

Subject-Chemistry

Activity1-Endothermic and Exothermic Reactions.

Chapter1-Chemical Reactions and Equations

Class- X

Duration-40mins

Nature of the Activity- Group

Learning Outcome-

Students will be able to differentiate between Exothermic and Endothermic Reaction.

What we have to do?

To perform the following reactions, record their temperatures and identify Endothermic and Exothermic Reactions.

What do we require?

4 Beakers(10mL), water, Copper Sulphate Solution, Potassium Sulphate, Calcium Oxide
Anhydrous Copper Sulphate, Spatulas and Laboratory Thermometer

What do we need to know?

Teacher will ask students to recall the definition of Endothermic and Exothermic Reactions and give examples from daily life. The reactions in which amount of heat absorbed is more than the amount of heat released is called as an **Endothermic Reaction** and the reactions in which the amount of heat released is more than the amount of heat absorbed is called as an **Exothermic Reaction**

How will you proceed?

➤ Teacher's Activity

Teacher will divide the class into groups of four each and make necessary arrangements for the activity also guide students on how to perform the activity.

➤ Student's Activity

1. Take four beakers and label them A, B, C and D
2. Put 5mL of water in A, B and C beakers and Copper Sulphate solution in beaker D
3. Record the temperature of each liquid contained in beakers above, using a Laboratory thermometer.
4. Add one spatula of Potassium Sulphate, Calcium Oxide, Anhydrous Copper Sulphate and Iron fillings to beakers A, B, C and D respectively and stir.

5. Record the temperature of each of the above mixture again

What have you observed?

Beaker	Temperature of the liquids before start of the reaction	Temperature of the mixture at the end of the reaction
A		
B		
C		
D		

What have you learnt?

Reaction in Beaker A is an _____ reaction

Reaction in Beaker B is an _____ reaction

Reaction in Beaker C is an _____ reaction

Reaction in Beaker D is an _____ reaction

EXTENDED LEARNING

What would you be interested to know?

1. What are the conditions necessary for a chemical reaction to take place?
2. What are the various types of chemical reactions?
3. Why is respiration an Exothermic Reaction?

