

مدرسة غياثي المشتركة
منطقة الظفرة التعليمية

تربية وتعليم

من المهارة الى
الصدارة

مبادرة معكم غياثي

مراجعة مادة العلوم للصف الخامس
حسب الهيكل التنظيمي لاختبار العلوم
نهاية الفصل الدراسي الأول
2025/2026

معلمة المادة : ميسون علي الطويل

مديرة المدرسة: أ/ موزة سعيد المنصوري

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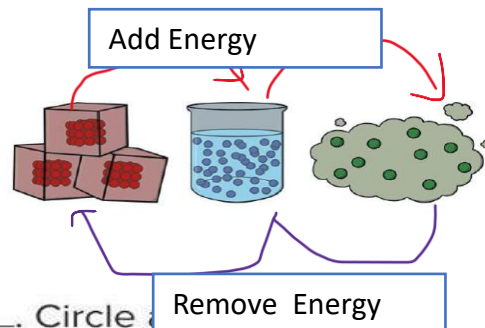
Question* السؤال*	Learning Outcome/Performance Criteria** ناتج التعلم / معايير الأداء**	المراجع في كتاب الطالب (النسخة الانجليزية)	
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Three-Dimensional Thinking

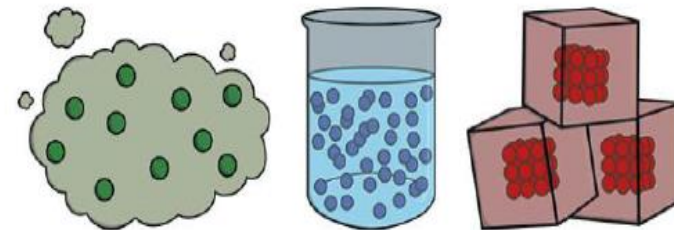
1. How does matter change from one state to another?
Circle all that apply.

- ☒ A. adding energy
- ☒ B. removing energy
- C. adding mass
- D. removing volume



2. Liquid has _____. Circle:

- ☒ A. definite volume
- B. definite shape
- C. no definite volume
- ☒ D. no definite shape



2. A _____ has a definite shape and a definite volume.

a. **solid** b. liquid c. Gas

3. A _____ has no definite shape but has a definite volume.

a. solid b. **liquid** c. Gas

4. A _____ has no definite shape and no definite volume.

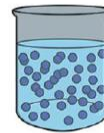
a. solid b. liquid c. **Gas**

Describe the properties of liquids in terms of shape and volume.

1. A _____ has a definite shape and a definite volume.
a. **solid** b. liquid c. Gas
2. A _____ has no definite shape but has a definite volume.
a. solid b. **liquid** c. Gas
3. A _____ has no definite shape and no definite volume.
a. solid b. liquid c. **Gas**

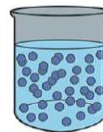
4. Liquid has _____

- A. definite shape and a definite volume
- B. no definite shape but has a definite volume
- C. no definite shape and no definite volume
- D. definite shape and no definite volume



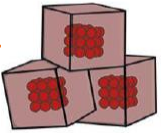
5-Liquid has _____

- A. definite shape
- B. **definite volume**
- C. no definite volume
- D. **No definite shape**



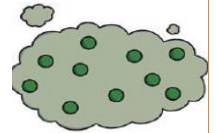
6-Solid has _____

- A. **definite shape and a definite volume**
- B. no definite shape but has a definite volume
- C. no definite shape and no definite volume
- D. definite shape and no definite volume



7-Gas has _____

- A. definite shape and a definite volume
- B. no definite shape but has a definite volume
- C. **no definite shape and no definite volume**
- D. definite shape and no definite volume



MCQ / 2

Is it Matter?



Four friends were talking about matter. They each had different ideas about the kinds of things that are matter. This is what they said:

Abe: I think something needs to be solid to be matter.

Kayla: I think matter can be a solid or a liquid.

Curtis: I think matter can be a solid, liquid, or gas.

Lori: I think matter can be a solid, liquid, or gas, but it doesn't include living things.

Who do you agree with most? **Curtis**

Explain why you agree.

Sample answer: Matter is made of particles and is what makes up all objects. Matter can be in the form of a solid, a liquid, or a gas.

1-Anything that has mass and takes up space.

- A. volume B. mass
C. **matter** D. physical property

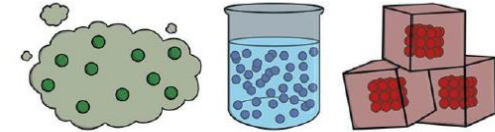
2- what are the three states of matter

A. **Solid , liquid and Gas**

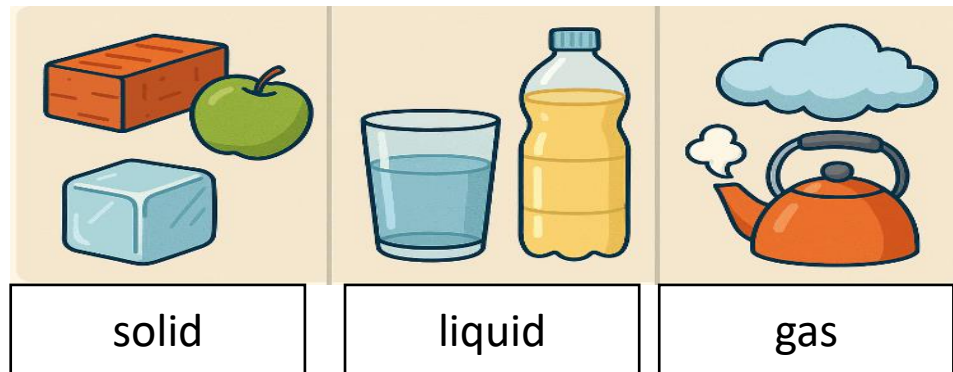
B. Solid and liquid

C. Solid and Gas

D. Solid liquid or gas , it does not include living things



3-What is the state of matter in each image



solid

liquid

gas

4-Which is **NOT** one of the three common forms of matter?

- A. solid B. liquid C. gas D. **density**

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MCQ / 3

Describe the relationship between mass and volume as properties of matter.

1. Matter is anything that has: a) weight only b) mass and volume c) gravity d) energy only	4-Which has more mass <u>golf ball</u> or <u>tennis ball</u>? and why? a) The golf ball has more mass, it has more matter than tennis ball, b) The tennis ball has more mass, it is larger and take more space c) The golf ball has less mass, than tennis ball,
2. What is the term for How large or how small an object is. A-Matter B-mass C-Volume D Temperature	4-Which has more VOLUME <u>book 1</u> or <u>book 2</u>? and Why? a. book (1) because it is larger and take more space b. book (2) because it has more space. c. book (1) because it has more of matter



Question 3 : Short answer يجب على الطالبة حفظ الإجابة

1-Which one has **more volume** marbles bag or inflated balloon ?Explain

.....

.....

Question 3 : Short answer يجب على الطالبة حفظ الإجابة

2-Which one has **more mass** marbles bag or inflated balloon ?Explain your answer.

.....

.....

Sample answer: The balloon has more volume, because it takes up more space.

معلمة المادة : ميسون علي الطويل



Sample answer: The bag of marbles has more mass, because it contains more matter.

MCQ / 3 Describe the relationship between mass and volume as properties of matter.

1-Which one has **more volume** marbles bag or inflated balloon ?Explain why ?

- a. The balloon has more volume .because it has more matter
- b. The bag of marble has more volume .because it has more mass.
- c. **The balloon has more volume .because it takes up more space**
- d. The bag of marble has more volume .because it takes up more space



2-Which one has **more mass** marbles bag or inflated balloon ?Explain why.

- a. The balloon has more mass .because it contains more matter
- b. **The bag of marble has more mass .because it contains more matter.**
- c. The balloon has more mass .because it takes up more space
- d. The bag of marble has more mass .because it takes up more space



مهم جدا يرجى حفظ السؤال و الجواب وليس فقط رمز الإجابة

معلمة المادة : ميسون علي الطويل

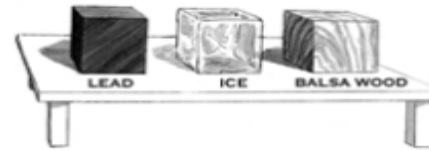
fill in the blank : Mass// volume // matter // space

MCQ / 4

Define the following terms: matter, mass, volume.

- 1-Matter is anything that has Mass and takes up space.
2. The amount of space taken by an object is called volume.
3. Mass is the amount of matter in an object.
4. When an object has more particles, it has more Mass.
5. How large or how small an object is referred to volume.

5) Anita places three cubes on a table. One cube is lead, the second is ice, and the third is balsa wood. The sides of each cube are exactly 3.5 centimeters long.



Which do all three cubes have in common?

- ☐ the same mass
- ☐ the same weight
- ☒ the same volume
- ☐ the same temperature

DEFINE THE FOLOWING TERM

1-Matter :

is anything that has mass and takes up space

2. Volume is :-

The amount of space taken by an object

3. Mass is :

a measure of the amount of matter in an object.

4 volume

. How large or how small an object is

المطلوب حفظ معاني المفردات باللون الأصفر

معلمة المادة : ميسون علي الطويل

Question 1: Match the word with the correct definition:

- | | |
|----------|---|
| 1-Mass | a. The amount of space an object takes up |
| 2-Volume | b. Anything that has mass and takes up space. |
| 3-Matter | c. The amount of matter in an object. |

Gases have no definite shape or volume. The particles in a gas are much farther apart than particles in solids or liquids. They can move around each other very easily. Gases spread out and completely fill a closed container. If you make the container bigger, the same amount of gas will expand to fill it.

Read the passage above then use it to answer the following questions:

1. Which comparison between gases and solids is correct?

- A. Gas particles are farther apart than solid particles.
- B. Gas particles are closer together than solid particles.
- C. Gas particles cannot move while solids can.
- D. Gas particles have a fixed shape while solids do not.

2. Which best explains why gases can be compressed more easily than solids or liquids?

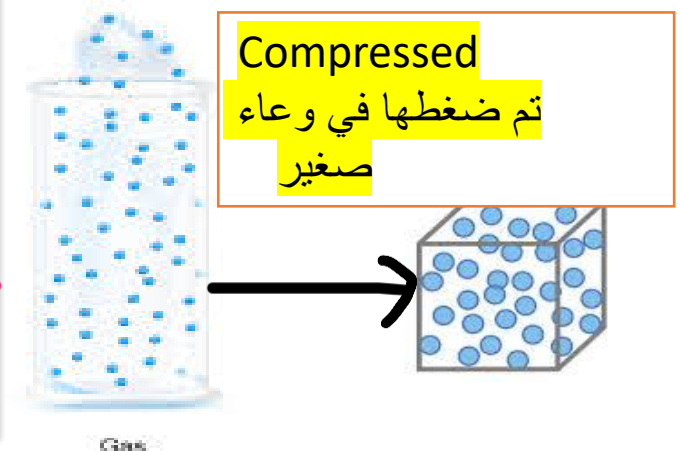
- A. Gas particles are very far apart with lots of empty space
- B. Gas particles are tightly packed together
- C. Gas particles cannot move at all
- D. Gas particles are heavier than solids

MCQ / 5: Gas

Describe properties of gases in terms of arrangement of particles.:

صفحة 56

مهم جدا يرجى حفظ السؤال و الجواب وليس فقط
رمز الإجابة



معلمة المادة : ميسون علي الطويل

Define physical and chemical changes.

