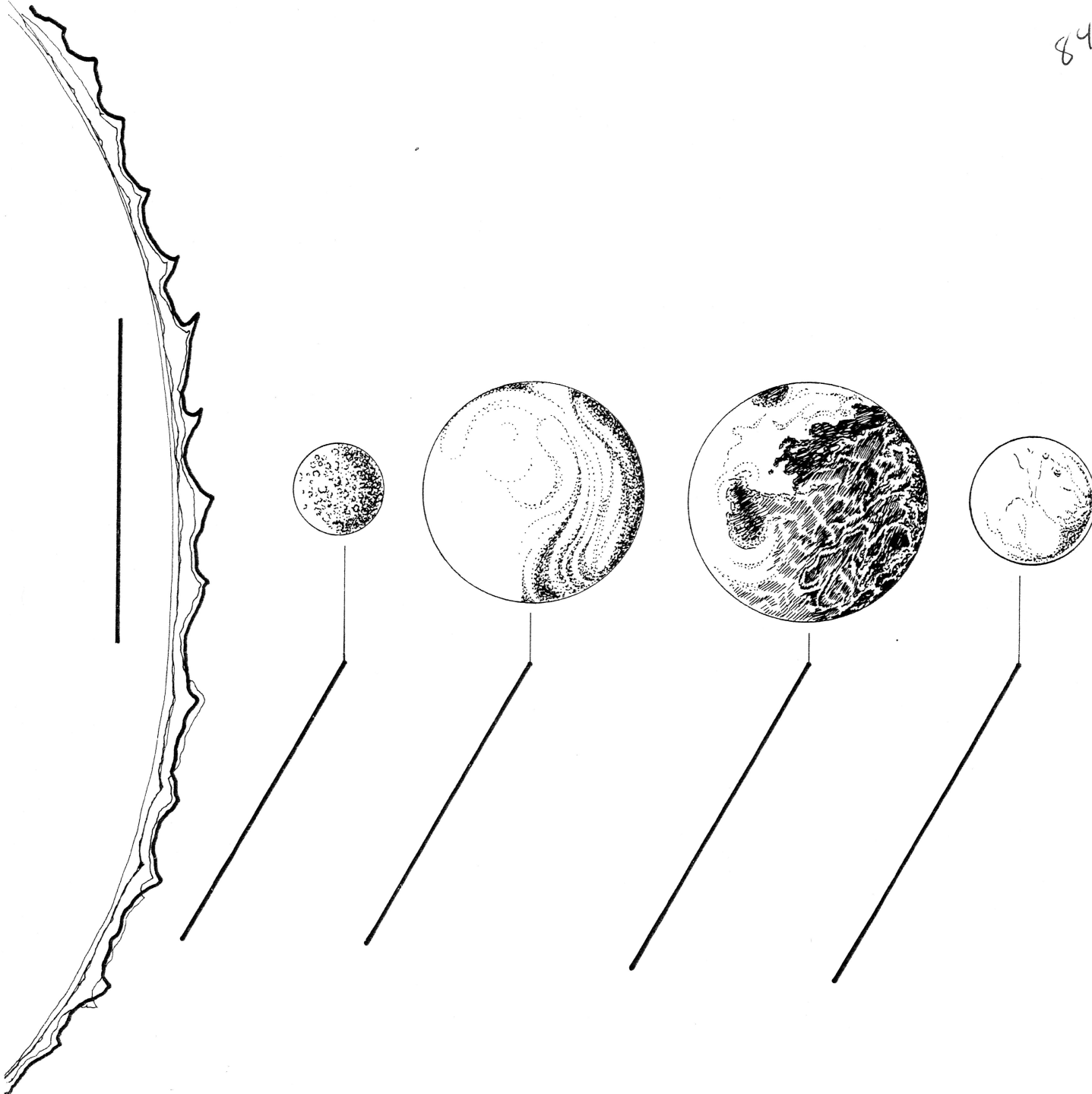


# The Inner Planets

Name \_\_\_\_\_

The planets that are closest to the sun are called the Inner Planets. Label the Inner Planets and the sun.

84-91



## WORD BANK

sun  
Earth

Venus  
Mars

Mercury

**The Solar System** ▪ *Review and Reinforce*

# The Outer Planets

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## Understanding Main Ideas

*Answer the following question in the spaces provided.*

1. What are the five outer planets?

\_\_\_\_\_

2. Which planets are the gas giants?

\_\_\_\_\_

3. What are the two main differences between Pluto and the gas giants?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

