

Exam Practise Questions- Grd 5 Science- General

1) Which of the following indicate that a chemical reaction has occurred?

A.the formation of gas bubbles

B. a change in color

C.an odor

D. all of these indicate that a chemical reaction has occurred.

2) The particles that make up gases are

A.very close together

B.very far apart

3) How are reflectivity and solubility related?

Both are physical properties of matter. We can observe both these properties.

4) You are performing an experiment combining two substances in a closed container. You first pour 350 mL of substance one followed by 430 mL of substance two.

A chemical reaction occurs.

Choose the equation below that would best explain the total mass of the combined substances.

A. $430\text{ mL} - 350\text{ mL} = 80\text{ mL}$

B. $350\text{ mL} \times 430\text{ mL} = 780\text{ mL}$

C. $350\text{ mL} + 430\text{ mL} = 780\text{ mL}$

D. $780\text{ mL} - 430\text{ mL} = 350\text{ mL}$

5) A----- property is a characteristic that can be observed and measured without changing the material.

A. **Physical**

B. Chemical

6) A ----- produces new matter with new and different properties.

A. physical change

B. chemical property

C. **chemical change**

D. physical property

7) The ability to burn is an example of a physical property. (combustibility)

A. True

B. **False**

8) —**Reflectivity**-----is a physical property that describes how light reflects off of an object

9) The amount of space an object takes up is its ____.

A. matter

B. mass

C. **volume**

D. property

10) A boiled egg in its shell weighs -----as a raw egg in its shell.

A.more than

C.less than

B.the same as

11) What would happen to the weight of an ice cube if it melted?

A.It would weigh a little more.

B.t would weigh a lot less.

C.It would weigh the same.

D.It would weigh a lot more.

12) Which mixture is a solution?

A.muddy water

B.cranberry juice

C. potting soil

D.milk

13) The ability of matter to dissolve in a liquid is called

Solubility

14) Gases have -----

A. definite shape and definite volume

B. definite shape and no definite volume

C. no definite shape and no definite volume

D. no definite shape and definite volume

15) The property of a material to transmit heat and electricity is **conductivity**-----

16) Which is an example of a physical change?

A. a candle burning

C. **ice cream melting**

B. rust on a bicycle

D.D.a firework exploding

17) A force of attraction between any two objects is called

A.static electricity

B.rotation

C.**gravity**

D.orbit

18)-----is the path one object takes around another object.

A.**An orbit**

B. A rotation

19) A chunk of rock from space that travels through Earth's atmosphere is called a -----

A.meteoroid

B.**meteor**

C.asteroid

D.comet

20) We do not feel Earth move because —————

A. we move with Earth as it rotates

B. Earth moves very slowly

21) If you threw a ball up on the Moon, it would go up 6 times higher than on Earth.

Explain how this is possible.

Moon is smaller mass than earth. Moon has 6 times less gravity than the earth, therefore ball will go up 6 times more higher on moon than on earth.

22) Which would be the most likely outcome of a meteorite's encounter with Earth?

A. The meteorite orbits around Earth.

B. The meteorite flies past Earth.

C. The meteorite hits Earth and makes a crater.

D. The meteorite burns in Earth's atmosphere

23) Earth completes one full _____ on its axis every 24 hours.

A. rotation

B. revolution

C. resolution

D. reservation

24) What causes daily changes in length and direction of shadows?**Explain your answer.**

The position of the sun at different times of the day causes the length and direction of shadows to change.

When the sun is directly overhead at midday, the shadow is the shortest.

Sample answer: A shadow will change direction and length as the Sun appears to move across the sky.

Look at the data

In the morning the shadow is long and it gets shorter and shorter till midday. After midday it starts getting longer again

Time of Day	9:00 a.m.	10:30 a.m.	1:00 p.m.	2:00 p.m.
Length of Shadow	276 cm	149 cm	85 cm	90 cm

25)

The tilt of Earth's _____ affects the seasons.



- ☐ axis
- ☐ poles
- ☐ equator
- ☐ core

Answer:

Axis

26) Explain the difference between meteors and meteorites

A meteor is a space rock that enters earth's atmosphere. It glows and looks like a shooting star.