Summarize:

1-What is a chemical change?

A change that produces new matter with different properties from original matter.

2-What is a physical change?

A change begins and ends with the same kind of matter.

Use the following passage to answer questions 6, 7 and 8

Changes in Matter

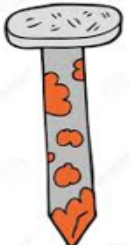
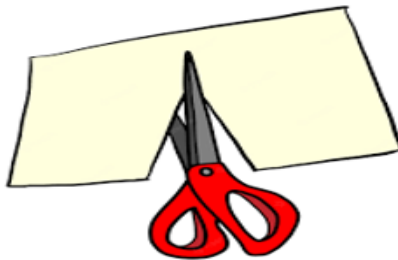
Think about the ways the banana was changing. Matter can be changed in many ways. A

physical change begins and ends with the same kind of matter. A

chemical change—also called a **chemical reaction**—is a change that produces new matter with different properties from the original matter. The law of **conservation of mass** states that **matter is neither created nor destroyed during a physical change or chemical reaction**. For example, when you mix baking soda with vinegar, particles in the baking soda and vinegar link up in new ways. During the chemical change, bubbles form and a solid is left behind. The new substances are different materials.

GO ONLINE Watch the video *Identifying Chemical Changes* to learn more about how to recognize a chemical change.

Q2 :- Chemical change or physical change

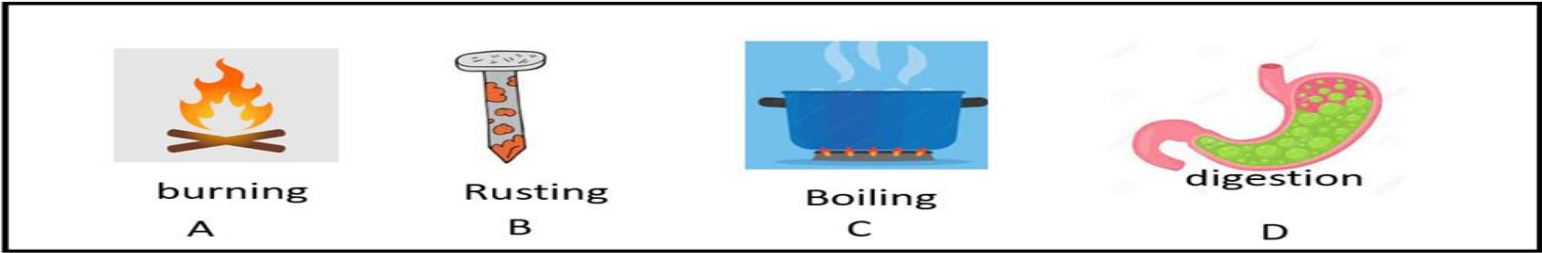
Glass breaking	Nail rusting	Frying an egg	Cutting of paper into pieces
			
physical change	Chemical change	Chemical change	physical change

MCQ 7:

Identify given examples as physical or chemical changes based on evidence.

Use the figure to identify which letter represents a chemical property?	
	
A	A
B	B
C	C
D	D

Use the figure to identify physical change or chemical ?

			
Chemical change	Chemical change	Physical change	Chemical change

MCQ 7:

Identify given examples as physical or chemical changes based on evidence.

Use the figure to identify which letter represent physical change ?		
 burning A  Rusting B  Boiling C  digestion D		
A		C
B		D

Identify as physical or chemical change

I	 Combustion	Chemical change
II	 Rusting	Chemical change
III	 Digestion	Chemical change
IV	 Boiling	Physical change

MCQ 7:

Identify given examples as physical or chemical changes based on evidence.

 cutting an apple ☒ physical change ☐ chemical change	2)  baking a cookie ☒ physical change ☐ chemical change
3)  burning wood ☐ physical change ☒ chemical change	4)  melting ice ☒ physical change ☐ chemical change

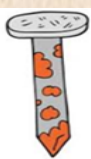
13-Which of the following is NOT an example of a physical change?



Which of the following is Not example of chemical change ?



Identify as physical or chemical change

I	 burning	Chemical change
II	 Rusting	Chemical change
III	 digestion	Chemical change
IV	 Boiling	Physical change

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MCQ :8

Apply the Law of Conservation of Mass to physical changes.

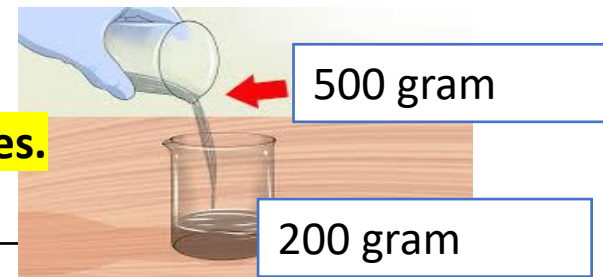
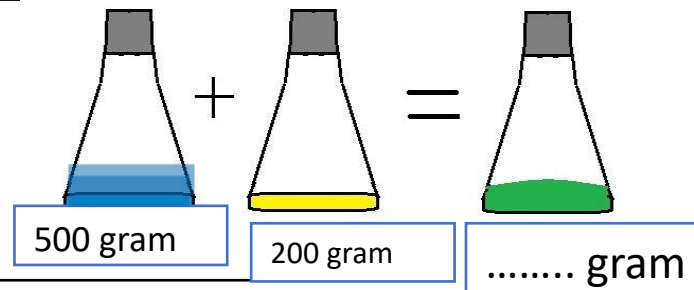
You combine 500 g of one material and 200 g of another in a closed container. A chemical change occurred. What can you say about the masses of the materials after the chemical change?

1-What law are you using?

Answer: law of conservation of mass

2-What is the total mass after the chemical reaction ?

$$500 + 200 = 700 \text{ gram}$$

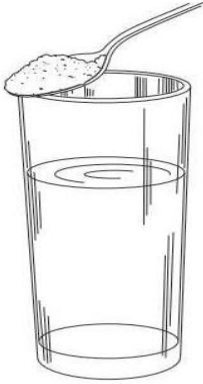


Select the correct choice.

Sara mixed 300 g pistachio, 350 g almonds, and 250 g cashews together. Sara found that the total mass of the mixture was 900 g. What do you conclude?

- ☐ The mass of the mixture is less than the total of its parts' masses.
- ☐ The mass of the mixture can't be known from its parts' masses.
- ☒ The mass of the mixture is the total of its parts' masses.
- ☐ The mass of the mixture is greater than the total of its parts' masses.

Salt and Water



A spoonful of salt has a mass of 10 grams. A cup of water has a mass of 300 grams. What do you predict will be the total mass of the saltwater when the salt is dissolved in the water? Circle the answer that best matches your thinking.

- A. more than 300 grams
- B. less than 300 grams
- C. 300 grams

Explain your thinking. What reasoning did you use to make your prediction?

Sample answer: Since the mass of the water is 300 grams, adding more mass to the water would increase its mass, even if the salt seems to disappear.

You will revisit the Page Keeley Science Probe later in the lesson.

MCQ :9

Apply the Law of Conservation of Mass to physical changes.

What is the type of change when you add 10 gram of salt to 300 gram of water

Answer: physical changes –mixture (solution)

what is the total mass before and after ?

The mass before mixing 300+10

Must equal to the total mass 310 gram

What law are you using?

Answer: law of mass conservation

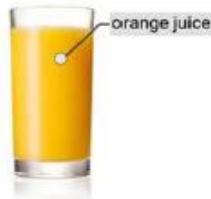
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What is a mixture?

Mixture - physical combination of **two or more** substances

TYPES OF MIXTURES

Homogeneous Mixtures



parts are uniform throughout
you **CANNOT SEE** the different
parts of the mixture
Special type: Solution

Heterogeneous Mixtures



parts are **NOT** uniformly mixed together
you **CAN** see the different parts of the
mixture
Types: Suspension and Colloids

Solutions

A **solution** is a special type of mixture.

A solution is a homogeneous mixture
that combines a solute and a solvent.

A solution involves one
substance that is
completely dissolved in
another substance



Key Words

Mixture
الخليط

Homogeneous Mixture
خلي متجانس

Heterogeneous Mixture
خليط غير متجانس

Solution المخلول

Colloid الخليط الغروي

Suspension مُعلق

Heterogenous

suspension

Parts settle out over time
(showing the parts of the mixture).



Muddy water

colloid

Parts are so small they do not settle out over time.



Whipped cream



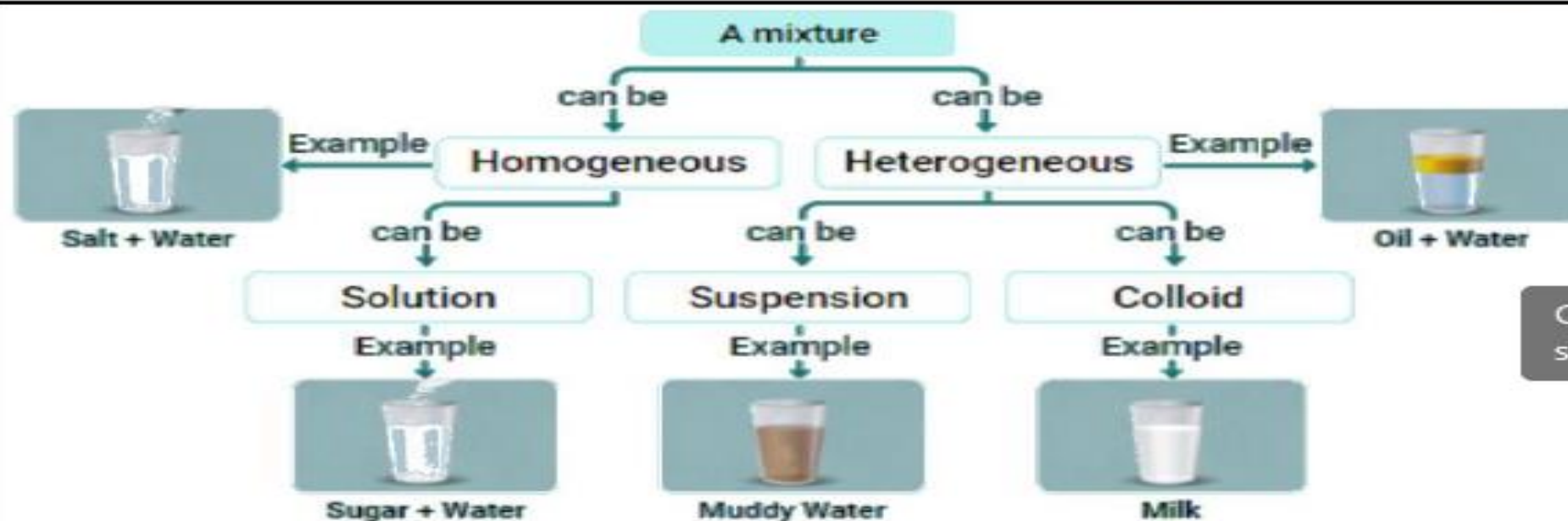
mayonnaise



fog



aerosol



MCQ :10 a**Investigate mixtures and classify them.****Three-Dimensional Thinking**

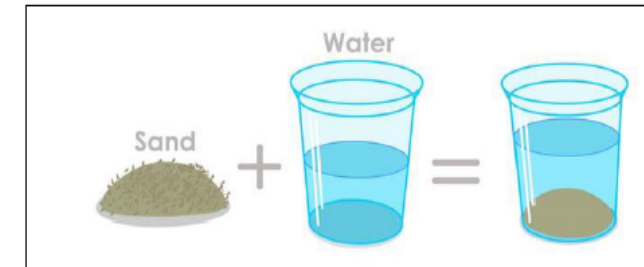
1. Which mixture is most likely a solution?