4. Why doesn't the gas on a gas giant escape into space, as it has on Mercury?

\_\_\_\_\_

\_\_\_\_\_

5. What object in the solar system has a composition similar to that of the gas giants? \_\_\_\_\_

6. What planet is by far the most massive of all the planets that revolve around the sun? \_\_\_\_\_

7. What are Saturn's rings made of? \_\_\_\_\_

8. How did astronomers know where to look to discover Neptune?

\_\_\_\_\_

\_\_\_\_\_

9. Why do astronomers sometimes consider Pluto and its moon, Charon, to be a double planet?

\_\_\_\_\_

## Building Vocabulary

10. Define *gas giant*.

\_\_\_\_\_

\_\_\_\_\_

11. What is a *ring*?

\_\_\_\_\_

\_\_\_\_\_

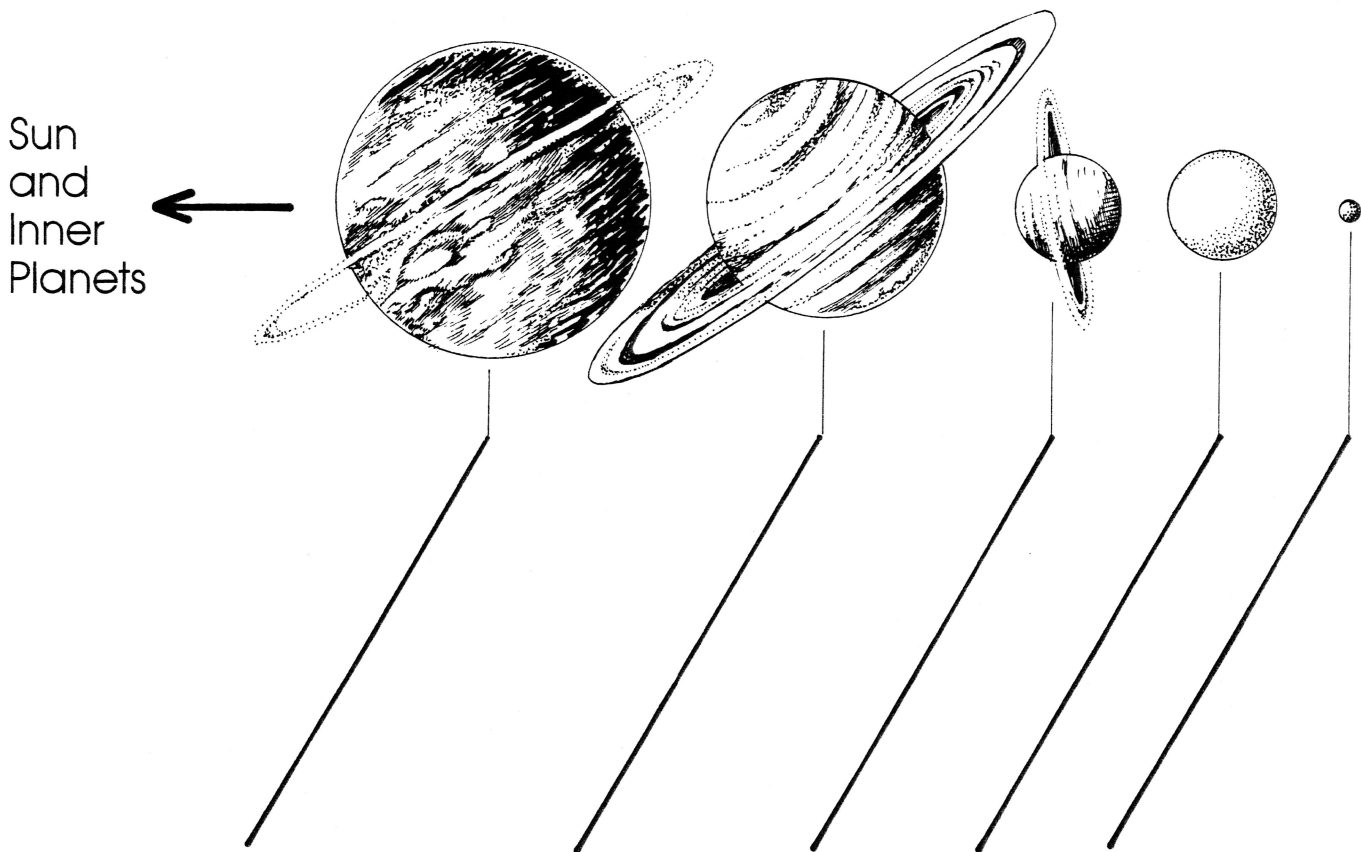


# The Outer Planets

Name \_\_\_\_\_

The planets that are farthest from the sun are called the Outer Planets. Label the Outer Planets.

94.101



## WORD BANK

Jupiter  
Neptune

Saturn  
Pluto

Uranus

**The Solar System** ▪ *Review and Reinforce***Comets, Asteroids, and Meteors****Understanding Main Ideas***Complete the following table.*

Object	Description	Location/Movement
Asteroid		
Comet		
Meteoroid		

*Answer questions 1 through 3 on a separate sheet of paper.*

1. Explain what causes a meteoroid to become a meteorite.
2. Describe these parts of a comet: head, nucleus, coma, tail.
3. How can you tell a meteor from a comet?