A meteorite is a space rock that hits the earth and forms a crater

27) The students learn that as meteors enter Earth's atmosphere, they speed up and fall toward the ground.

Which statement best describes the direction of force that affects the meteor's movement?

- A. The force comes from Earth and pulls the meteor downward.
- B The force comes from Earth and pushes the meteor across the sky.
- C The force comes from the Sun and pulls the meteor downward.
- D The force comes from the Sun and pushes the meteor across the sky

28) Larger, round objects in space that orbit a star are called -----

A.constellations

B.planets

29) Planets in our solar system orbit the -----

A.Sun

B.Earth

C.Milky Way Galaxy

D.Asteroid Belt

30) A chunk of rock from space that travels through Earth's atmosphere is called a -----

A.meteoroid

D. comet

B.meteor

C.asteroid

Vocabulary you should know

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chemical change a change that produces new matter with different properties from the original matter



chemical property a characteristic that can only be observed when the type of matter changes



colloid a type of mixture in which the particles of one material are scattered through another without settling out

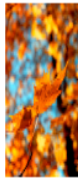


Condensation the process through which a gas changes into a liquid



conductivity ability for energy, such as electricity and heat, to move through a material

conservation of mass a physical law that states that matter is neither created or destroyed during a physical or chemical change



evaporation a process through which a liquid changes into a gas



gravity the force of attraction between any two objects due to their mass



galaxy a collection of billions of stars, dust and gas that is held together by gravity



gas a state of matter that does not have its own shape or definite volume



light year the distance light travels in a year



liquid a state of matter that has a definite volume but no definite shape



magnetism the ability of a material to be attracted to a magnet without needing to be a magnet themselves



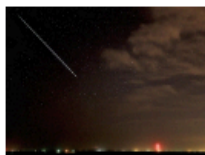
mass the amount of material in an object



matter anything that has mass and takes up space



meteor a chunk of rock from space that travels through Earth's atmosphere



meteorite A meteor that strikes Earth's surface



physical change a change of matter in size, shape, or state that does not change the type of matter



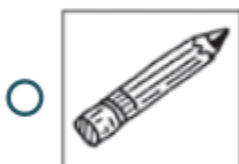
physical property a characteristic of matter that can be observed and or measured

planet a large, round object in space that orbits a star



More Practise Questions from Inspire Science

1) Which would have the most mass?



Answer: Book

2. A -----stays in a definite shape and has a definite volume.

A. solid

B. liquid

3. Which does not represent a physical change?

A. cutting

B. burning

C. folding

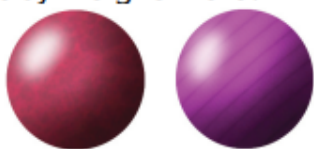
4. When mixing two substances, bubbles start to form. This is ----- change.

A. chemical

B. Physical

5.

) Sam and Sara both have balls of clay shown below. Both balls have the same amount and type of clay. Sam shapes his into one big circle and Sara shapes hers into five small hearts. Whose clay weighs more?



- ☐ Sam's
- ☐ Sara's
- ☐ They both weigh the same.

Both weigh the same.

6. Mixing sugar and tea creates a -----mixture.

A. Heterogenous

B. **Homogenous**

7. An ice cube melts after it was left in a cup.

Which statement explains why this is a reversible change?

