

Skim Lesson 1 in your book. Read the headings and look at the photos and illustrations. Identify three things you want to learn more about as you read the lesson. Record your ideas in your Science Journal.

Main Idea

What is the solar system?

I found this on page _____.

Objects in the Solar System

I found this on page _____.

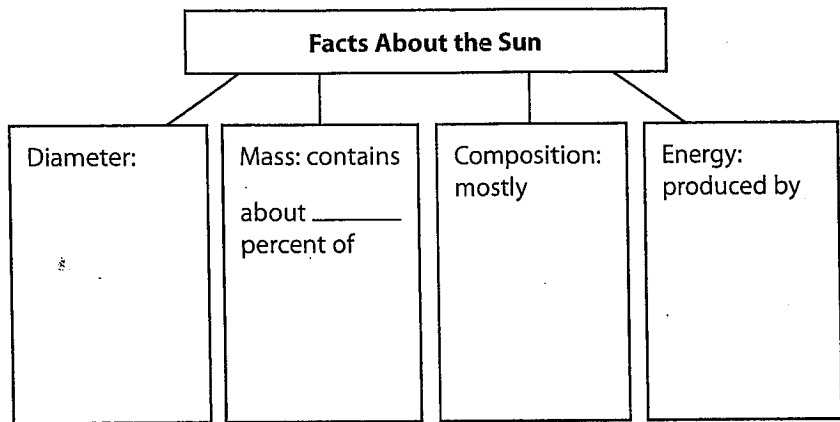
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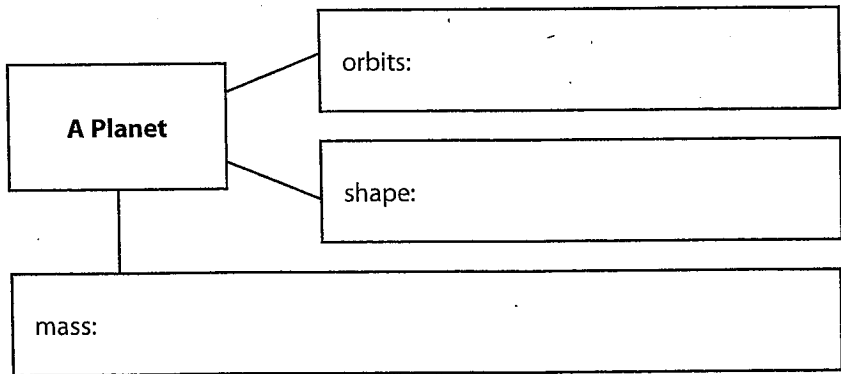
Details

Describe the solar system.

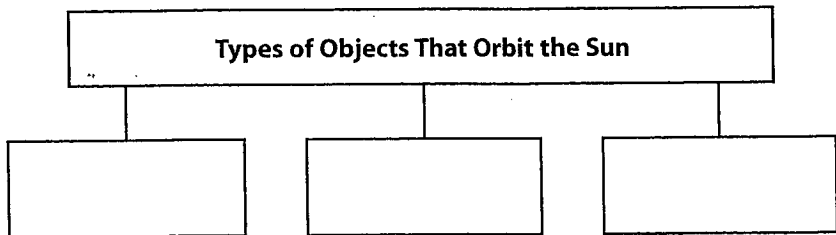
Organize facts about the Sun in this graphic organizer.



Explain how an object is classified as a planet.



Identify objects that orbit the Sun.



Lesson 1 | The Structure of the Solar System (continued)


