



INDIAN SCHOOL AL WADI AL KABIR

Class: VI	DEPARTMENT OF SCIENCE- 2020-2021	Date: 20.12.2020
Worksheet No.: 14 WITH ANSWERS	Topic: CHANGES AROUND US	Note: A4 FILE FORMAT
NAME OF THE STUDENT:	CLASS & SEC:	ROLL NO.:

1.OBJECTIVE TYPE QUESTIONS

1. When an object is cooled, its size_____
 - a. increases
 - b. decreases
 - c. remains the same
 - d. none of the above
2. Which of the following is a reversible change?
 - a. evaporation
 - b. ripening of fruits
 - c. bud to flower
 - d. milk to curd
3. Which of the following changes will show expansion?
 - a. burning of paper
 - b. heating of sand
 - c. heating of iron
 - d. heating of wood
4. Melting of ice is a _____
 - a. irreversible change
 - b. reversible change
 - c. contraction
 - d. expansion
5. Rohan tore a sheet of paper into pieces and then burnt them. Identify the irreversible change taking place in the process.
 - a. tearing the sheet into pieces
 - b. burning the pieces
 - c. both tearing and burning of pieces
 - d. none of these.

6. While lighting a candle, Paheli observed the following changes
- i) Wax was melting.
 - ii) Candle was burning.
 - iii) Size of the candle was reducing.
 - iv) Melted wax was getting solidified.
- Of the above, the changes that can be reversed are
- a) (i) and (ii)
 - b) (ii) and (iii)
 - c) (iii) and (iv)
 - d) (i) and (iv)
7. Iron rim is made slightly smaller than the wooden wheel. The rim is usually heated before fixing into the wooden wheel, because on heating the iron rim.
- a) Expands and fits onto the wooden wheel.
 - b) Contracts and fits onto the wooden wheel.
 - c) No change in the size takes place.
 - d) Expands first, then on cooling contracts and fits onto the wooden wheel.

For the following questions, two statements are given- one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (i), (ii), (iii) and (iv) as given below-

- i) Both A and R are true and R is correct explanation of the assertion.*
 - ii) Both A and R are true but R is not the correct explanation of the assertion.*
 - iii) A is true but R is false.*
 - iv) A is false but R is true*
8. Assertion (A): Burning of matchstick is an irreversible change.
Reason (R): The ashes formed on burning cannot be converted back to matchstick.
- (i) Both A and R are true and R is correct explanation of the assertion.
9. Assertion (A): The change of water from liquid to steam on heating is reversible change.
Reason (R): Conversion of liquid into steam is called evaporation.
- ii) Both A and R are true but R is not the correct explanation of the assertion.
10. Assertion (A): Small gap is left between the rails of a railway track.
Reason (R): Cooling of substances result in expansion.
- (iii) A is true but R is false.

II. BASIC CONCEPT LEVEL QUESTIONS

1. What is a change? [Hint: A change refers to a noticeable difference in shape, size, colour, state, internal structure or any other property.]
2. Is printing of book is a reversible or an irreversible change? [Hint: Printing is an irreversible change because ink and paper cannot be separated once printing is done.]

3. A small size boat is made by folding a paper. Can this change be reversed? Think and write one more example of similar type. [Hint: Yes, it can be reversed. Another example is ball made by folding paper.]
4. Your brother accidentally dropped your favorite pencil box and broke it. This is a change you did not want. Can you reverse this change? [Hint: No, this change is not reversible as broken pieces cannot be fixed.]
5. State whether burning of a piece of paper is a reversible or an irreversible change. [Hint: When we burn a piece of paper, it changes into ash and smoke. We cannot combine the ash and smoke to form the original piece of paper. So, the burning of a piece of paper is an irreversible change.]
6. Why the stretching of a rubber band is reversible change? [Hint: The stretching of a rubber band is a reversible change because after we leave the rubber, it gets back to its original position.]
7. Why is sharpening of pencil considered to be an irreversible change? [Hint: The size of pencil reduces with sharpening. We cannot get the original size of the pencil, so sharpening of pencil is considered as an irreversible change.]
8. A potter working on his wheel shapes a lump of clay into a pot and bakes it in an oven. Can this change be reversed? [Hint: No, this change cannot be reversed (irreversible).]