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

Part C. Multiple Choice.

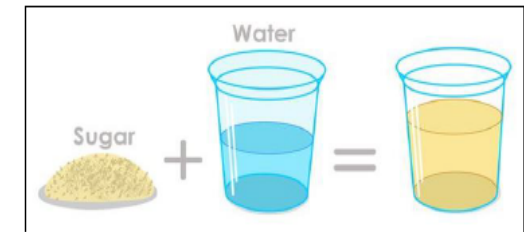
13. The image on the right is a

- A. solution
- B. homogeneous mixture
- C. suspension**



14. The image on the right is a

- A. solution**
- B. heterogeneous mixture
- C. suspension



15. The bowl of cereals with milk is a

- A. solution
- B. heterogeneous mixture**
- C. colloid



Fill in the blanks:

1. _____ **mixture** _____ is a physical combination of two or more substances.
2. In a _____ **Heterogeneous** _____ mixture, you can see the parts.
3. In a _____ **Homogeneous** _____ mixture, you cannot see the parts.
4. A _____ **solution** _____ involves one substance that is completely dissolved
in another substance.
7. The parts of a _____ **colloid** _____ do not settle out as they are very small.

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.

MCQ :10 b

How are mixture formed and separated

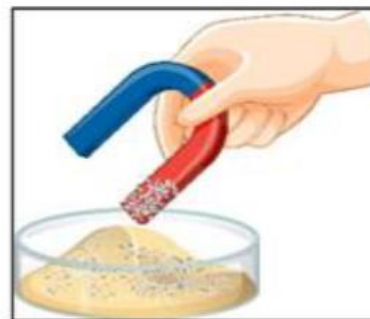
Part D. Identify the method used to separate the mixtures.



17.



18.



19.



20.



Evaporation

Separated method

Sorting by hand

Filtration

Use Magnet

Use a sieve

Type of mixture

Heterogeneous

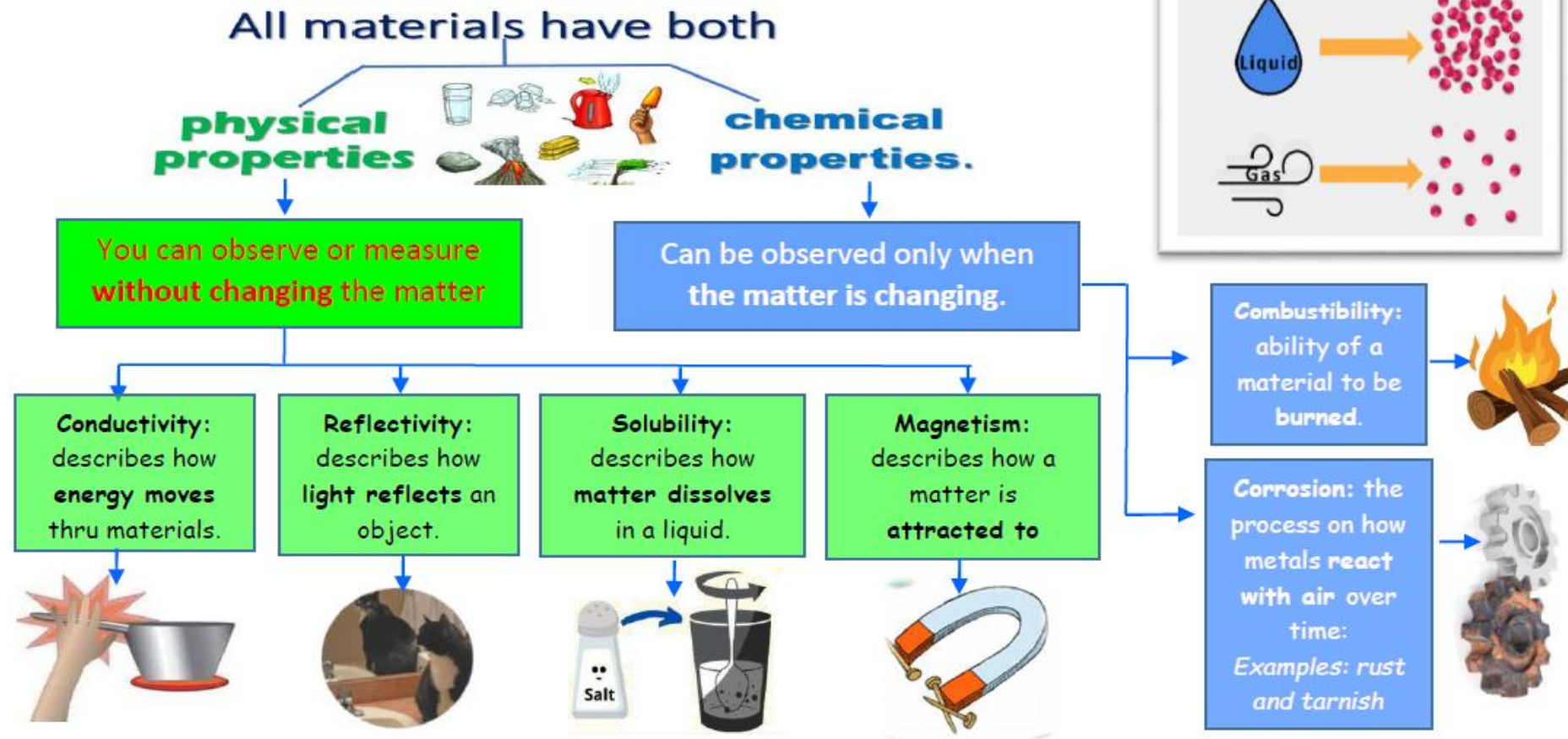
Heterogeneous
Sand and water

Heterogeneous
Sand and iron

Heterogeneous
Small
sand/large sand

Homogeneous
Sugar and water

describe matter.



MCQ :11**Identify physical properties of solids.**

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.



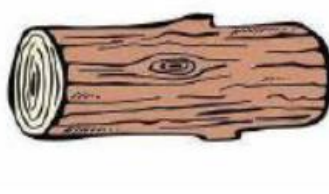
19. Which of the following can conduct electricity?



A



B



C



D

MCQ :11

Identify physical properties of solids.

1-copper can be found in many shapes. Is it a physical or chemical property?

Physical property chemical property chemical property

2-Which material you will use to conduct electricity ?

A . Wood b . copper c. paper

3-Which list are the correct properties of copper ?

A. non-magnetic, conductor, able to formed, reflect light

B. magnetic, insoluble, insulator

C. magnetic, insoluble, conductor



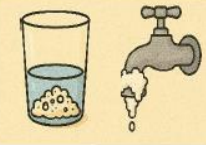
Describe 4 additional possible signs of chemical change.

<u>SIGN of Chemical Change</u>	<u>Example</u>
Change of Colour	Bleach removes colours by a chemical change 
Change of Smell (odor)	When you cook it is a chemical change and the food smells different 
Change in Temperature	A chemical reaction can cause matter to give off light and heat 
Forms a Gas	Bubbles form when A gas is released 
Forms a solid	Two liquids can react to make a solid 

MCQ :12 حفظ الجدول

Describe observable signs of a chemical change (color, odor, gas, temperature change)

Signs of Chemical Change

Signs of Chemical Change	Examples	Picture
Color Change	rust on iron, banana turning brown.	
Change in Odor	marshmallow toasting on a fire	
Temperature Change or Light Emission	burning wood.	
Gas Formation	bubbles from baking soda reacting with vinegar.	
Formation of a Solid	soap scum forming in hard water.	

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d



c



a



e



b



a. change in color

b. change in odor

c. change in temperature

d. formation of gas

e. formation of solid

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MCQ :13**Explain how temperature affects solubility.****1-sugar dissolve faster in:**

- a. warm water
- b. cold water

Explain why.

In warm water ,the particles of sugar move faster ,in cold water move slower, so I must stir it a lot

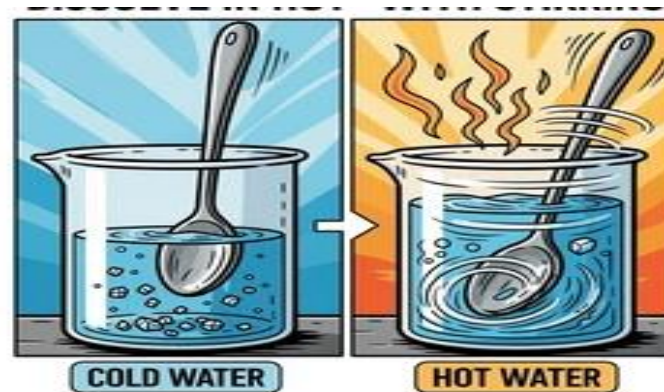
2. sugar dissolve faster in:

- a. warm water, because the particles of sugar move faster
- b. cold water , because the particles of sugar move faster.
- c. warm water, because the particles of sugar move slower

taster in warm water or cold water.

Make a Prediction Will sugar dissolve faster in warm or cold water?

Sample answer: I think the sugar will dissolve faster in warm water because when I add drink mix to cold water, I have to stir it a lot.

**3. how you can increase solubility of salt in water**

Increasing the temperature and stirring

4. Explain how temperature affects solubility.

a. Increase the temperature
Make the salt dissolve faster

B . Decrease the temperature
Make the salt dissolve slower

Earth's gravity affects the Moon. The Moon's gravity also affects Earth. The Moon's gravitational force causes Earth's **tides**, or the regular rise and fall of water along the shore. Earth's water bulges on the Moon-facing side of Earth. A bulge also forms on the side facing away from the Moon. The water level rises where the bulge is and the level lowers where it is not. This bulge of water causes changing tides as the Moon travels around the Earth.

2) Complete the sentences using the words from the box below.

((Low Tide// Tides// Full Moon // New Moon// High Tide))

1- Moon's gravitational force causes Earth's **tides**

2- The point at which the water level is at its highest **High tide**

3-- The point at which the water level is at its lowest **low tide**

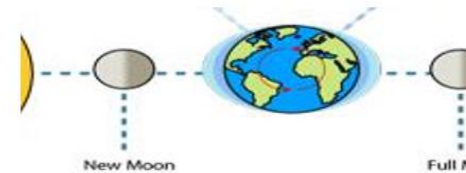
4- High Tide occur during **New moon**
and **Full moon**

5. What causes ocean tides on Earth?

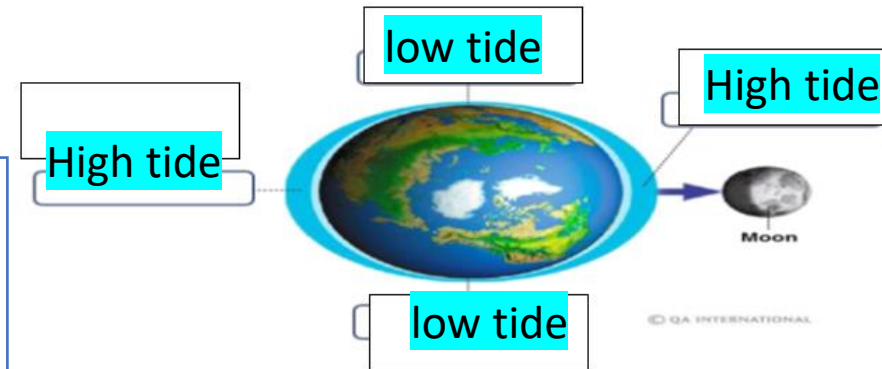
..... **Moon gravity**

2- How is moon's gravity effect on the Earth?

