

UNIT 5. MATTER - REVIEW

MATTER

1. What states of can matter exist in?

2. Complete the sentences about matter.

molecule - atoms - compound - element

- a) _____ are the building blocks of matter.
- b) A group of atoms is called a _____.
- c) Matter with only one kind of atom is called an _____.
- d) When atoms of different elements join and react together, they form a _____.

3. What is the difference between pure substances and mixtures?

4. Which of the following substances are pure substances? Circle them.

rubbish - gold - ice - salad - orange juice - pizza - mud
biscuits - copper - mayonnaise - nitrogen - cardboard - milk
blood - silver - salt - aluminium

5. What is the difference between a heterogeneous and a homogeneous mixture? Give an example of each. _____

6. Which substance is pure and which is a mixture?

A



rock

B



mineral

7. Is water a pure substance or a mixture? Is it an element or a compound?

MIXTURES

8. Match to make sentences.

- | | |
|----------------------------------|---|
| ___ a. A mixture is ... | 1. have varied colour and textures. |
| ___ b. Homogeneous mixtures... | 2. a substance with two or more components. |
| ___ c. Heterogeneous mixtures... | 3. a mixture with a solvent and a solute. |
| ___ d. A solution is | 4. have consistent colour or texture. |

9. How are evaporation and distillation linked? What part of the process is the same?

10. What property of matter is the method of decanting based on? _____

11. Complete the chart.

Separating	Heterogeneous mixtures	Homogeneous mixtures
A solid from a liquid		
A solid from a solid		
Two liquids		

12. Look at the picture. Which separation method is being used? Explain.



13. How would you separate a mixture of garbanzo beans and rice?

14. What method would you use to separate the salt from a glass of seawater?

15. How can you separate a mixture of sand and water?

16. What method can you use to separate lentils from a lentil soup?

17. What method can you use to obtain clear water from muddy water?

18. Match the mixtures with the methods for separating their components.

- | | |
|--|----------------|
| ___ a. Sand mixed with water | 1. Magnetism |
| ___ b. Oil mixed with water | 2. Decantation |
| ___ c. Sugar dissolved in water | 3. Filtration |
| ___ d. Iron particles mixed with chalk | 4. Evaporation |

19. Look at the photograph and write down what is happening



CHANGES IN MATTER

20. How are new substances produced from matter? What changes need to take place?_____

21. Classify the Physical changes and the Chemical changes in a chart.

melting - solidification - combustion - evaporation - condensation
- oxidation - putrefaction - fermentation - sublimation

PHYSICAL CHANGES	CHEMICAL CHANGES

Write *physical change* or *chemical change*.

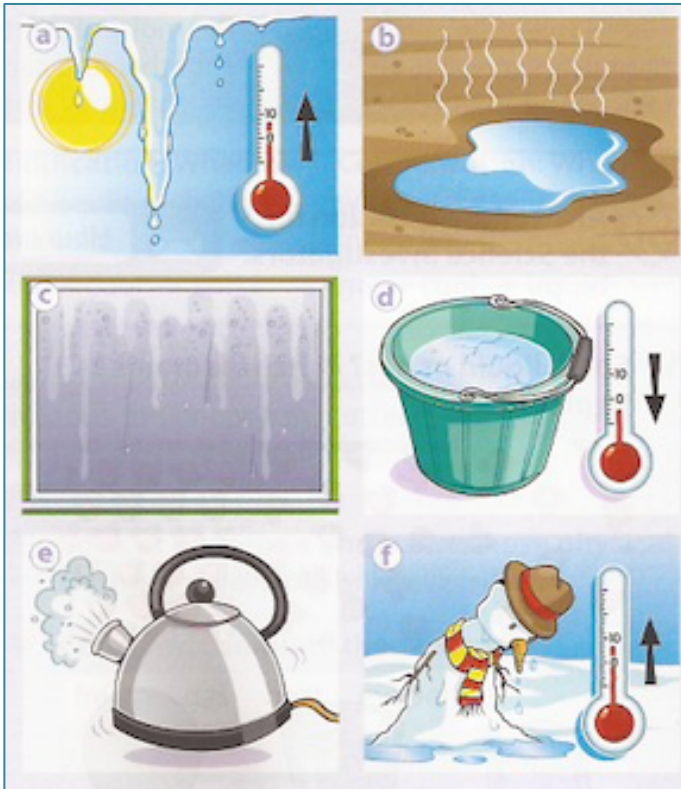
- a) _____ the substance changes but the matter stays the same.
- b) _____ the substance changes into a different substance.

