

ACTIVITY NO. -5-COLOUR CODE

Subject	Science
Class	VII
Chapter/Unit	Acids, bases and salts
Topic	Indicators
Time	30 minutes
Nature of Activity	Individual

What will I learn (Learning Outcome)?

To test acids and bases using indicators.

Skills: Analyzing and Applying

What I have to do?

To test acids and bases using natural indicators.

What do I require?

- Half a teaspoonful each of lemon juice, baking soda and common salt for testing,
- purple-cabbage juice and turmeric, as indicators,
- a small piece of white cloth cut into six pieces and
- three test tubes.

What do I need to know?

Indicators are those substances which help us to identify whether a substance is an acid or a base, by their change of color.

➤ **Teacher's Activity**

Teacher will

1. explain the properties of acids and bases
2. arrange the materials for the individual
3. give instructions regarding the activity

How will I proceed?

➤ **Student's Activity**

1. Take some water in a test tube, add lemon juice and shake it to make a solution. Mark it A.
2. Similarly, make a solution of baking soda in a test tube and mark it B.
3. Make a solution of common salt and mark the test tube C.
4. Take three pieces of cloth and put turmeric stains on each one of them. Put a drop each of solution A, B and C on the three stains. Note the change in color, if any, of the turmeric stain.
5. Now, take three pieces of cloth and put purple-cabbage juice on each one of them. Put a drop of each of solution A, B and C on the three stains. Note the change in color.

What have I observed?

Effect of solution on turmeric

Color	A	B	C
Before adding indicator			
After adding indicator			

Effect of solution on purple-cabbage

Color	A	B	C
Before adding indicator			
After adding indicator			

What have I learnt?

- With **turmeric** I will observe that:
 - ❖ It changes color from _____ to _____ with the baking soda solution.
 - ❖ It _____ color with the lemon juice solution.
- With **purple-cabbage juice** I will observe that:
 - ❖ It changes color from _____ to _____ with the lemon juice solution.
 - ❖ It changes color from _____ to _____ with the baking soda solution.

The turmeric and the purple-cabbage juice _____ show any change in color with the common salt solution.

What am I curious to learn?

- Let us make indicator solutions from China rose and check their color in solutions of some acidic and basic substances.

Let me evaluate myself

Q1. Give one example each of acidic, basic and neutral substances.

Ans. _____
_____.

Q2. List any three substances that can serve as indicators.

Ans. _____
_____.

Q3. Mention any two difference between an acidic and a basic substance.

Ans. _____
_____.

Q4. It has been observed that a turmeric stain on a white shirt turned when it is washed with soap. Explain why?

Ans. _____
_____.

Q5. A few drops of purple-cabbage juice are added to the colorless solution of a salt. The resulting solution becomes light purple. What does it indicate about the nature of the salt?

Ans. _____
_____.