**Building Vocabulary***From the list below, choose the term that best completes each sentence.*

asteroid	comet	meteoroid
asteroid belt	Kuiper belt	meteorite
coma	meteor	Oort cloud

4. When a meteoroid enters Earth's atmosphere, friction causes it to burn up and produce a streak of light called a(n) \_\_\_\_\_.
5. A chunk of ice and dust whose orbit is usually a long, narrow ellipse is a(n) \_\_\_\_\_.
6. If a meteoroid hits Earth's surface, it is called a(n) \_\_\_\_\_.
7. A rocky object that revolves around the sun, but is too small to be considered a planet, is a(n) \_\_\_\_\_.
8. A chunk of rock or dust in space that usually comes from a comet or an asteroid is called a(n) \_\_\_\_\_.
9. The region of the solar system between the orbits of Mars and Jupiter is known as the \_\_\_\_\_.
10. Clouds of gas and dust on a comet form a fuzzy outer layer called a \_\_\_\_\_.
11. A spherical region of comets is the \_\_\_\_\_.
12. A doughnut-shaped region of comets that begins near Neptune's orbit is the \_\_\_\_\_.

~~104~~  
104-167

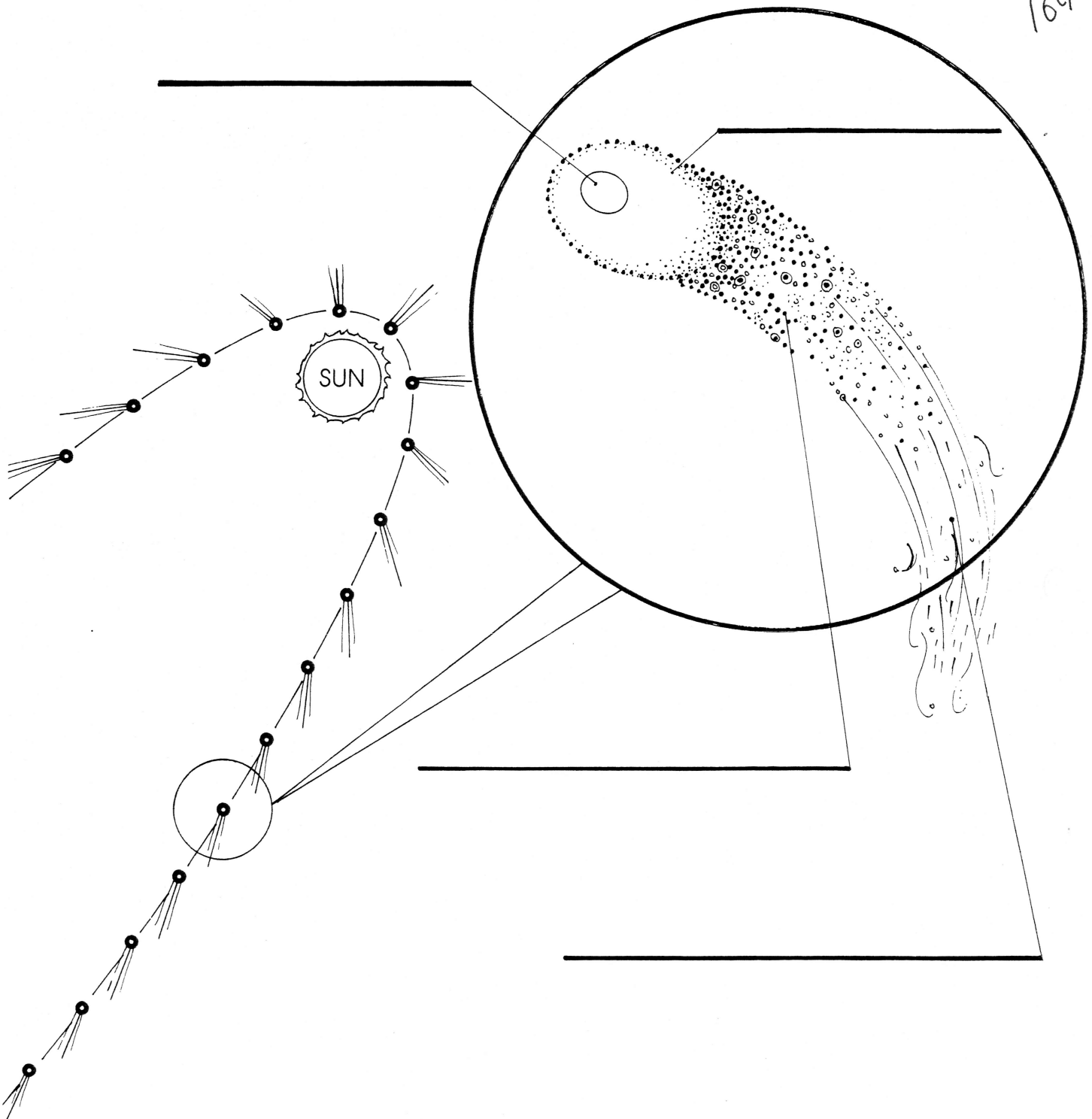


# Dirty Snowballs

Name \_\_\_\_\_

Comets are like "dirty snowballs." Use the words from the **WORD BANK** to label the parts of these frozen masses of gas and dust particles.

164-107



## WORD BANK

nucleus

coma

gas tail

dust tail