22. Match the processes with the definitions.

- | | |
|-------------------------------------|-------------------|
| ___ a. A liquid changes to a solid. | 1. Melting |
| ___ b. A gas changes to a liquid. | 2. Evaporation |
| ___ c. A solid changes to a liquid. | 3. Condensation |
| ___ d. A liquid changes to a gas. | 4. Solidification |

23. What are the melting point and the boiling point of substances?

24. Describe what's happening in pictures a- f.



a _____

 b _____

 c _____

 d _____

 e _____

 f _____

25. Imagine you heat an ice cube in a saucepan. What changes of state take place from the time you start to heat the saucepan until the saucepan has no water in it?

26. Explain the changes of state involved in these everyday situations.

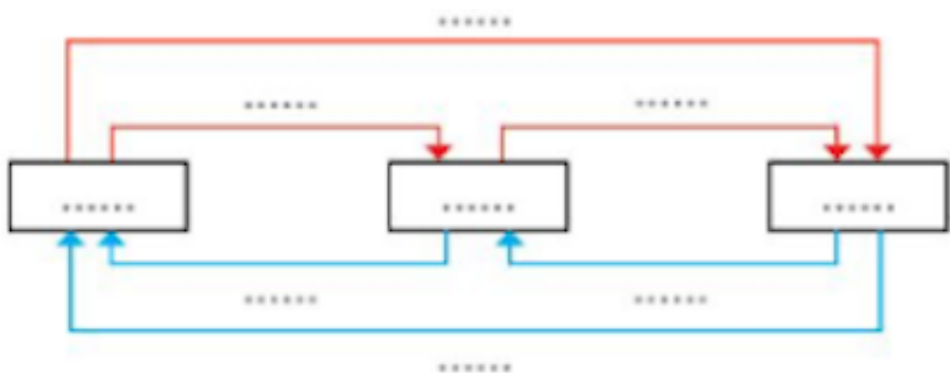
- a wet floor that is drying _____
- frost formed on a leaf _____
- an ice-covered pond _____
- a steamed-up mirror after a hot shower _____

27. Search the Internet to find out the melting and boiling points of three different substances. Put them in order from highest to lower.

MELTING POINTS

BOILING POINTS

28. Label the diagram with the corresponding changes of state.



29. Complete the sentences with *Oxidation* or *Combustion*.

- a) _____ occurs when a substance is burned and changes into different substances.
- b) _____ occurs when a substance reacts with the oxygen

30. Explain why photosynthesis and cellular respiration are chemical reactions.

31. Explain what oxidation and combustion are. What is the relation between the two?

32. What's fermentation? How useful is it? _____

33. Read the examples. Which chemical change are they?

- Burning a sheet of paper. _____
- Making wine out of grapes. _____
- The rain making your bike get rusty. _____
- Food spoiling. _____

34. Which gas is needed for combustion? What energy is produced during combustion? _____

35. Look at his list of foods. Which have undergone fermentation? Circle them

beer - lemonade - yoghurt - cheese - wine - jam

36. Which of the following involve chemical changes? Identify the type of chemical reaction.

- A rusted bicycle _____
- A snowflake _____
- A lighted candle _____
- A broken mirror _____
- Bread _____
- Yoghurt _____

Heterogeneous mixtures _____

Alloys _____

39. Complete the text. Use these words.

pure - distillation - composition - substances - mixtures -
filtration - physical - shape - combustion - heterogeneous - state

Matter can exist as _____ substances or _____. Mixtures can be _____ or homogeneous. These can be separated using different method, such as _____, evaporation, _____ and decantation.

Matter can undergo _____ or chemical changes. Physical changes can affect the size, _____, colour or _____ of matter, but the _____ does not change.

Chemical changes involve chemical reactions in which new _____ are produced. Oxidation, _____ and fermentation are types of chemical reactions.

40. Are these sentences true or false? Correct the false ones.

1. Matter always stays the same.

2. Without oxygen, combustion can't take place.

3. The composition of matter always changes when its appearance changes.

4. A chemical change is when matter changes into something different but it doesn't create a new substance.

5. Physical changes are irreversible when matter can back to its original state.

6. Combustion is a chemical reaction in which fuel reacts with oxygen to give off heat and light.

7. Pure substances can break down into more basic substances.

8. A solution is a homogenous mixture.

9. Heterogeneous mixtures are those in which the components cannot be identified at glance.

41. Complete the sentences with the following words.

mixture - physical - substance - oxygen - pure

1. In a _____ change, the substances that form the matter do not change.
2. In a chemical change, there is a change in the composition of a _____
3. Oxidation is the combination of _____ with other substances.
4. Water, gold, copper and salt are all _____ substances.
5. Almost all the matter is formed from the _____ of pure substances.