- A. It make crater .
- B. It pulls some objects toward the moon.
- C. causes ocean tides.**
- D. It has **no effect because it's too small.**



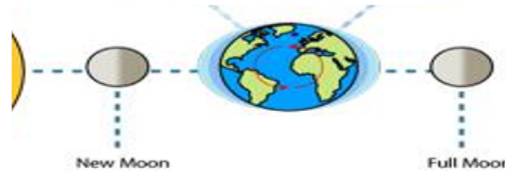
6- Determine where water rise (high tide) , fall of water (low tide)



2) Complete the sentences using the words from the box below.

((Low Tide// Tides// Full Moon // New Moon// High Tide))

- 1- Moon's gravitational force causes Earth's Tides.....
- 2-The point at which the water level is at its highest High Tide
- 3-- The point at which the water level is at its lowest Low Tide
- 4- High Tide occur during Full Moon _____
and New Moon _____
5. What causes ocean tides on Earth?



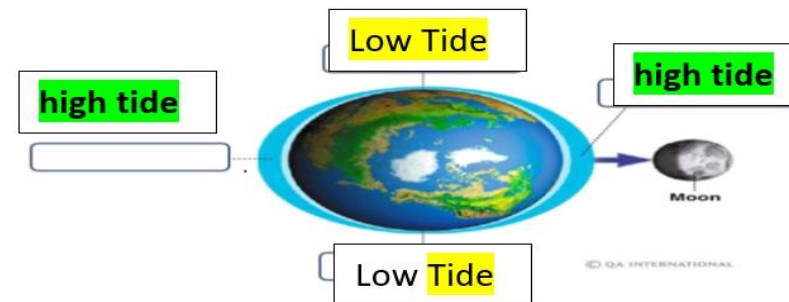
ANSWERS

..... Moon's gravitational force causes Earth's Tides

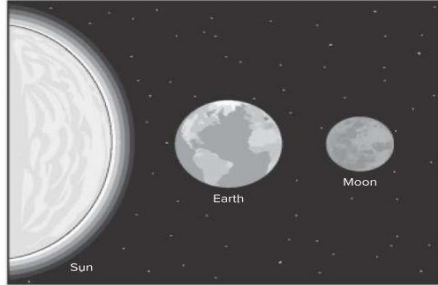
2- How is moon's gravity effect on the Earth?

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- C. causes ocean tides.
- D. It has no effect because it's too small.

6- Determine where water rise (high tide) , fall of water (low tide)



Phases of the Moon



Look at the diagram of the Sun, Earth, and Moon. What would a nighttime observer on Earth see? Circle the answer that best matches your thinking.

A.



A full moon

B.



A crescent moon

C.



A quarter moon

D.



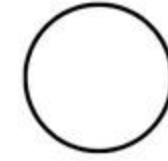
No moon is seen

Explain why you agree.

Sample answer: The answer is A. This diagram shows a full moon. The Sun is shining on the half of the Moon that is facing Earth. The Moon is not in Earth's shadow.



NEW MOON

WAXING
CRESCENTFIRST
QUARTERWAXING
GIBBOUSFULL
MOONWANING
GIBBOUSThird
QUARTERWANING
CRESCENT

حفظ أوجه القمر بالاسم و الشكل

حفظ السؤال و الجواب وليس
فقط رمز الإجابة

The figure shows the phases of moon. Study it well and answer the following question

1- label the letter A , B, and C

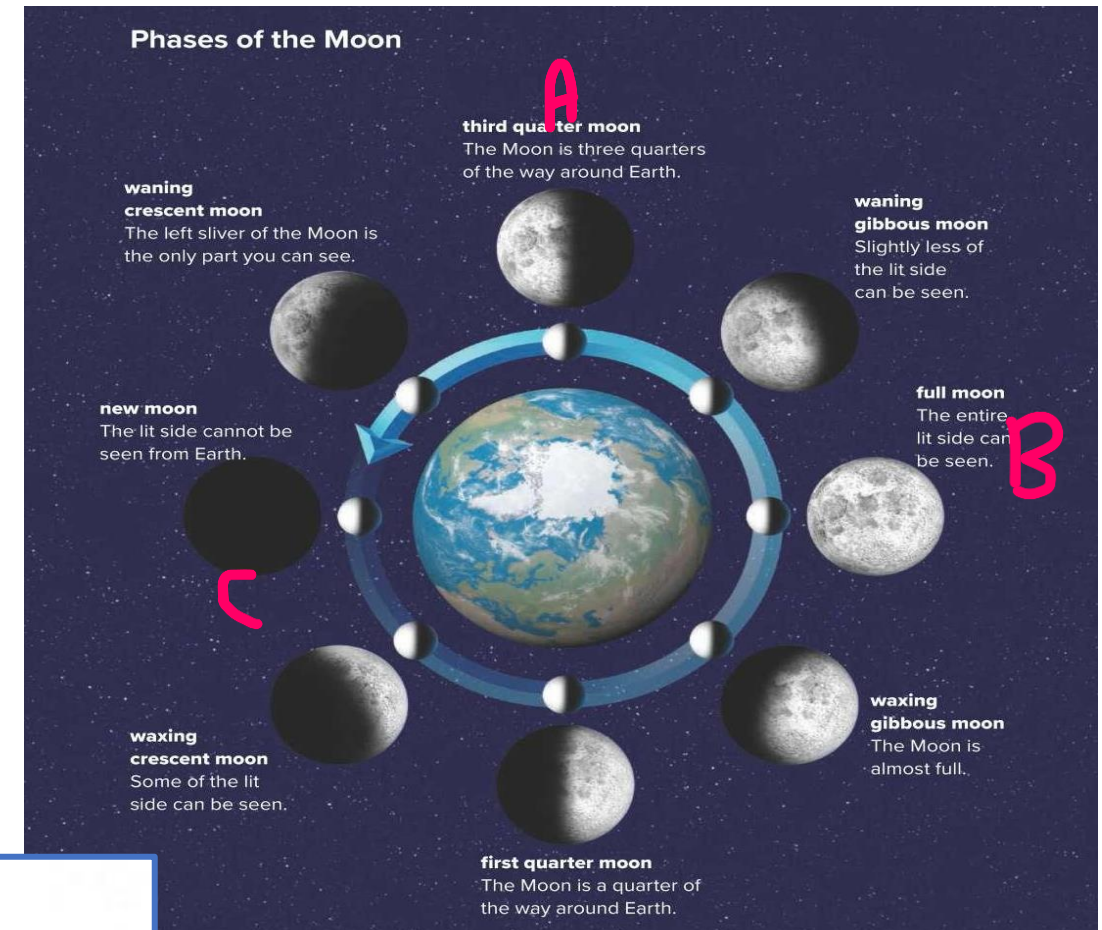
- Letter A..... **Third quarter**
- Letter B..... **Full moon**
- Letter C..... **Waxing crescent**

2-In B why we can see the half of the moon lit ?

- The sun is shining on the half of the moon that facing the sun

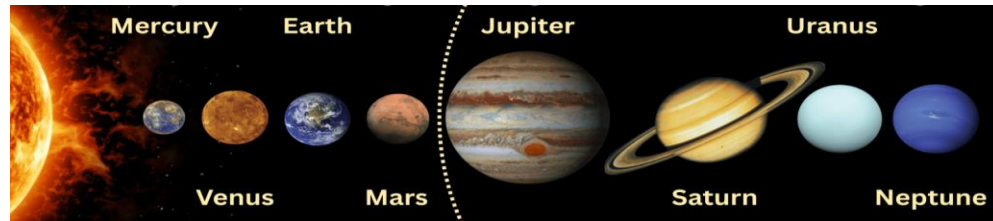
3-What causes the moon phases ?

Moon revolve around the Earth



2. Complete the following sentence.

- As the moon appears to get larger, it is **Waxing**
- As the moon appears to get smaller, it is ... **Waning**



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

1. Which planet takes 29.4 years to travel around the Sun?.... **Saturn..**

2. Which planet takes 11.9 (Earth years) to revolve around the Sun?.... **Jupiter...**

3. Which planet takes more time to revolve around the Sun?.....

a) Earth b) Jupiter c) Uranus

Unit 4: Three-Dimensional Thinking pg: 65



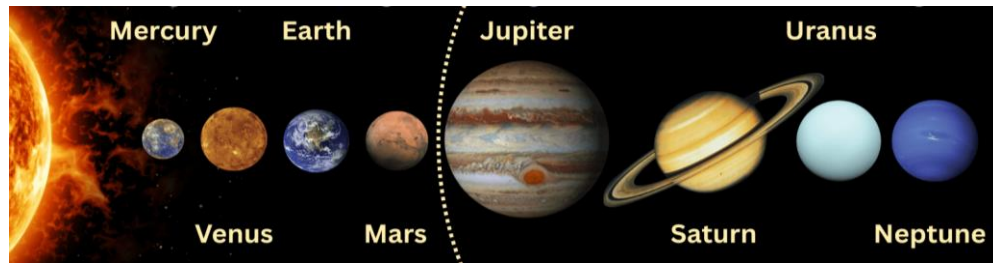
Three-Dimensional Thinking

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

- 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



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
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Jupiter	10	11.9	5.2
Saturn	10	29.4	9.5
Uranus	17	84.0	19.2
Neptune	16	164.8	30.0

1. Which planet is the nearest planet to the Sun? **Mercury**
2. which planet is the farthest planet from the sun ? **Neptune**
3. Which planet is farther from the Sun, Mars or Venus? **Mars**
4. Which planet is (7 AU) from the sun? **Venus**
5. Which planet is (9.5 AU) from the sun? **Uranus**
6. How long is Jupiter's revolution?
7. Which one of the following planets has a longest day:---
Earth Mars **Mercury**
8. Which one of the following planets has a longest day
Venus Saturn Uranus
9. Which one of the following planets has a longest day:
Mars Saturn Neptune

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
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Jupiter	10	11.9	5.2
Saturn	10	29.4	9.5
Uranus	17	84.0	19.2
Neptune	16	164.8	30.0

2. Which planet has the longest day?

- a. Mercury b. **Venus** c. Neptune d. Mars

3. Which planet is closest to the Sun?

- a. Earth b. **Mercury** c. Mars d. Jupiter

4. Which planet takes the longest time to around the Sun?

- a. Earth b. Uranus c. **Neptune** d. Saturn

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

- 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.