Main Idea

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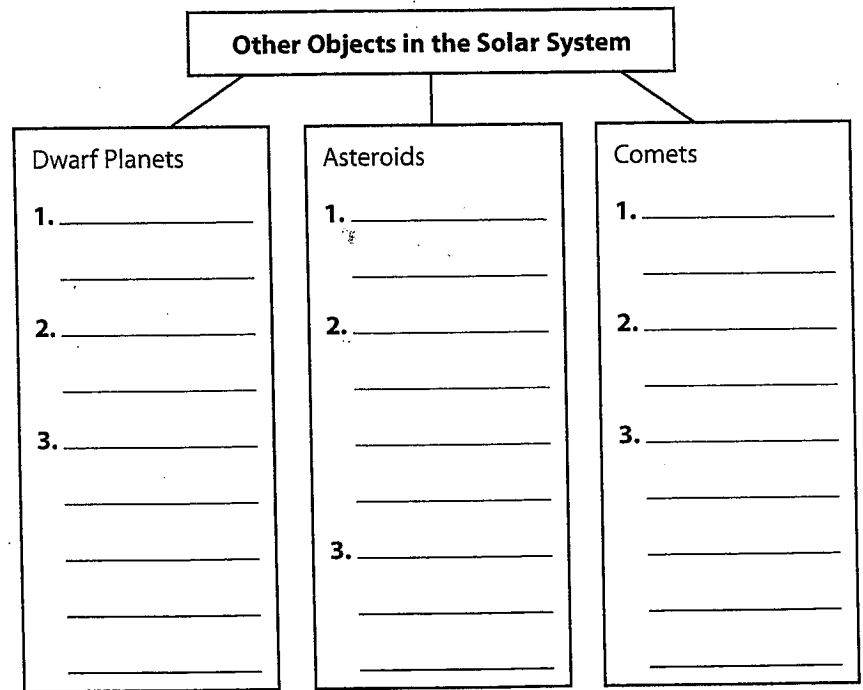
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Details

 **Contrast** the inner and outer planets by completing the table.

	Inner	Outer
Relative distance to the Sun		
Composition		
Relative size		
Names of the planets		

Outline information about dwarf planets, asteroids, and comets. Write three facts about each type of object.



Identify the names of four dwarf planets.

1. _____
2. _____
3. _____
4. _____

Main Idea


I found this on page _____.

The Motion of the Planets

I found this on page _____.

I found this on page _____.


Details

 **Organize** information about astronomical units.

Definition: _____

Length: _____


Used because: _____

 **Organize** information about the motion of the planets by completing the chart.

Motion of the Planets	
Rotation	Revolution
The time that a planet takes to _____ _____	The time that a planet takes to _____ _____
Also called: _____	Also called: _____ Shape: _____

Identify the relationship between a planet's speed and its distance from the Sun by circling the correct speed.

Distance from the Sun	Speed	
Closer to the Sun	faster	slower
Farther from the Sun	faster	slower

 **Analyze It** Do Mercury and Venus travel through space faster than Earth? Are Mercury and Venus less than or greater than one AU from the Sun? Explain both answers.

Lesson 2 The Inner Planets

Scan Lesson 2 in your book. Think of three questions that you have about the inner planets. Write those questions in your Science Journal. Then try to answer them as you read.

Main Idea

Planets Made of Rock

I found this on page _____.

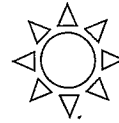
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Mercury

