Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Planets

Due Date:

Reading \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Guide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Review \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Critical Thinking \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Concept Map \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Crossword ­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Test Prep ­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Planets Reading

1. Astronomical unit
2. Light minute
3. Terrestrial planet
4. Mercury
5. Rotation
6. Period or rotation
7. Orbits
8. Period of revolution
9. Venus
10. Prograde rotation
11. Retrograde rotation
12. Earth
13. Mars
14. Olympus Mons
15. Gas giants
16. Jupiter
17. Saturn
18. Rings
19. Uranus
20. William Herschel
21. Neptune
22. Pluto

Planets Guide

Astronomical unit

Terrestrial planets

Prograde rotation

Retrograde rotation

Gas giants

Give the distance from the sun, the period of rotation and period of revolution for each planet.

Mercury

Venus

Earth

Mars

Jupiter

Saturn

Uranus

Neptune

Pluto (not a planet)

Planets Review

Earth Mercury retrograde rotation Venus

gas giants Neptune Saturn

Jupiter Pluto terrestrial planets

Mars prograde rotation Uranus

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are the small, dense, rocky planets of the inner solar system.
2. The counterclockwise spin of a planet or moon as seen from the planets north pole is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. The clockwise spin of a planet or moon as seen from above the planet's north pole is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
4. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are the large, planets of the outer solar system.
5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the first terrestrial planet from the sun, smallest planet.
6. The fifth gas giant from the sun, largest planet, made of hydrogen and helium is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
7. The third terrestrial planet from the sun; has liquid water is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
8. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the second terrestrial planet from the sun, retrograde motion, hottest planet.
9. The fourth terrestrial planet from the sun, thin atmosphere, largest volcano is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
10. The sixth gas giant from the sun, largest rings, most moons is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
11. The 7th gas giant from the sun, rotates sideways, first to be discovered with a microscope is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
12. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the planet-like object beyond Neptune, made of rock and ice.
13. The 8th gas giant from the sun, many clouds is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Identify the planets as being either terrestrial (T) or gas giant (G).

1. \_\_\_\_\_Neptune
2. \_\_\_\_\_Earth
3. \_\_\_\_\_Saturn
4. \_\_\_\_\_Jupiter
5. \_\_\_\_\_Venus
6. \_\_\_\_\_Uranus
7. \_\_\_\_\_Mercury
8. \_\_\_\_\_Mars

Determine whether the statement is true (T) or false (F).

1. \_\_\_\_\_Mercury rotates slower than Earth.
2. \_\_\_\_\_The most similar planet to Earth is Mars.
3. \_\_\_\_\_Mars and Earth are the only planets with liquid water.
4. \_\_\_\_\_Jupiter is made mostly of hydrogen and helium.
5. \_\_\_\_\_Years get shorter as we move away from the sun.
6. \_\_\_\_\_Uranus is tipped on its side.

Put the planets in order from smallest to largest. Use numbers.

1. \_\_\_\_\_Mercury
2. \_\_\_\_\_Venus
3. \_\_\_\_\_Earth
4. \_\_\_\_\_Mars
5. \_\_\_\_\_Jupiter
6. \_\_\_\_\_Saturn
7. \_\_\_\_\_Uranus
8. \_\_\_\_\_Neptune
9. Most planets spin counter clockwise on their axis. This is
	1. Prograde rotation
	2. Prograde revolution
	3. Retrograde rotation
	4. Retrograde revolution
10. Which of these planets does not have any moons?
	1. Mercury
	2. Uranus
	3. Mars
	4. None of the above
11. Liquid water cannot exist on the surface of Mars because
	1. The temperature is too hot
	2. Liquid water once existed there
	3. The gravity of Mars is too weak
	4. The atmospheric pressure is too low
12. Which of the following planets is not a terrestrial planet?
	1. Mercury
	2. Mars
	3. Earth
	4. Pluto
13. Which of the following planets has rings?
	1. Mercury
	2. Pluto
	3. Venus
	4. Uranus
14. This planet has retrograde rotation.
	1. Mars
	2. Mercury
	3. Uranus
	4. Venus
15. This planet has days that are longer than its years.
	1. Mercury
	2. Uranus
	3. Venus
	4. Jupiter
16. This planet rotates on its side.
	1. Jupiter
	2. Saturn
	3. Venus
	4. Uranus
17. The planet with the shortest year is
	1. Mercury
	2. Neptune
	3. Pluto
	4. Mars
18. The planet with the longest year is
	1. Mercury
	2. Neptune
	3. Jupiter
	4. Saturn
19. All of the gas giants have
	1. Moons
	2. Rings
	3. Volcanoes
	4. Both a and b

