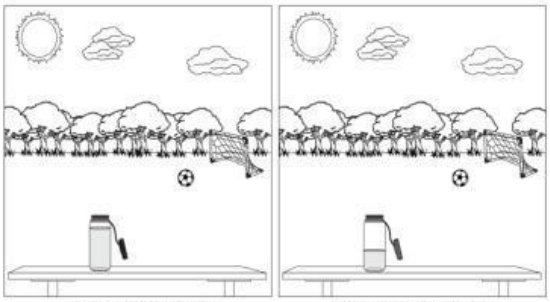
Q1. Choose the correct answer. Write the letter of the correct answer on the left.

_____**1.** A science group wants to know if **a physical change** occurs during an experiment. What evidence should they look for? Choose **three** correct answers.

A. a shape change
B. a temperature change
C. a change in the type(kind) of matter
D. a change in the state of matter

_____**2**. Look at the pictures. On Monday, Nadine forgot her water bottle at soccer practice. Nadine found her water bottle on Thursday right where she left it.



Soccer Practice Monday Soccer Practice Thursday

Which explains the change in the pictures? Choose **two** correct answers.

A. A change in the temperature of the water caused a physical change.
B. The water in the bottle reached its melting point.
C. Water particles evaporated.
D. A change in the temperature of the water caused a chemical change.

_____**3**. Sam wants to draw a model to show that the particles of matter are too small to be seen. Which would best help him to show this concept?

A. Sam should model the temperature of a sugar mixture.
B. Sam should model the mass of a sugar cube.
C. Sam should model the height, width, and length of a block of ice.
D. Sam should model the elements that make up water.

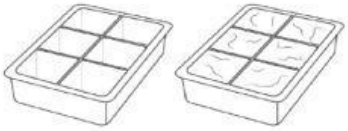
_____**4**. Jamal's class is observing how different substances are affected by physical

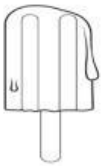
and chemical changes. What is an example of **a physical** change?

Choose **two** correct answers.

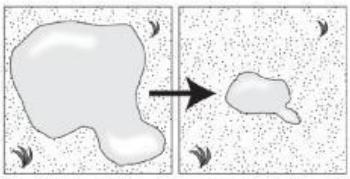
A. tearing a paper
B. cracking an egg
C. baking a cake
D. burning a log

_____**5.** Luke is looking for evidence of evaporation. Which **two** examples show that **evaporation** is occurring?

A. 

B. 

C. 

D. 

_____**6.** Kayla's mom is cooking an egg in a pan. As the egg cooks, part of it changes color from clear to white. Kayla can smell the egg cooking. The egg changes and becomes solid. Which is a sign that a **chemical change** is occurring with the egg?

Choose **three** correct answers.

A. new smell
B. color change
C. formation of a solid
D. temperature change

_____**7.** When a beaker of water is heated its volume increases a little. What is happening to

the particles in the liquid?

A. They are moving slower.
B. They are moving faster
C. They are getting smaller.
D. They are getting bigger

_____**8.** Aidan observes what happens when different substances are combined.

He records his observations in a table.

Combinations of Different Substances	
Substances	**Observations**
water and sugar	Most of the sugar dissolved, but some remained. The water got a little cloudy.
vinegar and baking soda	Gas bubbles formed.
baking soda and lemon juice	Gas bubbles formed.
vinegar and salt	The water got a little cloudy. The salt dissolved.

Which combinations show evidence of a chemical change? Select **two** correct answers

A. vinegar and salt
B. water and sugar
C. vinegar and baking soda
D. baking soda and lemon juice

_____**9.** Lamar builds a robot out of blocks. He measures the mass of the robot on a scale. Lamar accidentally drops the robot, and the robot breaks into pieces. What can Lamar expect to find when he measures the mass of the all broken pieces?

The mass of the broken robot

A. increases
B. stays the same
C. there will be no mass
D. decrease

_____**10.** Which statement is the correct definition of the term freezing?

A. A change from liquid to gas
B. A change from gas to liquid
C. A change from solid to liquid
D. A change from liquid to solid

Use the information below to answer questions 11 and 12.

_____**11**. Amal was doing an investigation. She took an ice cube and placed it outside the freezer. After a while, the ice cube started to change into liquid water.

What happened to the ice cube?

