

ACTIVITY NO. -6-SHADES OF BLUES AND GREENS

Subject	Science
Class	VII
Chapter/Unit	Physical and Chemical changes
Topic	Characteristics of chemical change
Time	30 minutes
Nature of Activity	Individual

What will I learn (Learning Outcome)?

To learn that:

- ❖ In a chemical change one or more substances are formed.
- ❖ The substances formed are totally different in nature to the substances before the change.
- ❖ Most chemical changes are irreversible.

Skills: Analyzing and Applying

What I have to do?

To study the deposition of copper on iron nails.

What do I require?

Copper sulphate, water, glass rod, iron nails, sand paper, test tube.

What do I need to know?

A change in which a new substance is formed is known as chemical change and these changes are mostly irreversible.

➤ **Teacher's Activity**

Teacher will

1. explain that all changes can be broadly classified as physical or chemical changes based on whether or not the change results in the formation of a new compound or substance.
2. arrange the materials for the individual.
3. give instructions regarding the activity.

How will I proceed?

➤ **Student's Activity**

1. Take about 100 ml of water in a test tube and add some copper sulphate to it.
2. Dissolve the salt by stirring the solution with a glass rod. Observe the color of the solution.
3. Clean the iron nails thoroughly with sand paper. Record their color.
4. Now, drop the iron nails in the copper sulphate solution and leave them undisturbed overnight.
5. Take the iron nails out the next day and observe the color of the iron nails and the solution.

What have I observed?

Color of the:	Before the reaction	After the reaction
Solution		
iron nail		

What have I learnt?

- Copper, from the copper sulphate solution, gets deposited on the iron nails and gives the nails a _____ color.
- Some iron from the iron nails goes into the solution and forms a new substance, iron sulphate, which is _____ in color.
- Since this change involves the formation of new substances, so it is a _____ change.

What am I curious to learn?

- Let us observe the process of rusting on iron objects by leaving it in a moist atmosphere for several days and see the formation of the brown powdery substance called rust on it.

Let me evaluate myself

Q1. Define a chemical change and list its characteristics.

Ans. _____.

Q2. Define a physical change and list its characteristics.

Ans. _____.

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Q3. What are the different methods followed to prevent rusting?

Ans. _____.

Q4. Why is rusting of iron articles faster in coastal areas than in deserts?

Ans. _____.

Q5. Explain why, explosion of a firework (such as cracker) is said to be a chemical change.

Ans. _____.