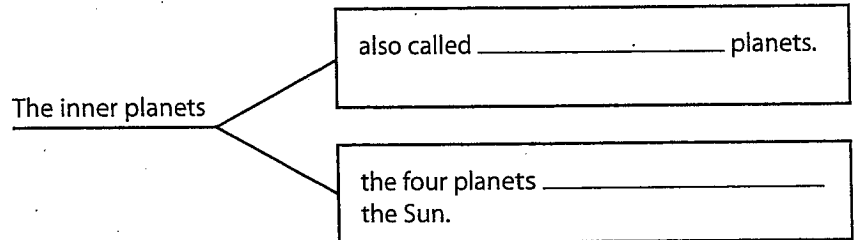
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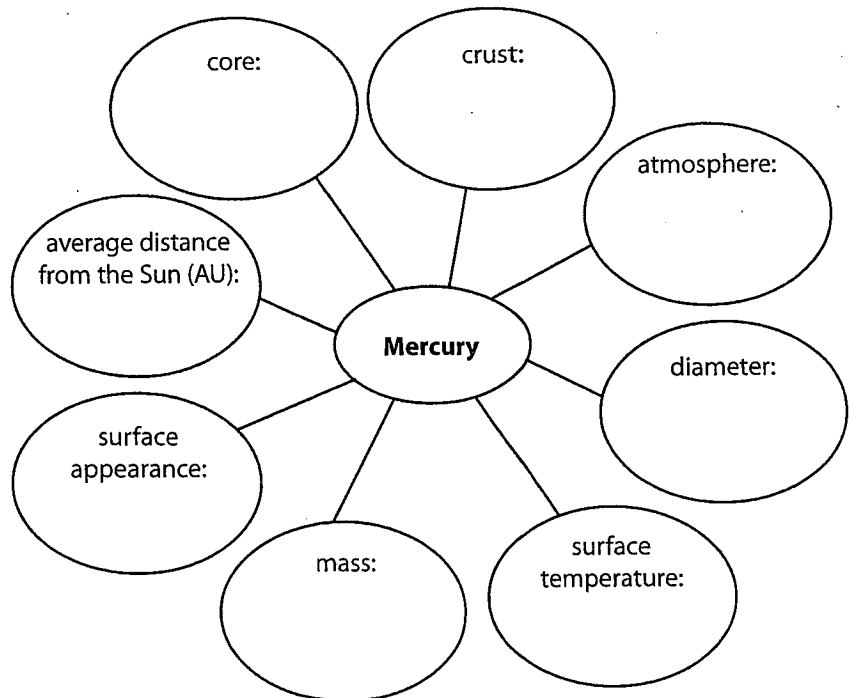
Model the inner planets by drawing their orbits around the Sun. Color-code each planet and its orbit as follows: violet for Mercury, blue for Venus, green for Earth, and red for Mars.



Describe the inner planets by completing the diagram.



Organize facts about Mercury by completing the spider map.



Main Idea

Venus

I found this on page _____.

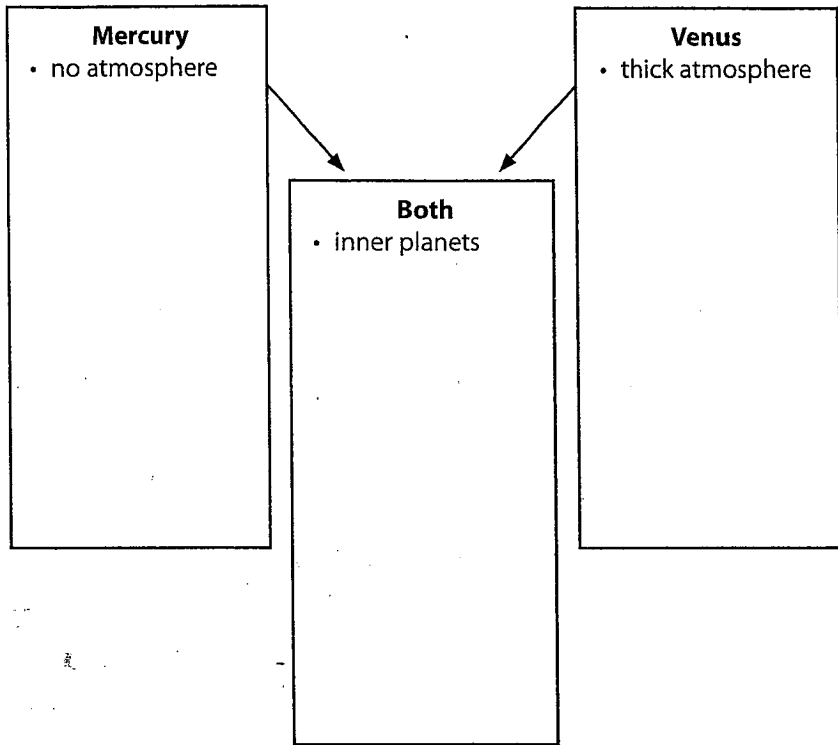
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Earth

I found this on page _____.