A. Freezing
B. Melting
C. Evaporation
D. None of the above.

_____**12**. What kind of a change that took place in the ice cube?

A. Chemical change
B. Physical change
C. Molecular force
D. Element change

_____**13**. ---------- is the material's ability to keep its shape when you push it or strike it.

A. volume
B. mass
C. temperature
D. hardness

_____**14**. An **----------**is made up of only one kind of atom.

A. element
B. molecule
C. compound
D. atom

_____**15.** Which is **Not** a sign of a **physical change**?

A. Formation of a solid material
B. Change in the shape
C. Change in the state of matter
D. Change in size

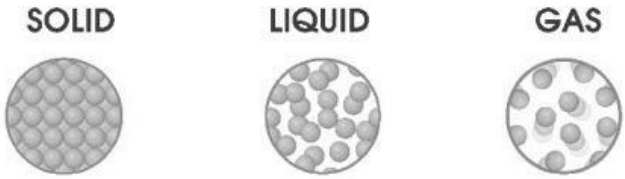
_____**16**. Which is the correct term that can be given to the smallest particle of a compound that still has the properties of that compound?

A. Atom
B. Element
C. Molecule
D. Compound

_____**17**. Which is the smallest part of an element that still has the properties of the element?

A. Atom
B. Element
C. Molecule
D. Compound.

Use the diagram below to answer questions 18, 19, and 20.



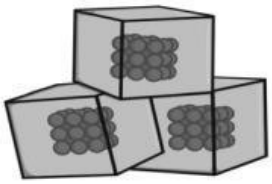
_____**18**. State of matter that takes the shape of its container (indefinite shape) and has a definite volume.

A. Liquid
B. Solid state
C. Gas state
D. None

_____**19**. State of matter that can fill containers with **No** definite (fixed) **shape** or **volume**

A. Solid state
B. Liquid state
C. Gas state
D. None

_____**20**. Which is **NOT** a property of a solid?



A. Has a definite shape
B. Has a definite volume
C. The particles are tightly packed and do not flow
D. Has no definite shape and takes the shape of its container

Use the information below to answer questions 20,21 and 22.

Trey placed an inflated balloon in a freezer. When he checked on the balloon two hours later, the balloon had **changed shape**.

Before freezer

Two hours in freezer

____**21**. Trey did not observe a hole or a leak in the balloon after he removed it from the freezer. Which **best** explains why the balloon changed **shape** after being in the freezer?

A. Chemical change happened inside the balloon.
B. The balloon melts.
C. The **volume** of the air in the balloon changes.
D. None of the above

_____**22**. Trey places the balloon from the freezer on a kitchen counter and leaves the room for two hours. What will Trey **most likely** observe when he returns to the kitchen?

A. The balloon will have expanded.
B. The balloon will continue to shrink.
C. The balloon will have broken into small pieces.
D. None of the above

_____**23**. An inflated balloon will shrink if it is placed in a refrigerator. What does the lower temperature cause the gas particles to do?

A. Move faster and become closer together
B. Move slower and become closer together
C. Move slower and become further apart
D. Move faster and become further apart

____**24**. What is the other name for describing the amount of space taken by matter?

A. Volume
B. Mass
C. Temperature
D. Texture

_____**25**. ---------- is the temperature at which ice (solid water) changes to a liquid.

A. 0°c
B. 100°c
C. 50°c
D. None of the above

_____**26.** A boiling point can be used to help identify a substance. What is the boiling point for water?

A. 0°c
B. 100°c
C. 50°c
D. None of the above

_____**27**. Evaporation takes place when particles leave a liquid and become a gas. What is the difference between **evaporation** and **boiling**?

A. Both happens at 100-degree Celsius
B. Evaporation is the change from liquid to gas whereas boiling from solid to gas
C. Evaporation can happen only at 100- degree Celsius
D. Evaporation can happen at any time (any temperature)

_____**28**. Which list a **physical property** of matter?

A. Rusting, hardness, texture
B. Color, shape, size
C. State of matter, temperature, flammability (burning)
D. Volume, rusting, mass

_____**29.** This diagram shows the particles in two substances that are being combined.

What would the model look like if a chemical reaction had occurred?

A. 

B. 

C. 

D. 

_____**30.** Sophia measured the mass of both substance X and substance Y. She then combined the two substances. When Sophia combined the substances, a new color formed. She measured the mass of the new substance and recorded the data in the table shown.

Weight of Substances		
Substance	**Color**	**Mass (g)**
X	blue	132
Y	yellow	46
XY	green	178

Which explains why the mass of X and Y combined is the same mass as the new substance XY?

A. chemical change
B. physical change
C. color change
D. law of conservation of matter

Q2. Read the sentences below. Choose true if the sentence is true. Choose false if the the sentence is false.

Sentence	True	False
1. A**ban balance** is a science tool used to measure the **volume**.		
2. Crushing a can, shredding cheese, and crumbling a paper are examples of a **chemical change.**		
3. In a **physical change** the particles rearrange to form a new substance.		
4. The **law of conservation** states that in any chemical change or physical change, the total mass of the matter does not change.		
5. Most things around you are **compounds**, which are matter made of **two or more elements such as salt**.		

Q3. Match each science terminology in column **A** to its definition in column **B**.