Planets Critical Thinking

1. What three characteristics do the inner planets have in common?
2. List three similarities between Venus and Earth.
3. Why is Venus hotter than Mercury?
4. What is unusual about Uranus’s axis of rotation?
5. Why is the word surface not included in the statistics for the gas giants?
6. Why is Saturn less colorful than Jupiter?
7. What are rings?
8. What are three differences between gas giants and terrestrial planets?
9. What does Earth have that the other planets don’t that makes life possible?
10. Why is a day on Venus longer than a year on Venus?

Planets Concept Map

Use the following terms to create a concept map: largest planet, Mercury, liquid water, Jupiter, retrograde motion, Venus, planet, terrestrial, axis on its side, Saturn, biggest volcano, Earth, gas giant, Uranus, most rings, Mars, smallest planet, farthest from sun, Neptune.

1. The gas giants have many more moons than the terrestrial planets. Explain why this is so? (the answer may not be in your notes)
2. What is one explanation for Uranus being on it’s side?
3. What happens to the length of a year as planets get farther from the sun? Explain.
4. Why is it unlikely that we will find life on Mars?
5. What do the eight planets have in common? Hint: what makes them planets?

**Planets**


Across

2. third terrestrial planet from the sun, liquid water

5. planet-like object beyond Neptune, made of rock and ice

7. small, dense, rocky planets of the inner solar system

8. first terrestrial planet from the sun, smallest planet

10. fifth gas giant from the sun, largest planet, made of hydrogen and helium

11. the counterclockwise spin of a planet or moon as seen from the planets north pole

12. 8th gas giant from the sun, many clouds

Down

1. the large, gaseous planets of the outer solar system

3. sixth gas giant from the sun, largest rings, most moons

4. second terrestrial planet from the sun, retrograde motion, hottest planet

6. 7th gas giant from the sun, rotates sideways, first to be discovered with a microscope

8. fourth terrestrial planet from the sun, thin atmosphere, largest volcano

9. the clockwise spin of a planet or moon as seen from above the planet's north pole

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| S | T | K | J | J | D | B | A | T | S | Q | Q | W | E | O | P | U | M | O | Z |
| U | U | E | I | Z | M | G | R | R | Y | F | Y | P | I | Q | T | P | D | I | G |
| U | K | N | N | A | K | A | F | W | S | Z | T | T | X | A | W | I | U | T | C |
| Q | P | B | A | A | E | C | I | N | L | U | A | S | H | N | I | T | U | A | P |
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| G | A | S | G | I | A | N | T | S | B | R | J | C | Q | J | U | J | V | A | C |
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| J | H | O | P | L | V | K | F | F | Z | T | A | N | E | E | Y | C | I | O | S |
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| C | F | Q | U | B | B | C | O | P | L | G | I | N | Y | E | O | A | C | B | F |

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|  |
| EARTH | GASGIANTS | JUPITER |
| MARS | MERCURY | NEPTUNE |
| PLUTO | PROGRADEROTATION | RETROGRADEROTATION |
| SATURN | TERRESTRIALPLANETS | URANUS VENUS |
|  |  |  |



Test Prep

26) When elements form mixtures, the elements

A) keep their original properties.

B) react to form a new substance with new properties.

C) combine in a specific mass ratio.

 D) always change their physical state.

 27) Which of the following is NOT true of compounds?

A) The unique set of properties of a compound differ from the properties of the elements that

make up the compound.

B) The particles are made of atoms of two or more elements that are chemically combined.

C) Different samples of any compound have the same elements in the

same proportion.

 D) They can be separated by physical methods.

 28) How is a mixture different from a compound?

A) Mixtures have two or more components.

B) Each substance in a mixture keeps its characteristic properties.

 C) Mixtures are commonly found in nature.

D) Solids, liquids, and gases can form mixtures.

 29) During what type of reaction do the atoms of two or more elements join together

to form compounds?

A) reaction with acid

B) physical reaction

C) chemical reaction

D) chain reaction

 30) When materials combine to form a mixture, they

A) keep their original properties.

B) react to form a new substance with new properties.

C) combine in a specific ratio.

D) always change their physical state.