Details

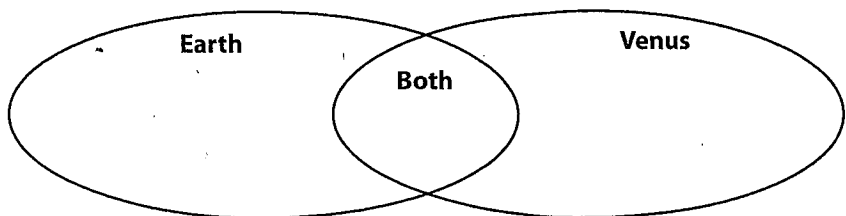
Compare and contrast characteristics of Mercury and Venus.



Explain why Venus is hotter than Mercury.

Sort facts about Earth and Venus. Place the number of each fact in the Venn diagram.

- | | | |
|-----------------------------------|-------------------------------------|------------------------------|
| 1. has a greenhouse effect | 5. atmosphere mostly carbon dioxide | 8. a terrestrial planet |
| 2. has extremely high temperature | 6. rotates counter-clockwise | 9. an inner planet |
| 3. has water in its atmosphere | 7. rotates clockwise | 10. has a moon |
| 4. year is longer than its day | | 11. has water on its surface |
| | | 12. can support life |



Lesson 2 | The Inner Planets (continued)

Main Idea

Mars


I found this on page _____.

I found this on page _____.


Details

Contrast Earth and Mars. Circle the best answers.

	Earth	Mars
Which phases of water are found there?	ice liquid water vapor	ice liquid water vapor
What is its distance to the Sun?	distance > 1 AU distance = 1 AU distance < 1 AU	distance > 1 AU distance = 1 AU distance < 1 AU
Describe the appearance of its surface.		
How many moons does it have?	one two	one two

 **Summarize** information about the inner planets. Place a check mark in each box that applies to each planet.

	Mercury	Venus	Earth	Mars
Atmosphere				
Inner and outer core				
Liquid outer core				
Liquid core, only				
Solid inner core				
Atmosphere 90% CO ₂				
Cratered surface				
Liquid water on surface				
Ice on surface				
A moon or moons				
Mantle and crust				
Signs of volcanic action				

 **Synthesize It** From Earth, Venus looks like a very bright star in the night sky. If you could look at Earth from Venus, what would Earth look like? Explain your answer.

Lesson 3 The Outer Planets

Predict three things that will be discussed in Lesson 3. Read the headings and look at the photos and illustrations. Write your predictions in your Science Journal.

Main Idea

The Gas Giants
I found this on page _____.

Jupiter
I found this on page _____.

Details

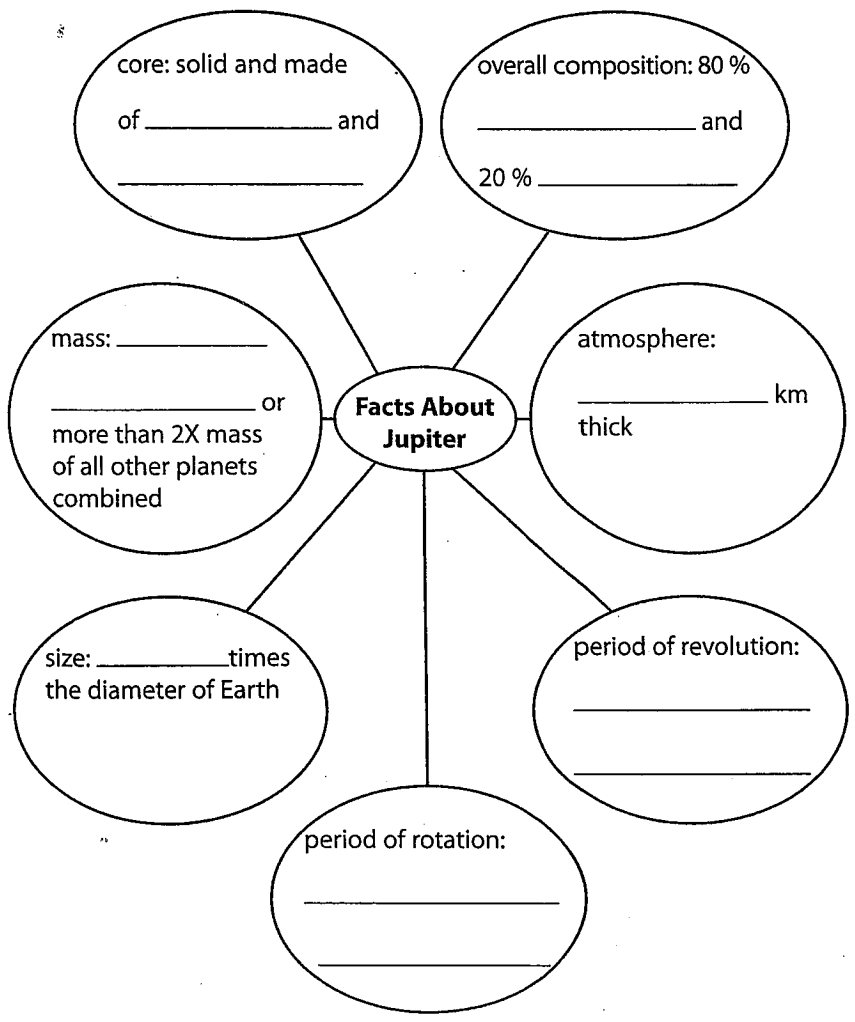
Key Detail three ways in which the outer planets are similar