A. The water cannot be frozen again.

B. The water will boil when it is heated.

C. **The water can be frozen into an ice cube**

D. The water will weigh less than the ice cube did.

8. The Northern Hemisphere experiences winter when-----

A. it is tilted toward the Sun

B. it is tilted away from the Sun

C. Earth is closest to the Sun

D. Earth is farthest away from the Sun

9. Earth completes one full _____ on its axis every 24 hours.

A. rotation

B. revolution

C. resolution

D. reservation

10. When it is summer in the Southern Hemisphere, it is—winter----- in the Northern Hemisphere.

11. Earth spins on an imaginary line called its-----

A. hemisphere

B. meridian

C. axis

D. rod

12. Earth's -----causes the change in the seasons.

A. rotation on its axis

B. revolution around the Sun

13. Which is the largest of all the planets?

A. Neptune

B. Saturn

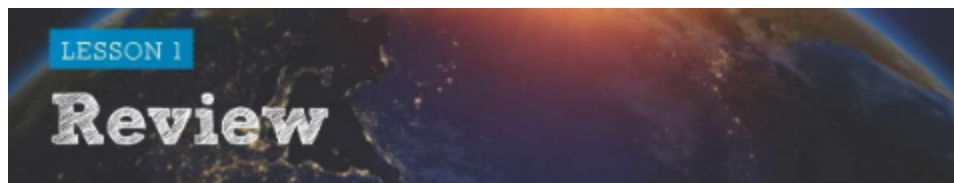
C. Uranus

D. Jupiter

14. When we say the Sun rises in the east and sets in the west, we are describing the -----of the Sun.

A. Orbit

B. Apparent path



EXPLAIN THE PHENOMENON

What does the sunrise
look like where you live?

Summarize It

Explain Earth's location in space and how its location affects what we see in the night sky.

Sample answer: Earth is located third from the Sun in the solar system. The solar system is in the Milky Way galaxy. Earth's location determines what is visible in the night sky because of its orbit around the Sun.



Three-Dimensional Thinking

1. Based on the data table, what conclusion can you draw?

Planet	Length of Day (hours)	Length of Year (Earth years)	Distance from the Sun (AU)
Mercury	1,408	0.2	0.4
Venus	5,832	0.6	0.7
Earth	24	1.0	1.0
Mars	25	1.9	1.5
Jupiter	10	11.9	5.2
Saturn	10	29.4	9.5
Uranus	17	84.0	19.2
Neptune	16	164.8	30.0

- A. The farther a planet is from the Sun, the longer its day.
- ☒ B. The farther a planet is from the Sun, the longer its year.
- C. A day on Earth is longer than a day on Venus.
- D. Uranus is the coldest of all the planets.

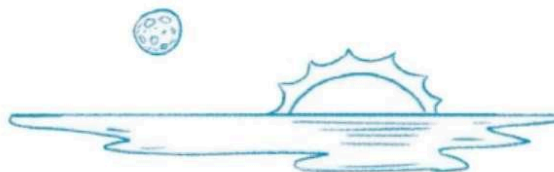
2. A planet is a large, round space object that _____ the Sun.

- A. attracts
- ☒ B. orbits
- C. follows
- D. reflects

3. Circle all that apply.

Stars appear to move in the sky because of Earth's _____.

- A. axis
- ☒ B. rotation
- C. poles
- D. galaxies
- ☒ E. revolution





Three-Dimensional Thinking

1. Which property measures the space taken up by an object?

- A. hardness
- B. mass
- ☒ C. volume
- D. weight

2. Use information you have obtained to explain how properties of matter can be measured.

Sample answer: Magnetism can be measured by placing a magnet close to an object, mass can be measured with a balance, and the volume of a liquid can be measured with a beaker or a measuring cup.

3. Describe at least three physical properties that can help identify copper.

Sample answer: Copper has a reddish-brown color and can take on many different shapes because it is able to be formed. Copper can conduct electricity and reflect light.



Three-Dimensional Thinking

1. Which mixture is most likely a solution?

- A. muddy water
- ☒ B. cranberry juice
- C. potting soil
- D. milk

2. How are mixtures formed and separated?

Sample answer: Mixtures are formed from the physical combination of materials such as stirring. They can be separated using different techniques depending on their physical properties. Some examples may include sorting materials by hand, using tools such as a sieve or magnet, or by the process of evaporation.

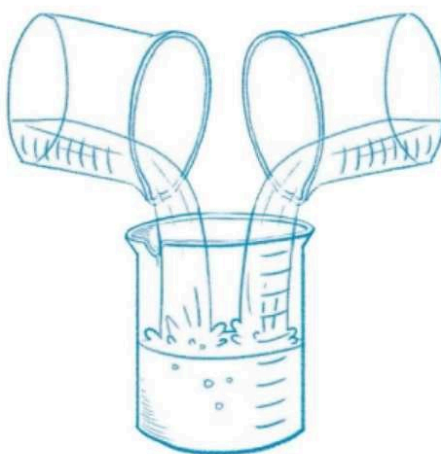


Three-Dimensional Thinking

Think about a scenario for an experiment. You combine 500 g of one material and 200 g of another in a closed container. A chemical reaction occurs. What can you say about the mass of the materials after they combine and go through the reaction? Choose a simple mathematical equation to support your answer.