3. Circle all that apply.

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

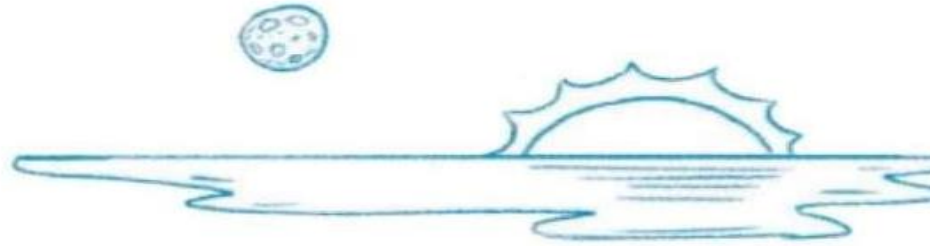
A. axis

☒ B. rotation

C. poles

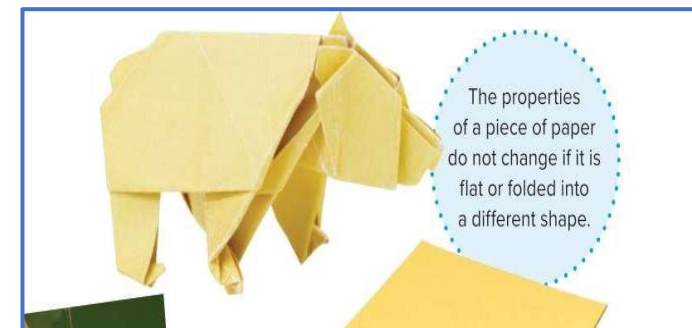
D. galaxies

☒ E. revolution



What kind of change occurs in the image and why?

- a. It is a physical change because the paper changes shape without changing in matter .
- b. It is a physical change because the paper changes shape in the matter .
- c. It is a chemical change because the paper changes shape without changing in matter .
- d. It is a chemical change because the paper changes shape with changing in matter



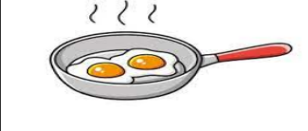
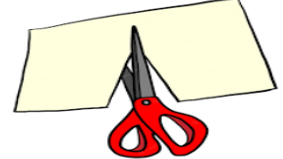
Read the text in the dotted circle.
Explain why the properties of the piece of paper will not change.

Drag and drop the correct option to complete the sentence.

If you fold a piece of paper, its size and shape will change. This is called a

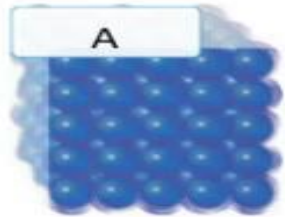
- o chemical change
- o change of state
- o physical change**
- o chemical reaction

Q2 :- Chemical change or physical change

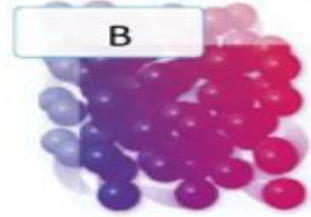
Glass breaking	Nail rusting	Frying an egg	Cutting of paper into pieces
			
physical change	Chemical change	Chemical change	physical change



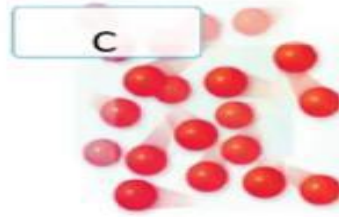
Identify states of matter represented with letters A, B, and C in the image below.



a. solid



b. liquid



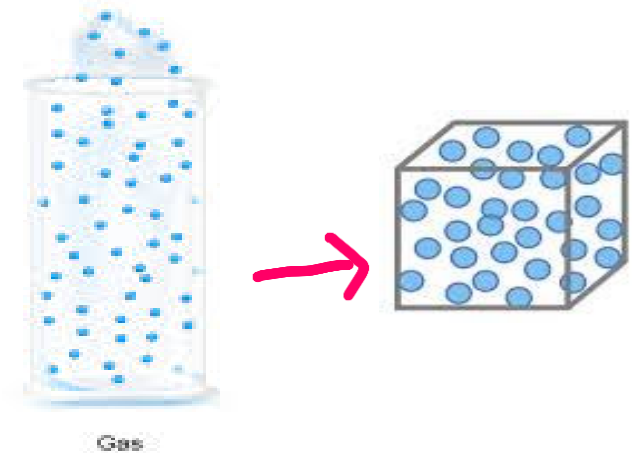
c. Gas

2-Which state of matter can be compressed

a. solid

b. liquid

c. Gas



Summarize It

Use what you have learned to explain what pulls objects toward Earth's surface.

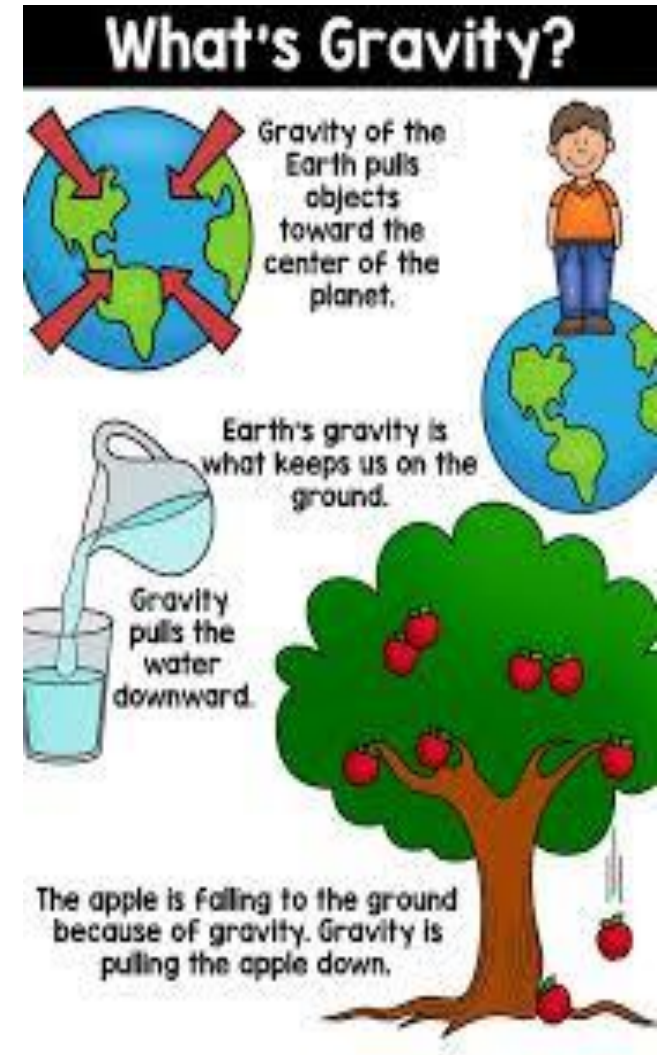
Sample answer: Gravity is the force or attraction between two objects. Gravity pulls objects down toward the center of Earth.

1- Gravitation of earth pull objects toward

- A. Center
- B. Sea
- C. Space
- D. Atmosphere

2-What makes waterfall down tower the Earth?

- a. Earth's Gravity b . Moon's Gravity



1. Based on the table of stars distances from Earth, choose the correct order of the stars from the brightest to the dimmest

- A. star B, star A, star E, star C, star D.
- B. star A, star B, star C, star D, star E.
- C. star D, star C, star E, star A, star B.
- D. star E, star D, star C, star B, star A

2.-Why can you see the Sun but no other stars during the day?

- a. The sun is closest star to the earth
- b. The sun has large size than other stars.

EXPLAIN THE PHENOMENON

Why are some stars brighter than others?

Summarize It

Use what you have learned to explain what stars are and why some appear brighter than others when we look at the night sky.

Sample answer: Stars are spheres of hot gas that give off heat and light. Some stars appear brighter than others due to their size or their relative distance from Earth. For example, the Sun is the closest star to Earth, which is why it is brighter than all of the other stars and visible during the day.

Star	Distance from Earth (light-years)
Star A	8.6
Star B	11.4
Star C	6.0
Star D	4.2
Star E	7.7

الأسئلة الكتابية

يجب على الطالبة حفظ الإجابة و التدريب على الكتابة

الأسئلة المقالية - FRQ				
	1	Identify chemical changes using observable evidence.	Unit 1: Lesson 2 Launch	33
		Identify conservation of mass in chemical reactions	Unit 1: Three Dimensional Thinking	47
		Use nature of particles to compare solids, liquids and gases.	Unit 1: Lesson 4 Launch (Particles in Matter)	49
	2	Classify materials based on observable changes.	Unit 1: Inquiry Activity	8
		Define the terms physical property, conductivity, reflectivity and solubility.	pdf	pdf
		Explain how the addition or removal of energy causes matter to change from one state to another.	Unit 1: Change in States of Matter	58
	3	Describe gravity as a force that pulls objects toward one another	Unit 4: Lesson 1 Launch (Earth's Gravity)	5
		Explain how gravity affects objects on Earth and keeps planets in orbit.	Unit 4: The Pull of Earth's Gravity	12
		Describe how the positions of the Moon and Earth result in changes in ocean water levels (tides) due to gravitational forces.	Unit 4: Three Dimensional Thinking	21
	4	Explain how Earth moves through space and how it affects life on Earth.	Unit 4: Summarize it	40
		Describe how Earth's tilt and revolution cause seasonal changes.	Unit 4: Seasons	31
		Label and arrange the planets in the solar system.	Unit 4: The Solar System	60

1

Identify chemical changes using observable evidence.

Unit 1: Lesson 2 Launch

33

Identify conservation of mass in chemical reactions

Unit 1: Three Dimensional Thinking

47

Use nature of particles to compare solids, liquids and gases.

Unit 1: Lesson 4 Launch (Particles in Matter)

49

LESSON 3 LAUNCH



Chemical Change

~~Frying an egg~~	Tearing up paper	~~Burning wood~~
~~A nail rusting~~	~~Grilling a hamburger~~	Dissolving salt in water
~~Exploding fireworks~~	Melting butter	~~Baking a cake~~
~~Rotting banana~~	~~Mixing baking soda and vinegar~~	Evaporating water
~~Lighting a match~~	Crushing a sugar cube	~~Milk going sour~~

Changes in matter can be chemical or physical. Put an X in any of the boxes that are examples of chemical changes.

Explain your thinking. How did you decide if something is a chemical change?

Sample answer: I chose these as examples of chemical change because they transform into a new type of matter.

You will revisit the Page Keeley Science Probe later in the lesson.

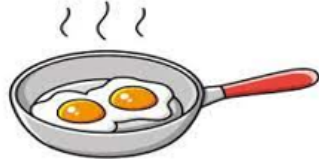
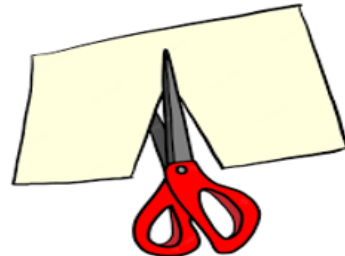
Example	Physical Change	Chemical Change
Frying an egg		✓
Tearing paper	✓	
Burning wood		✓
Rusting nail		✓
Grilling a hamburger		✓
Dissolving salt in water	✓	
Exploding fireworks		✓
Melting butter	✓	
Baking a cake		✓
Rotting banana		✓
Mixing baking soda and vinegar		✓
Evaporating water	✓	
Lighting a match		✓
Crushing a sugar cube	✓	
Milk going sour		✓

1	Identify chemical changes using observable evidence.	يجب على الطالبة التمييز بين التغيرات الفيزيائية والكيميائية	Unit 1: Lesson 2 Launch	33
	Identify conservation of mass in chemical reactions		Unit 1: Three Dimensional Thinking	47
	Use nature of particles to compare solids, liquids and gases.		Unit 1: Lesson 4 Launch (Particles in Matter)	49

The following table shows different changes. Write the type of changes that have occurred (Physical changes or Chemical changes) and explain your answer

Example of changes	Physical change or chemical	Explain
Burning wood	Chemical change	produce new substance (gases)
Rotting banana	Chemical change	Produce new substance (change in color)
Melting butter	Physical change	Butter change in state (solid to Liquid)
Exploding fireworks	Chemical change	Produce new substance (color/heat/sound)
Tearing up paper	Physical change	change in shape
crushing sugar cube	Physical change	change in shape
Evaporating water	Physical change	Water change in state (Liquid to gas)
Baking soda add to vinegar	Chemical change	Produce new substance (Gas)
Dissolving salt in water	Physical change	No change in the matter

1	Identify chemical changes using observable evidence.	Unit 1: Lesson 2 Launch	33
	Identify conservation of mass in chemical reactions	Unit 1: Three Dimensional Thinking	47
	Use nature of particles to compare solids, liquids and gases.	Unit 1: Lesson 4 Launch (Particles in Matter)	49

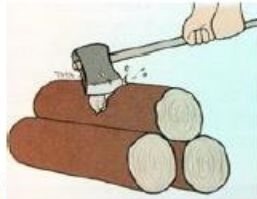
Q2 :- Chemical change or physical change			
Glass breaking	Nail rusting	Frying an egg	Cutting of paper into pieces
			
physical change	Chemical change	Chemical change	physical change

Explain Why ?	Glass Change in shape	Chang in color New matter	Transform to new matter	Change in shape
---------------	--------------------------	------------------------------	-------------------------	-----------------

Chemical change

Physical change

rt D. Tell whether the given is Physical or Chemical Change.



