المدرسة الوطنية الأرثوذكسية الشميساني

The National Orthodox School Shmaisani

The Primary Stage of Grades (4-5)
School Year 2022 - 2023

Name: _____

Unit (6): Physical and Chemical Changes
Worksheet (2)

Date: / /

Objective:

- **Differentiate between physical and chemical changes.**
- **Classify different changes into reversible and irreversible changes.**

Question 1: Classify the following changes into physical or chemical changes, then tell whether this change is reversible or irreversible change.

	Change	Physical/ Chemical Change	Reversible/ Irreversible
1.	An egg being fried.		
2.	Water being frozen to make ice cubes.		
3.	Burning wood in a fire.		
4.	Dissolving salt in water.		
5.	Mixing cement with water.		
6.	Adding Bicarbonate of soda to vinegar.		
7.	Attracting an iron nail by a magnet.		
8.	Adding yeast to flour and water to make dough.		
9.	Baking a loaf of bread.		
10.	Folding a piece of paper.		
11.	A gate being rusty.		
12.	Water vapor condensing into liquid water.		
13.	A seed germinating and growing into a plant.		
14.	Breaking glass.		

Question 2:

Angelique works in a large kitchen.

She is cooking rice in boiling water.

(a) Boiling water is a reversible process.

Cooking rice is an irreversible process.

Explain why boiling water is reversible but cooking rice is irreversible.

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(b) The walls of the kitchen get wet.

Angelique knows that the water comes from the boiling water.

Explain how the walls of the kitchen get wet.

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Ice melts into liquid water.

(c) The melting of ice is a **reversible** process.

Explain why.

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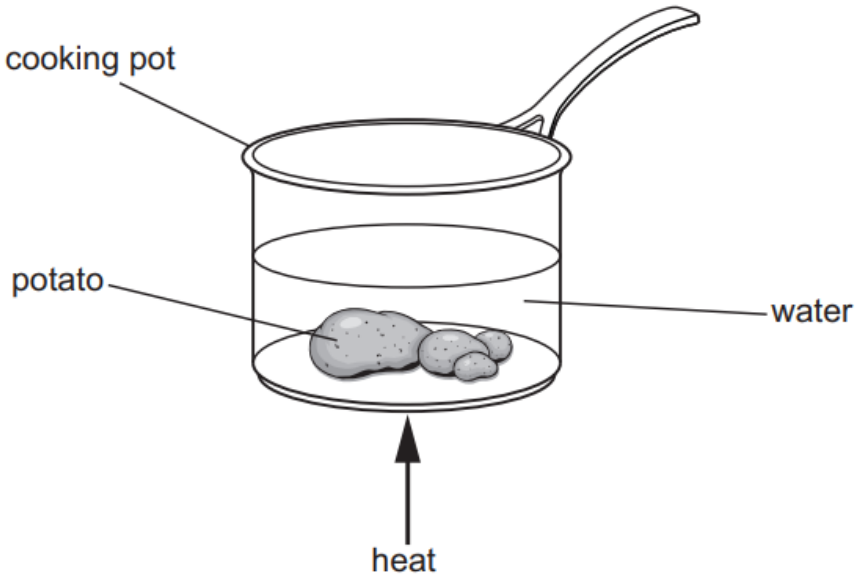
(d) Complete the sentences.

The melting point of ice is ..... °C.

The boiling point of water is ..... °C.

Question 3:

Anastasia cooks potatoes in hot water.



She puts the cooking pot over a flame and heats the water for 25 minutes.

(a) What happens to water when it is boiling?

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(b) Explain why boiling water is a **reversible** change.

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(c) Explain why cooking a potato is an **irreversible** change.

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(d) Suggest a material that **the handle of the pot** can be made of?

.....

(e) Suggest a material that **the pot** can be made of?

.....

Question 4:

The students are putting different materials into water.

They used one spoonful of each substance and stirred it well. Then they left the mixtures for 2 minutes.

This is what they observed.

	*Material **A** - a white powder* *It disappeared as we stirred it. There was nothing there when we checked it.*
	*Material **B** - brown crystals* *It moved about as we stirred it but sank to the bottom when we left it.*
	*Material **C** - a white powder* *It fizzed and bubbled when we first put it in and then disappeared.*
	*Material **D** - blue crystals* *The solid disappeared as we stirred but then the water turned blue.*

(a) (i) Write down the letters of the materials which did not dissolve.

..... [1]

(b) What happens to the solid when a soluble material is added to water?
Tick (✓) **one** box.

The material is still there but cannot be seen. ☐

The water soaks up the solid. ☐

The solid disappears into the air. ☐

The solid melts in the water. ☐

(c) Which material cannot be got back?
Tick (✓) **one** box.

Material A ☐

Material B ☐

Material C ☐

Material D ☐

- A **chemical change** has happened when this material was added to water.
What is the evidence?

……

d) What is smoke? Tick (✓) **one** box.

Gases made by melting. ☐

Liquid from evaporation. ☐

New materials made by burning. ☐

Solids made from condensation. ☐