1. Composed of: _____

2. Gravitational force: _____

3. Structure: _____

Key Describe Jupiter by completing the spider map.



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Lesson 3 | The Outer Planets (continued)

Main Idea

I found this on page _____.

I found this on page _____.

Saturn


I found this on page _____.

Details

Identify Jupiter's Galilean moons.

1. _____
2. _____
3. _____
4. _____

Relate Jupiter's moons to the formation of the planet's rings.

 Compare and contrast Saturn and Jupiter in the chart below.

Saturn	Same	Jupiter
Different		Different
ring system: _____	atmosphere: hydrogen and helium	ring system: _____
diameter: _____ times Earth's diameter	core: solid	diameter: _____ times Earth's diameter
average distance from Sun: _____ AU	rings	average distance from Sun: _____ AU
appearance of atmosphere: colorful _____	many moons	appearance of atmosphere: colorful _____ and Great _____

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Main Idea

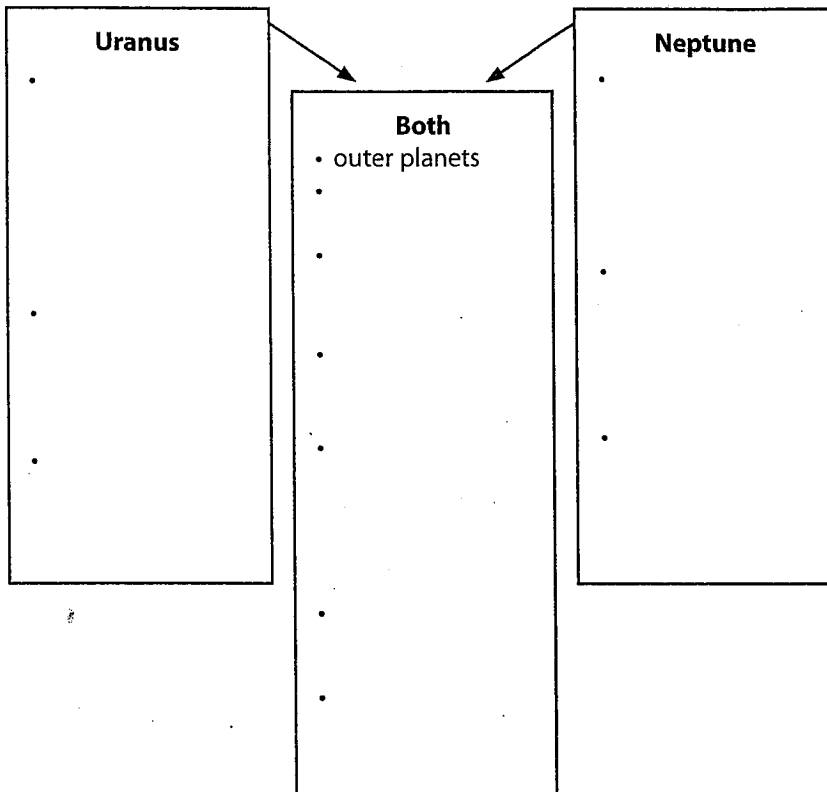
Uranus and Neptune

I found this on page _____.