III. INTERMEDIATE LEVEL QUESTIONS-

1. Write differences between reversible and irreversible changes with examples.

Reversible changes	Irreversible changes
Changes that can be reversed to get the original substance are called reversible changes.	A change that cannot be reversed to get back the original substance is called as irreversible change
It is a temporary change.	It is a permanent change
Example: Melting of ice into water.	Example: setting of milk into curd

2. How does curd being set? Is this change reversible? [Hint: A small quantity of curd is added to warm milk. The milk is stirred and is set aside undisturbed for a few hours at a warm place. In a few hours the milk changes into curd. Taste and texture of curd is different from milk. Curd formed from milk cannot be changed into milk again. So, this is an irreversible change.]

3. Differentiate between burning of a log of wood and breaking of a log of wood.

Burning of a log of wood	Breaking of a log of wood
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New substances with new properties are formed (ashes)	No new substances are formed. Composition remains same.
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4. What is the effect of heating and cooling on some materials? [Hint: Heating causes expansion (increase in size), change in state (ice to water). Cooling causes contraction (shrink in size), change in state (water to steam).]

5. Give reason:

- a) Fully blown balloon burst on its own when kept under the sun. [Hint: The air inside the balloon expands by absorbing heat from the sun]
- b) Expansion and contraction are considered as reversible changes. [Hint: When the cause of heating or cooling is removed, the substances return to their original state. Thus, expansion and contraction are reversible changes.]
- c) Metallic electric wires sag during summers. [Hint: Due to expansion]
- d) Tearing of paper is said to be a change that cannot be reversed. [Hint: We do not get the initial/original substance]

6. How the metal rim is fixed on a wooden wheel of a cart? [Hint: On heating, the metal rim expands. It is then slipped on the wheel and cold water is poured on it. The rim contracts on cooling and fits tightly onto the wheel.]

7. Differentiate between:

- a) Evaporation and Condensation [Hint: The process of conversion of liquid into its vapour state on heating is called evaporation. The process of conversion of vapour into its liquid state on cooling is called condensation.]
- b) Expansion and Contraction [Hint: The process in which substances increase in size is called expansion. The process in which the substances decrease in size is called contraction.]

8. Is Deforestation a reversible change? [Hint: No, deforestation cannot be considered as a reversible change because same tree can be planted again after cutting.]

IV. ADVANCED LEVEL QUESTIONS-

1. A bag of cement lying in the open gets wet due to rain during the night. The next day the sun shines brightly. Do you think the changes, which have occurred in the cement, could be reversed? [Hint: No, the change cannot be reversed.]
2. A thick coating of a paste Plaster of Paris (POP) is applied over the bandage on a fractured bone. It becomes hard on drying to keep the fractured bone immobilized. Can the change in POP be reversed? [Hint: No, the change cannot be reversed.]
3. How does a goldsmith make beautifully designed jewellery from a block of gold?

[Hint: Metals like gold melts on heating and the molten metal can be moulded into different shapes and size]

V. EXEMPLAR QUESTIONS-

1. A piece of iron is heated till it becomes red hot. It then becomes soft and is beaten to a desired shape. What kind of changes are observed in this process; reversible or irreversible? [Hint: The softening of iron on heating to red hot stage is a reversible change. And when the hot iron is cooled, it becomes hard again.]
2. Paheli had bought a new bottle of pickle from the market. She tried to open the metal cap to taste it but could not do so. She then took a bowl of hot water and immersed the upper end of the bottle in it for five minutes. She could easily open the bottle now. Can you give the reason for this? [Hint: She can easily open the bottle because of expansion of metal cap (increase in size) due to heating.]
3. Read the following and Identify the changes (a) to (d) as the changes that can be reversed or that cannot be reversed Paheli mixed flour and water and
 - (a) made a dough – [Hint: irreversible]
 - (b) rolled the dough to make a chapatti- [Hint: reversible]
 - (c) baked the chapatti on a pan- [Hint: irreversible]
 - (d) dried the chapatti and ground it in a grinder to make powder- [Hint: irreversible]

Prepared by: Mrs. SOBHANA RANLP	CHECKED BY : HOD - SCIENCE
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