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Warm-Up | Planets

Lesson Question

Lesson Goals

Characterize the planets in the solar system.

Identify characteristics shared by the inner planets.

Identify each planet in the solar system.

Identify _____ shared by the outer planets.

Words to Know

Fill in this table as you work through the lesson. You may also use the glossary to help you.

	liquefied by heat
	a wide, flat disc containing ice and rock particles that orbit a planet
	the movement of an object around the center of another object
	the turning or circling of an object
	existing as a gas

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The Solar System

The solar system consists of:

- the Sun.
- [ ] planets and their moons.
- several smaller objects.

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Characteristics of the Inner Planets

The _____ inner planets share several characteristics.

They:

- are small.
- are rocky.
- are dense.
- have few _____.
- have a slow _____.
- have a fast _____.

Mercury

Mercury is the _____ planet and the closest to the Sun.

It has:

- no moons.
- an interior of mainly dense iron.
- virtually no _____.
- huge _____ ranges.

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Venus

Venus is similar to Earth in size, mass, density, and internal structure, but it differs in other ways.

Venus:

- rotates opposite of most other _____.
- has a thick _____, mostly of carbon dioxide, surrounded by clouds of _____ acid.
- has the hottest _____ temperature of any planet.

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Earth

Earth has three layers—a solid rocky crust, a hot _____ mantle, and a dense core of iron and nickel.

Earth:

- is the only planet with _____ water at its surface.
- has an atmosphere that contains many different _____.
- is the only planet with an atmosphere rich in oxygen.

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Mars

Mars is sometimes called the “ ____ planet.”

Mars has:

- an atmosphere that is mostly carbon dioxide, with a few clouds.
- surface features that appear to have been created by ____, lakes, or floods.
- big canyons and some giant, inactive volcanoes.
- ____ like Earth.

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The Outer Planets

The four outer planets share several characteristics.

They:

- are ____.
- are ____.
- have low density.
- have many moons.
- have ____.
- have a fast rotation.
- have a slow ____.

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Jupiter

Jupiter is the largest and most massive planet.

It has:

- a thick atmosphere of hydrogen and helium.
- 53 moons.
- _____ sets of rings.
- fast winds and _____.
- the Great _____ Spot.

Saturn

Saturn is the second largest but least _____ planet.

It has:

- a thick atmosphere of _____ and _____.
- _____ moons.
- the largest and most visible rings.

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Uranus

Uranus is one of the two “ ” of the outer solar system.

Uranus:

- is very .
- has a blue color from methane in the atmosphere.
- has moons.
- has thin, flat rings.
- has a tilted axis.

Neptune

Neptune is the other “ice giant.”

Neptune:

- is cold and .
- has an active and changing atmosphere that once had the Great Dark Spot.
- has moons.
- has .

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Lesson Question

How are the inner and outer planets characterized?

Answer

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Review: Key Concepts

	[ ] Planets Mercury, Venus, Earth, Mars	[ ] Planets Jupiter, Saturn, Uranus, Neptune
Size	small	large
Composition	rock	gas
Density	high	low
Moons	few	many
Rings	no	yes
Rotation	slow	fast
Revolution	fast	slow

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Review: Key Concepts

	Venus		**Mars**
Smallest and closest to the Sun	Called “Earth’s twin”	Only planet with liquid surface water	Called the “red planet”

Review: Key Concepts

Jupiter		**Uranus**	
Largest and most massive	Least dense with most visible rings	Rotates on its side	Has active, changing atmosphere

Use this space to write any questions or thoughts about this lesson.

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