Column A		Column B
1. Mass	___	is how the material feels
2. Atomic theory	___	is made up of two or more different elements.
3. Physical change	___	occurs when one or more substances are turned into one or more different substances.
4. Temperature	___	the idea is that everything is made of small particles.
5. Organize	___	a change in some properties of matter that does not form a different kind of matter.
6. Texture	___	to sort out
7. Chemical reaction	___	use data and facts to make a statement
8. Compound	___	the amount of matter in a substance
9. Conclude	___	the measure of how fast the particles in an object are moving.

Q4. Fill in the blanks to answer the question.

Susannah is making pizza with her grandpa. Read the steps of the recipe.

Grandpa's Famous Pizza

1. Mix the flour, water, sugar, and yeast. Place the mixture in a covered bowl until bubbles form and the dough rises.
2. Remove the dough from the bowl and roll the dough flat.
3. Bake the dough until it becomes a dark-colored crust.
4. Spread tomato sauce over the top of the crust.
5. Slice peppers, onions, and pineapple. Arrange these items on the crust.
6. Grate some cheese.
7. Sprinkle the cheese on top of the pizza.
8. Bake the pizza until the cheese melts and turns a little brown.

Write whether each step in the recipe is a **chemical change** or a **physical change**.

Write whether each step in the recipe is a chemical change or a physical change.

- let dough rise _____
- roll dough _____
- bake dough _____

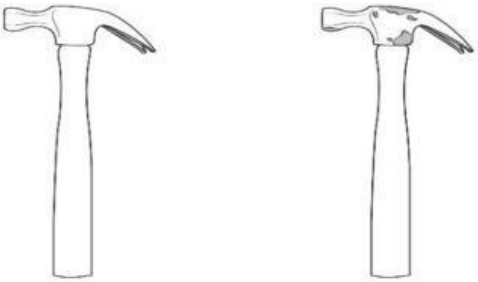
- slice vegetables _____
- grate cheese _____
- bake pizza _____

Q5. Read the words that describe different properties of matter. Draw lines to show the units and the science tool used to measure each physical property.

degrees Celsius	Volume	
milliliters	Mass	
grams	Temperature	

Q6. Circle the words to complete the sentences.

a. The picture shows two hammers. The first picture shows a new hammer. The second picture shows the same hammer after it was left outside all spring.



The picture of the hammer labeled “After” shows evidence of (**evaporation /melting /rust/ freezing)**, which is a **(chemical/physical)** change. This change occurs when the (**iron/ wood**) in the hammer reacts with (**oxygen/helium/nitrogen**) gas in the air.

b. Look at the illustration below. Circle the words to complete the sentences.

Over Time, some pennies change color from copper to green. This color change happens because of **(chemical change/physical change**). The **(sulfur/wood/copper/plastic)** that makes up a penny combines with **(oxygen/carbon dioxide/nitrogen)** in the air to form a green substance. The green substance is **(copper oxide/ water/carbon dioxide).** The copper oxide is made of two substances

---------- + ----------.

Q6. Write short answers.

a. What happens to liquids as they are cooled?

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b. What happens to the particles of substances when a chemical change occurs?

B. Is an explosion of a firework a chemical change or a physical change? Explain why?

---

d. Why do wet clothes become dry when put under direct sunlight?

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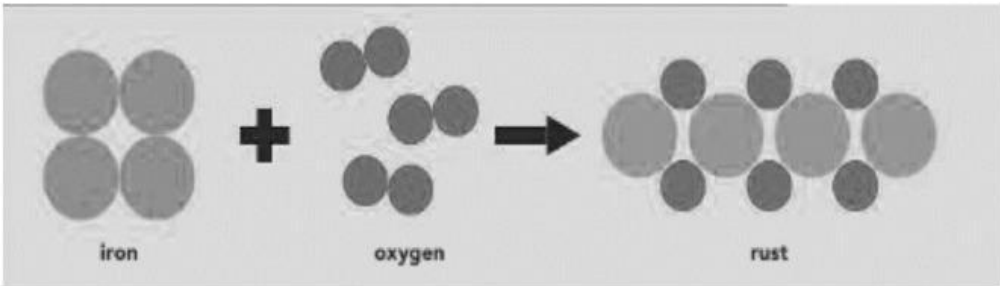
e. Look at the diagram. Each iron particle has a mass of 5 grams and each oxygen particle has a mass of 2 grams. Write the combined mass of the particles in each space below the word equation.



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Q7. Read each description. Mark it with a **P** if it describes a **physical change**, and a **C** if it describes a **chemical change**.

_____1. Food digestion

_____ 2. Melting ice cream

_____ 3. Puddle evaporating

_____ 4. Shredding paper

_____ 5. Roasting a marshmallow

_____ 6. Cutting fruits

_____ 7. Breaking a mug

_____ 8. Boiling water

_____ 9. Baking brownies

_____ 10. Leaves changing colors in fall.