Example:
Physical change



15. Chemical change



18. Chemical change



13. Chemical change



16. Physical change



19. Physical change



14. Chemical change



17. Physical change



20. Physical change

1	Identify chemical changes using observable evidence.	Unit 1: Lesson 2 Launch	33
	Identify conservation of mass in chemical reactions	Unit 1: Three Dimensional Thinking	47
	Use nature of particles to compare solids, liquids and gases.	Unit 1: Lesson 4 Launch (Particles in Matter)	...

Unit 1: Three Dimensional Thinking 47

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-What is the total mass of substances before combined?

$$=500+200=700 \text{ gram}.....$$

B-What is the total mass of the combined substances after chemical reaction
.....700 gram.....

C-What law are you using?

Answer: law of mass conservation

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.

Question	
You are performing an experiment combining two substances in a closed container. You combine 30g of substance A and 40g of substance B. A chemical reaction occurs. Choose the equation below that would best explain the total mass of the combined substances.	
A	$40g - 30g = 10g$
B	$70g - 40g = 30g$
C	$40g \times 30g = 1200g$
D	$40g + 30g = 70g$

d-What is the law of conservation of mass.

mass is neither created nor destroyed during a physical or chemical reaction

or the total mass of the substances before combined will always equal the total mass of the substances after combined

حفظ التعريف الاسهل على الطالبة

LESSON 4 LAUNCH

Particles in Matter



Four friends were talking about the particles that make up matter and give matter its properties. They each had different ideas. This is what they said:

Joyce: I think you can't see the particles that make up solids, liquids, and gases. They are too small to see.

Harold: I think you can see the particles that make up solids, liquids, and gases.

Royce: I think you can see the particles that make up solids and liquids, but you can't see the particles that make up gases.

Benito: I think you can see the particles that make up solids, but you can't see the particles that make up liquids and gases.

Who do you agree with most? **Joyce**

Explain why you agree.

Sample answer: Particles in matter are too small to see with ordinary magnification tools. The arrangement and movement of particles determine the state of matter.

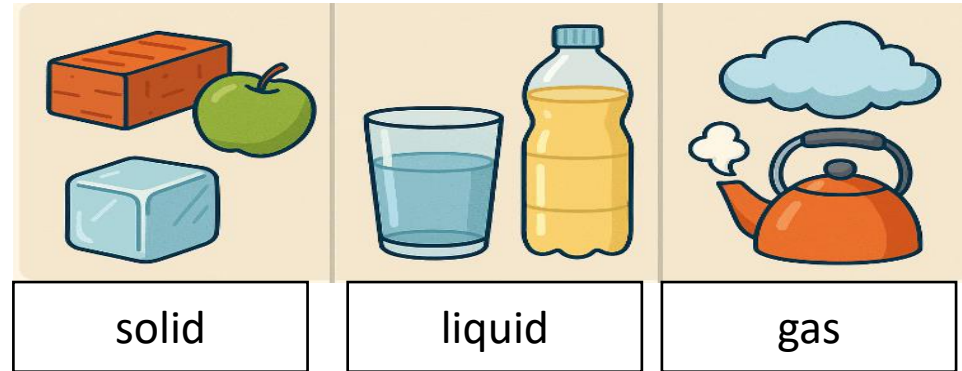
You will revisit the Page Keeley Science Probe later in the lesson.

FRQ3: Use nature of particles to compare solids, liquids and gases.

Unit 1: Lesson 4 Launch (Particles in Matter)

49

3-What is the state of matter in each image



معلمة المادة : ميسون علي الطويل

3-What is the state of matter in each image



Joyce: I think you can't see the particles that make up solids, liquids, and gases. They are too small to see.

Harold: I think you can see the particles that make up solids, liquids, and gases.

Royce: I think you can see the particles that make up solids and liquids, but you can't see the particles that make up gases.

Benito: I think you can see the particles that make up solids, but you can't see the particles that make up liquids and gases.

Who do you agree with most? **Joyce**

Explain why you agree.

Sample answer: Particles in matter are too small to see with ordinary magnification tools. The arrangement and movement of particles determine the state of matter.

You will revisit the Page Keeley Science Probe later in the lesson.

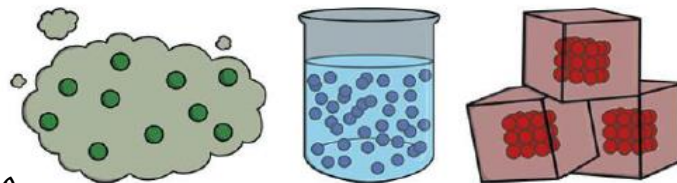
Question: Can we see the particles that make up the matter ?

Answer: No, we cannot see the particle it is too small

In solid state: the particles are close together and not move

In liquids: the particles can move

In gas: the particles can move easily around each other .



معلمة المادة : ميسون علي الطويل

2	Classify materials based on observable changes.	Unit 1: Inquiry Activity	8
	Define the terms physical property, conductivity, reflectivity and solubility.	pdf	pdf
	Explain how the addition or removal of energy causes matter to change from one state to another.	Unit 1: Change in States of Matter	58

THINK ABOUT IT:

Look at the enquiry activity below. If you were to carry out the activity, what results would you obtain? Fill in the table headed 'Record Data'

Record Data

Object	Did it get cold?	Could you bend it?	Did the magnet stick to it?	Is it shiny?	What property does it have?
Acrylic Rod	No	No	No	Yes	reflectivity
Paper Clip	Yes	Yes	Yes	Yes	magnetism
Rubber Eraser	No	Yes	No	No	flexibility
Aluminum Foil	Yes	Yes	No	Yes	conductivity
Copper Wire	Yes	Yes	No	Yes	conductivity
Wooden Toothpick	No	No	No	No	other

معلمة المادة : ميسون علي الطويل

INQUIRY ACTIVITY

Hands On

Test Matter's Properties

Think about the egg cracking. The egg has many different properties. All matter has different properties based on how it interacts with other matter.

Make a Prediction How can we test the properties of matter?

Sample answer: We can test how well matter conducts heat or is magnetic.

Carry Out an Investigation

BE CAREFUL Wear safety goggles. Be careful with any sharp or pointy edges on the materials.

- Hold one end of each object (one at a time) in the ice water for thirty seconds. Did the end you were holding get cold? Record the results in the table on the next page.
- Pick up each object and gently try to bend it. Did it bend easily? Record the results.
- Touch the magnet to each of the objects. Did it stick? Record the results.
- Hold each object under a light. Is it shiny? Record the results.
- Leave the last column empty for now. You will be revisiting this activity later in the lesson.

Materials

- safety goggles
- acrylic rod
- paper clip
- rubber eraser
- aluminum foil
- copper wire
- wooden toothpicks
- magnet
- plastic bowl
- ice cubes
- water

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© 5 McGraw-Hill Education, (others) Jorgans Connors/McGraw-Hill Education.

Record Data

Object	Did it get cold?	Could you bend it?	Did the magnet stick to it?	Is it shiny?	What property does it have?
Acrylic Rod					
Paper Clip					
Rubber Eraser					
Aluminum Foil					
Copper Wire					
Wooden Toothpick					

FRQ:2: Classify materials based on observable changes.**Unit 1: Inquiry Activity 8**

properties of matter has different properties based on how it interacts with other matter.

Make a Prediction How can we test the properties of matter?

Sample answer: We can test how well matter conducts heat or is magnetic.

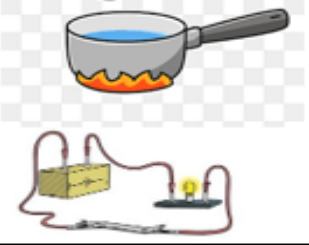
THINK ABOUT IT:

Look at the enquiry activity below. If you were to carry out the activity, what results would you obtain? Fill in the table headed 'Record Data'

يرحى حفظ الكلمة و المعنى و التدريب على الكتابة

object	the test	Property
paper clip	put in hot water or ice /conduct heat	conductivity
aluminum foil	shiny /cold or hot/	conductivity/reflectivity
copper wire	connect to battery and light bulb	conductivity
salt (or any solid)	dissolve in water	Solubility
Paper clip	Use magnet	magnetism

Classify materials based on observable changes.	Unit 1: Inquiry Activity	8
Define the terms physical property, conductivity, reflectivity and solubility.	pdf	pdf

	Key term	Definition	يرحى حفظ الكلمة و المعنى و التدريب على الكتابة
1	Physical property	is a characteristic that can be observed and measured without changing the material.	
2	Conductivity الموصلية	The ability of a material to allow heat or electricity to pass through it.	
3	Solubility الذائبية	The ability of a substance to dissolve in water	
4	Reflectivity الانعكاس	The way light reflects or bounces off an object	

Question 1 :Fill in the blanks using the ward bank

Conductivity // Solubility // Reflectivity // Physical property

- 1- (..... **Reflectivity**) The way light reflects or bounces off an object
- 2- (..... **Conductivity**) The ability of a material to allow heat to pass through it.
- 3- (..... **Solubility**) The ability of a substance to dissolve in water
- 4- (..... **Physical property**) is a characteristic that can be observed and measured without changing the material.