I found this on page _____.

Details

Compare and contrast characteristics of Uranus and Neptune. Include at least ten facts in your response.



Identify four characteristics common to all the outer planets.

1. _____
2. _____
3. _____
4. _____

Connect It Hydrogen, helium, and methane are gases on Earth. Why are these substances liquids on the gas giants?

Lesson 4 Dwarf Planets and Other Objects

Skim Lesson 4 in your book. Read the headings and look at the photos and illustrations. Identify three things that you want to learn about as you read the lesson. Record your ideas in your Science Journal.

Main Idea

Dwarf Planets

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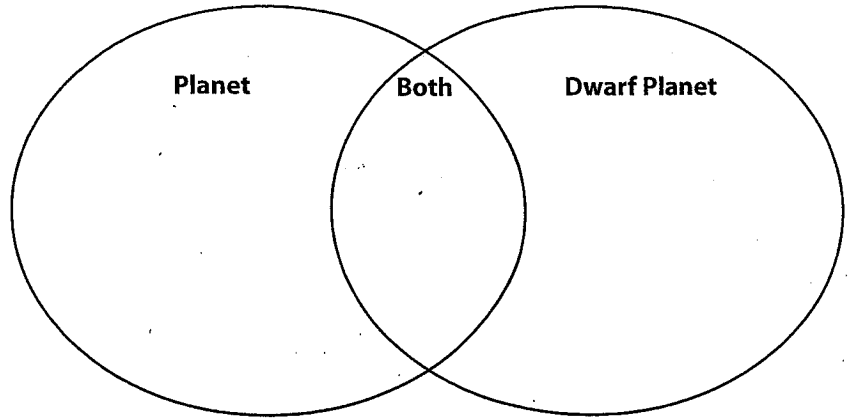
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Details



Compare and contrast a planet and a dwarf planet in the Venn diagram below.



Organize information about dwarf planets.

Dwarf Planets			
	Pluto	Ceres	Eris
Location in solar system			
Composition			
Number of moons			

Describe Makemake and Haumea.

Main Idea

Asteroids

I found this on page _____.

Comets

I found this on page _____.

I found this on page _____.

Details

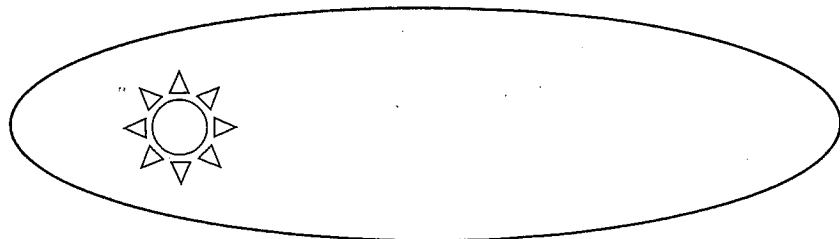
Relate facts about asteroids in the table below

Facts About Asteroids	
Location	
Number	
Description	
Largest (name and size)	

Compare and Contrast asteroids and comets by completing the chart.

Asteroids and Comets	
Same	Different
• _____ _____	• _____ _____
• _____ _____	• _____ _____
_____	_____
_____	_____

Model the structure of comets by adding two comets to the figure below. Draw one comet approaching the Sun and one comet going away from the Sun. Indicate the direction of motion with arrows. Show the comets' comas and dust tails.



Lesson 4 | Dwarf Planets and Other Objects (continued)

Main Idea

I found this on page _____.

Meteoroids

I found this on page _____.

Details


Distinguish information about the source of comets below.


The Kuiper Belt is _____

The Oort Cloud is _____

Analyze the differences between a meteoroid, a meteor, and a meteorite by completing the chart.

Name of Body	What It Is
Meteoroid	
Meteor	
Meteorite	

 **Describe** an impact crater and how one is formed.

 **Analyze It** Which attribute is more important in classifying a solar system object, its size or its composition? Explain.