- A. $500\text{ g} - 200\text{ g} = 700\text{ g}$
- ☒ B. $500\text{ g} + 200\text{ g} = 700\text{ g}$
- C. $700\text{ g} - 500\text{ g} = 200\text{ g}$
- D. $500\text{ g} \times 200\text{ g} = 700\text{ g}$

Sample answer: The mass of the materials after they go through the reaction would be the same as the sum of the materials before they react. Since it is in a closed container, if there are any gases that are a result of the reaction, they will be part of the total mass.



Model Matter

You have learned about the three main states of matter and how the organization of their particles affects how they behave.



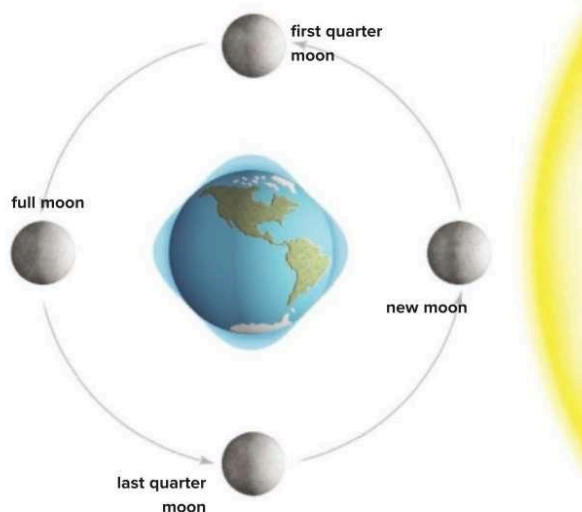
Choose an object for each of the three states of matter. Draw each object. Use unit cubes to **develop and use a model** to show **the scale** of the volume and number of particles in the object and how the particles in each object are organized. Add this information to your drawings. Below each model, describe how the arrangement of the particles determines the properties of each of the objects.

Solid	Liquid	Gas
Students can draw any object that is a solid. In their drawing, they can add that the particles in the solid are packed tightly together.	Students can draw any object that is a liquid. In their drawing, they can add that the particles in the liquid are loosely packed together and move past one another.	Students can draw any object that is a gas. In their drawing, they can add that the particles in the gas are very far apart from each other and move rapidly.



Three-Dimensional Thinking

The Moon orbits around Earth due to gravity. Throughout the Moon's orbit, there appears to be changes in Earth's water level. You have learned that these are called tides.



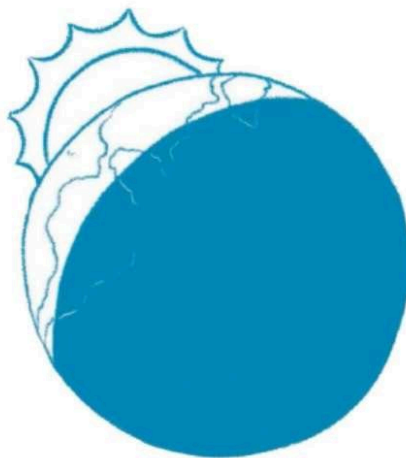
1. Based on what you know about gravity, what causes Earth's changing tides?
 - A. Tides are caused by tropical storms such as hurricanes.
 - ☒ B. Tides are caused by the pull of gravity between Earth and the Moon.
2. What causes the tide to bulge on the side of Earth facing the Moon?
 - ☒ A. Earth's water bulges on the side facing the Moon because of the pull of gravity.
 - B. The Moon reverses its orbit and causes the tides to change.



Three-Dimensional Thinking

1. Based on what you learned about the patterns of Earth's movement, how does the illustration below show how Earth experiences day and night?

Sample answer: The illustration below shows that one side of Earth faces the Sun at a time. As Earth rotates on its axis and revolves around the Sun, one of the patterns of its movements that takes place is the day and night cycle.



2. The Moon looks completely dark as seen from Earth. What causes a new moon?
 - A. The side of the Moon that is lit by the Sun can be seen from Earth.
 - ☒ B. The side of the Moon that is lit by the Sun cannot be seen from Earth.