Question 1

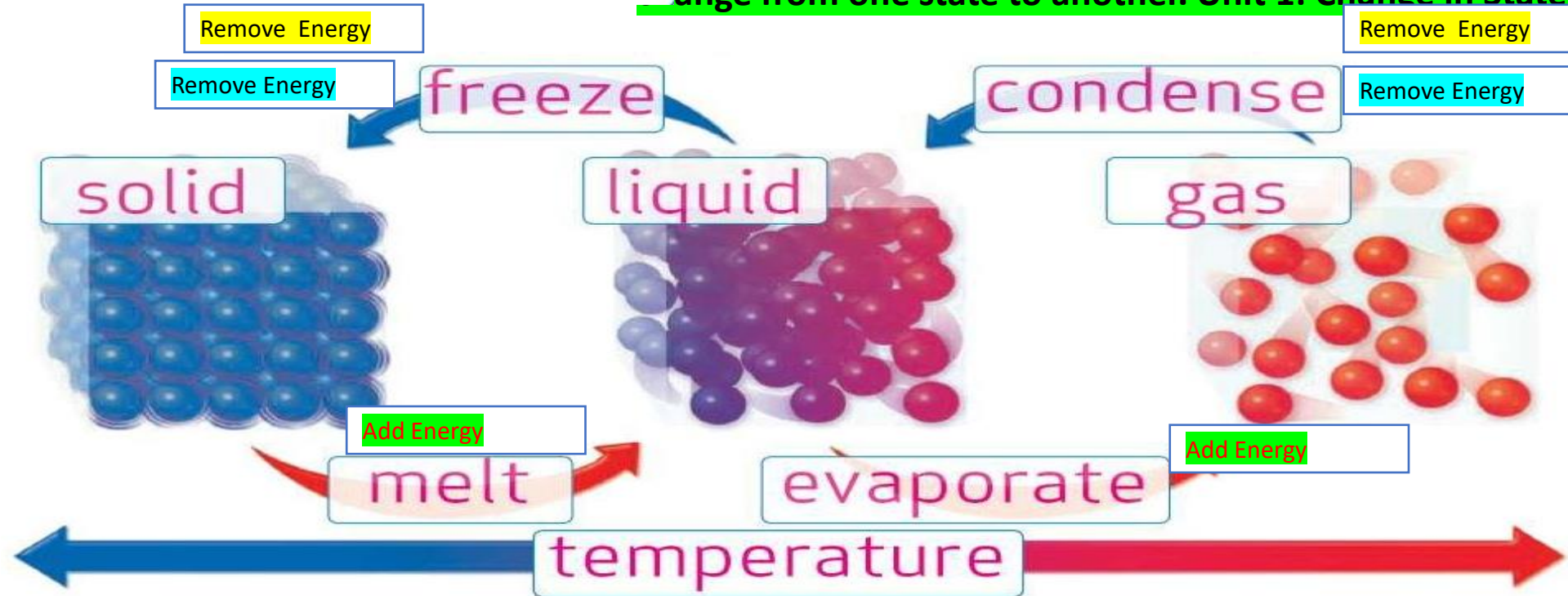
How can we use the properties of matter to identify materials

Answer : by observing and measuring characteristics like **physical state, color ,reflect of light , shiny or not , pass heat or not , hot or cold ,dissolve in water or not**

يرحى حفظ الكلمة و المعنى و التدريب على الكتابة

the states of matter in the diagram above. Label the process of how each state of matter changes from one to the other.

RQ: Explain how the addition or removal of energy causes matter to change from one state to another. Unit 1: Change in States of Matter 58



ملاحظة : احتمال انه
لن يتم إعطاء
الطالبات الكلمات لذا
عليها ان تحفظ جيدا
الكتابة

1. When Energy is added, what processes occur? Melting , evaporating .
2. When Energy is removed, what processes occur? Freezing , condensing
3. What will happen to the particles when energy is added : move faster
4. What will happen to the particles when energy is removed : move slower

Earth's Gravity



Four friends were talking about gravity. They each had a different idea. This is what they said:

Angie: I think Earth's gravity only pulls on things that are close to Earth's surface.

Tamara: I think Earth's gravity only pulls on things that are close to Earth and in Earth's atmosphere.

Carlos: I think Earth's gravity pulls on things close to Earth, including some things in space.

Mi-Ling: I think Earth's gravity pulls everything in the solar system toward it.

Who do you agree with most? **Carlos**

Explain why you agree.

Sample answer: Objects on or near Earth, including objects in space such as the Moon, satellites, and meteors, are pulled toward Earth due to the gravitational attraction of Earth and these objects.

You will revisit the Page Keeley Science Probe later in the lesson.



1-Why the moon orbit the Earth ?.....

Because of gravity force between earth and moon

2-What causes meteorites to fall from space?

Because of gravity force between earth and meteorites

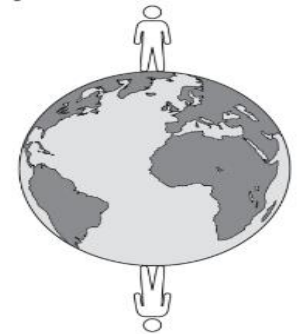
3-Salma is standing on the ground located at the North Pole.

Amena is standing on the ground located at the South Pole.

Explain how both can stand with their feet on the ground

Answer :

gravity pull things to the centre of Earth



3	Describe gravity as a force that pulls objects toward one another	Unit 4: Lesson 1 Launch (Earth's Gravity)	5
	Explain how gravity affects objects on Earth and keeps planets in orbit.	Unit 4: The Pull of Earth's Gravity	12

The Pull of Earth's Gravity

✓ **Gravity** is a force of attraction, or pull, between any two objects. The Barringer Crater is the result of gravity pulling a meteor to Earth's surface. ✓ The strength of gravity is affected by the total mass of the objects and the distance between them.

✓ The pull of gravity decreases when the total mass of the two objects decreases or they are further apart.

✓ On Earth, gravitational pull is the attraction between an object and Earth. ✓ No matter the location on Earth's surface, gravity pulls objects on all sides down toward the center. ✓ Every object that has mass experiences a gravitational pull. ✓ When an object is dropped from a certain height on Earth, it rushes downward due to gravity.



3	Describe gravity as a force that pulls objects toward one another	Unit 4: Lesson 1 Launch (Earth's Gravity)	5
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Distance - force – fly – six - total mass - gravity – sun

- Any object with mass has
- Two factors effecting of gravity between 2 objects are..... and
- Gravity is
- Gravity is holds all of the planets in orbit around the
- Without gravity, air, water and animals would all..... in space .
- 9- person would weigh times less on the moon than on Earth.

Question 3 : write word in correct blank :

ANSWERS

Distance - force – fly – six - total mass - gravity – sun

- Any object with mass have **gravity**
- Two factors effecting of gravity between 2 objects are **Distance** and **total of masses**
- Gravity **force**
- Gravity is holds all of the planets in orbit around the **sun**
- Without gravity, air, water and animals would all **fly** in space .
- 9- person would weigh **Six** times less on the moon than on Earth.

معلمة المادة : ميسون علي الطويل

on 2 : what will happen of gravity :



Distance increase between two objects	Total of masses decrease between two objects

Distance decrease between two objects	Total of masses increase between two objects

tion 2 : what will happen of gravity :



ANSWERS

Distance increase between two objects	Total of masses decrease between two objects
Decrease	Decrease

Distance decrease between two objects	Total of masses increase between two objects
Increase	Increase

3	Describe gravity as a force that pulls objects toward one another	Unit 4: Lesson 1 Launch (Earth's Gravity)	5
	Explain how gravity affects objects on Earth and keeps planets in orbit.	Unit 4: The Pull of Earth's Gravity	12

1-Which of the following affect the strength of gravity between two objects.

- a. Total Mass of the objects
- b. Total mass and distance between them**
- c. Distance between object
- d. The wight of the objects

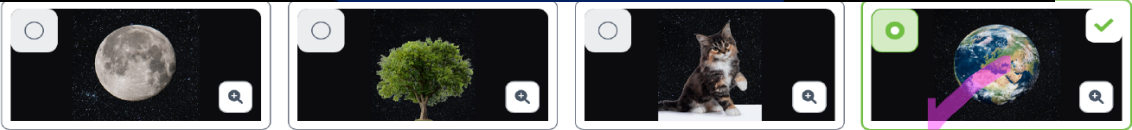
3- Gravitation of earth pull objects toward

- A. Center**
- B. Sea
- C. Space
- D. Atmosphere



4-What causes the Moon to revolve around

- A. Earth's gravity
- B. the Sun's gravity
- C. gravity of moon**
- D. not of above

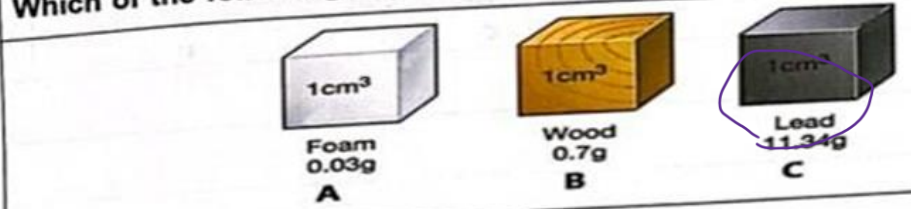


Select the correct choice.

An apple falls from a tree. Which of the following identifies the cause of the apple falling?

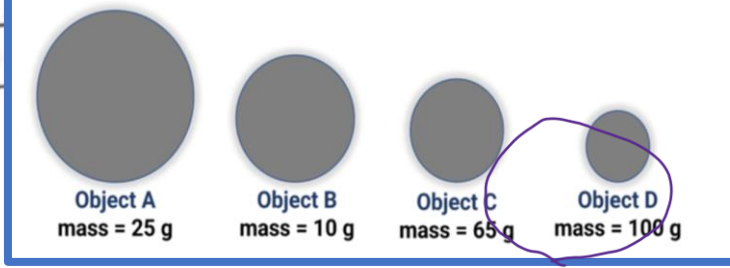
- ☒ Earth's gravity pulls on the apple
- ☐ the apple is moving at a fast speed
- ☐ a strong wind blows from up
- ☐ the air attracts the apple downward

The figure shows three cubes of the same volume.
Which of the following will be more affected by gravity?



A	A only
B	B only
C	C only
D	A and B only

Objects with more mass have more gravitational pull.
Which of the following objects has the strongest gravitational pull?



3	Describe gravity as a force that pulls objects toward one another	Unit 4: Lesson 1 Launch (Earth's Gravity)	5
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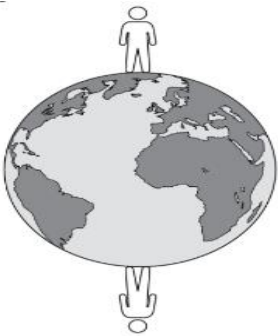
1-Salma is standing on the ground located at the North Pole.

Amena is standing on the ground located at the South Pole.

Explain how both can stand with their feet on the ground.

Answer :

gravity pull things to the centre of Earth



2.What affects the strength of gravity?

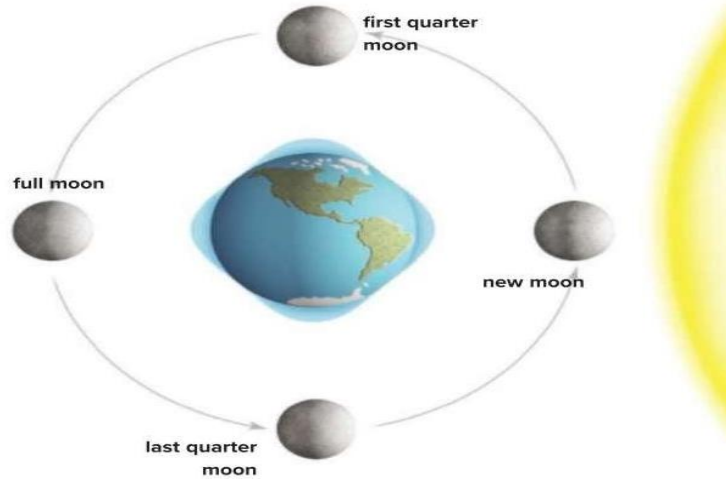
- A. Weight and Mass
- B. Distance and Weight
- C. Mass and Distance
- D. Mass and Force





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.



حفظ السؤال و الجواب وليس
فقط رمز الإجابة

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.

Tides are the **regular rise and fall of the ocean.**

They happen because of the **Moon's gravity** pulling on Earth's water

1. What are Tides?

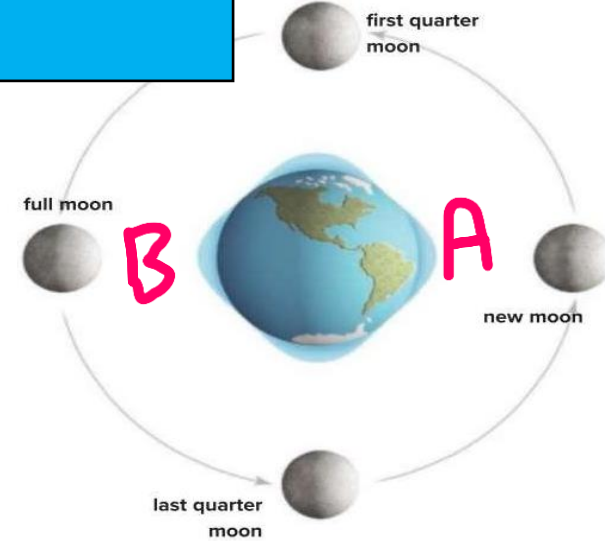
Tides are the rise and fall of the ocean

2. What causes tides?

The Moon's gravity causes tides.

3. What causes the tide to bulge on the side of Earth facing the moon?

The pull of gravity between earth and moon



LESSON 2

Review

EXPLAIN THE PHENOMENON

How does the Sun's position allow us to tell time on a sundial?

Summarize It

Explain how Earth moves through space and how it affects life on Earth.

Sample answer: Earth rotates causing day and night. Earth revolves around the Sun, resulting in the seasons. Because of Earth's movement, we also see the different phases of the Moon and can tell time on a sundial.

حفظ السؤال و الجواب



Revisit the Page Keeley Science Probe on page 23. Has your thinking changed? If so, explain how it has changed.

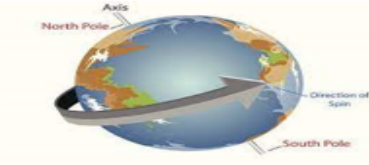
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FRQ:4: Explain how Earth moves through space and how it affects life on Earth.
Unit 4: Summarize it
40

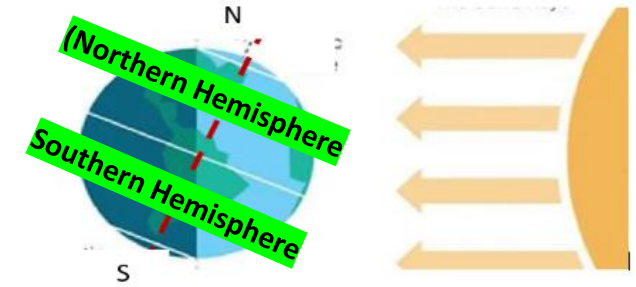
Summarize It

Explain how Earth moves through space and how it affects life on Earth.

Rotation when Earth spin on its axis each 24 Hours or 1 day casing day and night
Earth revolve around the sun resulting in the seasons. Moon revolve around the Earth we see moon phases

				
Name Of motion		Name Of motion	Revolution	 Revolution
Take time		Take time	29 days	 365.25 days
causes		causes	moon phases	 4seasons day and night

1. What is the season in (Northern Hemisphere)?.....**Summer**.....
2. What is the season in (Southern Hemisphere)?.....**Winter**.....



1. Explain why its **Summer** in the (Northern Hemisphere) ?

Answer: Because Northern hemisphere tilt towards the sun, it receive more energy from sun and the temperature is warmer

مهم جدا حفظ كتابي

- 2- Explain why its **Winter** in the (Southern Hemisphere)

1. Because Southern hemisphere tilts away from the sun, it receive less energy from sun, and the temperature is lower

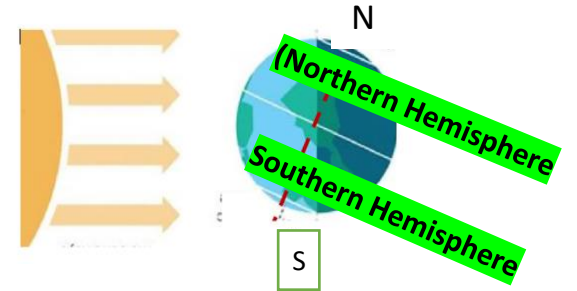
مهم جدا حفظ كتابي

مهم جدا الانتباه الى الجزء الشمالي من الأرض هل هو قريب من الشمس او بعيد عن الشمس لتحديد الصيف و الشتاء

1. What is the season in (Northern Hemisphere)?..... **Winter**.....
2. What is the season in (Southern Hemisphere)?..... **Summer**.....

2- Explain why its **Winter** in the (Northern Hemisphere) ?

1. Because Southern hemisphere tilts away from the sun, it receive less energy from sun, and the temperature is lower



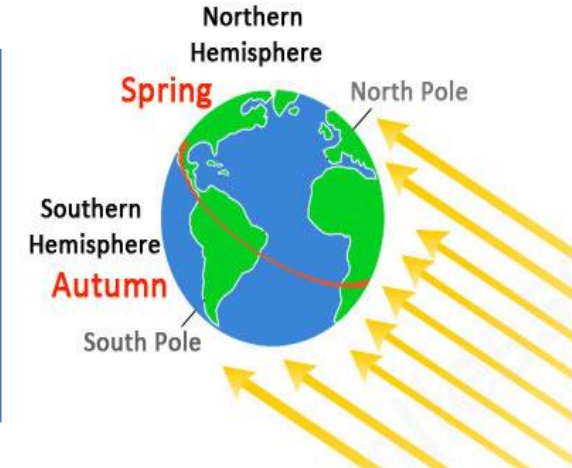
1. Explain why its **Summer** in the (Southern Hemisphere)

Answer: Because Northern hemisphere tilt towards the sun, it receive more energy from sun and the temperature is warmer

مهم جدا حفظ كتابي
مهم جدا الانتباه الى الجزء
الشمالي من الأرض هل هو
قريب من الشمس او بعيد عن
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الشتاء

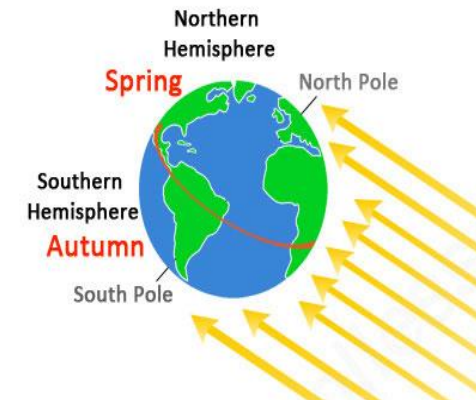
A) Explain why in spring and autumn, the temperatures are similar in both hemispheres

Because the tilt of Earth's axis always points in the same direction. both hemispheres receive, the same amount of sunlight in spring and autumn



in spring and autumn seasons:-

- a. Northern Hemisphere receive more sunlight
- b. Southern Hemisphere receives more sunlight
- c. Both hemispheres receive the same amount of sunlight
- d. Southern Hemisphere receives less sunlight



a. 2 -Because the tilt of Earth's axis always points in the same direction, the seasons in the Northern Hemisphere and the Southern Hemisphere are always _____.

b.

c. The same b. opposite c. three months apart d. six months apart

a. 3-When it is winter in the Northern Hemisphere, which season is in the Southern Hemisphere?

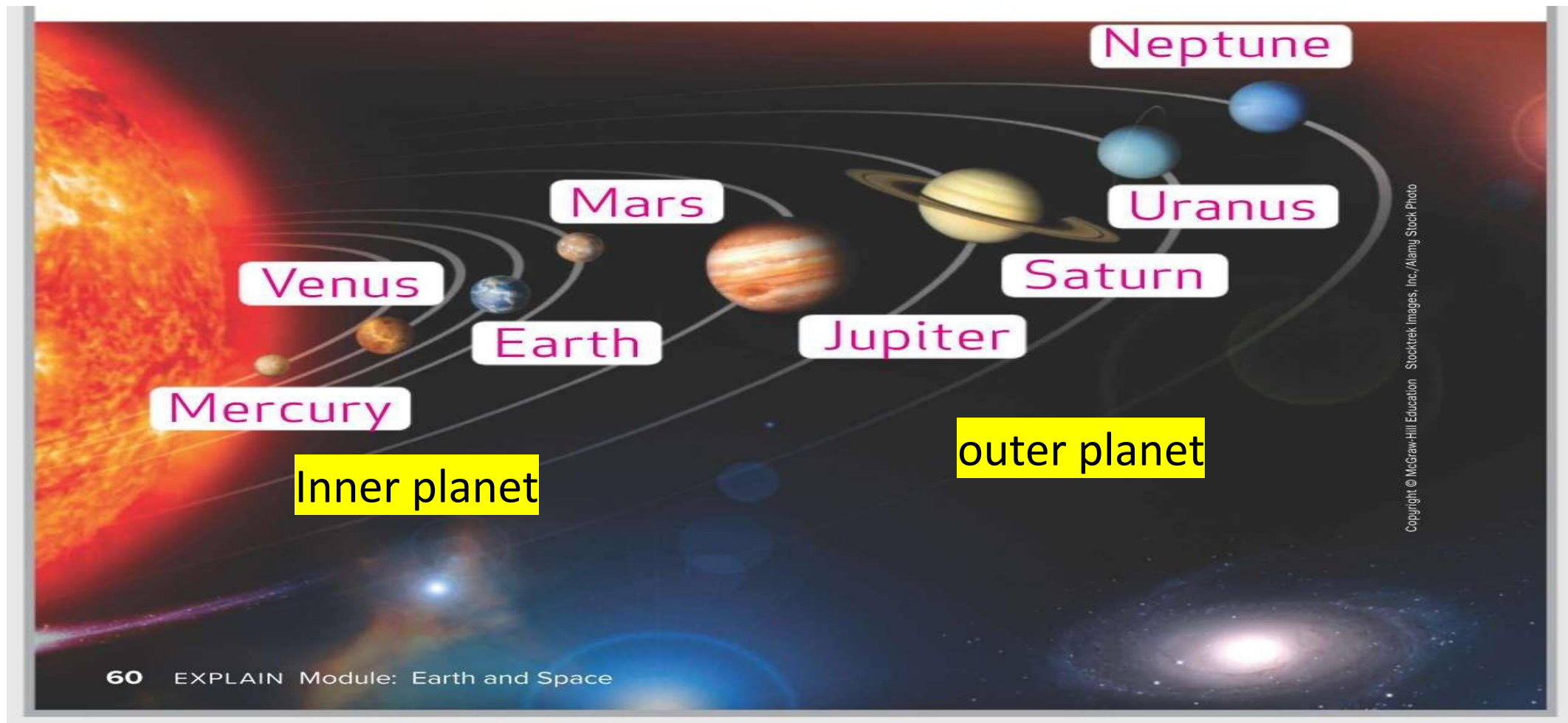
b. spring b- summer c- (Autumn) d- winter

B) Explain why the seasons in the Northern and Southern Hemisphere are always opposite.

Because the tilt of Earth's axis always points in the same direction, One of the Hemispheres receive more energy, and the other Hemisphere receives less energy

Label the planets in the solar system.

حفظ كواكب النظام الشمسي بالترتيب



outer planet

Inner planet