

# PM SHRI KV GAJJ BHUNGA , HOSHIARPUR

## Best Teaching Practices for Science (Class : VIII)

### **Inquiry-Based Learning**

#### **Topic: Microorganisms**

Example: Have students design an experiment to observe the effects of yeast on dough.

2. Demonstrate the functioning of compound microscope and observe the available specimens of microbes .



### **Hands-On Experiments**

#### **Topic: States of Matter**

Example: Conduct experiments to observe how water changes from solid to liquid to gas.

Real-Life Connections

#### **Topic : Crop Production & Management**

Example: Project on making models of traditional tools of farming

Creative learning and team work

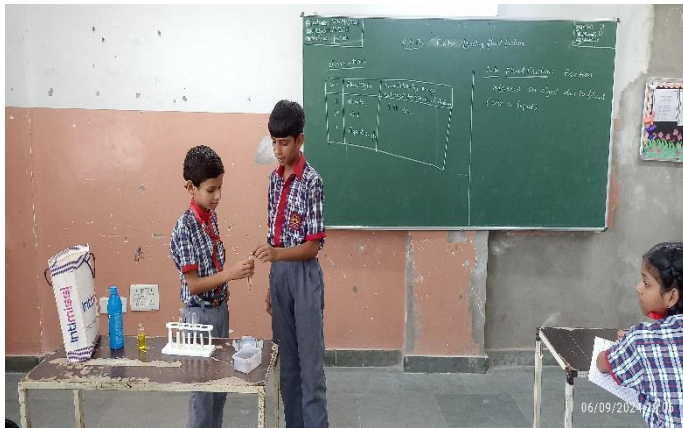


**Topic: Forces and pressure**

Example: Discuss how seatbelts protect passengers in a car crash, linking physics to everyday safety and demonstrate how schools bags with broad straps are easy to carry with special focus of concept of pressure.

Live Demonstration .

**Friction : Demonstrate factors affecting fluid friction Live demonstration / Group activity based learning**



**Friction : Observing the impact of friction**





**Friction : Experiencing different types of friction : Static Friction Rolling Friction and sliding friction etc.**

**Method : Learning by Doing**

### **Topic: The Nitrogen Cycle**

Example: Use diagrams and animations to illustrate the stages of the nitrogen cycle.

### **Group Projects**

#### **Topic: Combustible and Non- combustible substances .**

Example: Assign groups to research different renewable energy sources and present their findings.

### **Formative Assessments**

Topic:

Example: Use short quizzes and exit tickets to check understanding of how different types of friction work.

### **\*Class Discussions\***

#### **Topic: Climate Change**

Example: Facilitate a debate on the impacts of climate change and potential solutions.

Technology Integration

### **\*Peer Teaching\***

Topic: Scientific Method

Example: Have students teach each other about different steps of the scientific method through role play.

# Best Teaching Practices for Chemistry (Class XI and XII)

## Laboratory Work

### Topic: Chemical Reactions

Example: Conducted a reaction between vinegar and baking soda to observe acid-base reactions.

Real-Life Applications

### Topic: Organic Chemistry

Example: Discussed the role of organic compounds in everyday products like plastics and pharmaceuticals.

By Interactive Simulations

### Topic: Periodic Table

Example: Students created concept maps linking elements, their properties, and uses.

Case Studies

### Topic: Environmental Chemistry

Example: Analyze a case study on pollution and its chemical impacts on ecosystems. Divide students into groups and give each group a topic . Engage seminar on each topic where each group member adds points to the discussion of group leader.

Seminar Method and group discussion method.

### Topic: Chemical Bonding

Example: Use of videos and animations to demonstrate ionic and covalent bonding.

Peer Review

## Flipped Classroom

### Topic: Thermodynamics

Example: Assigned video lectures for homework and use class time for problem-solving and discussions.

Guest Speakers

### Topic: Career in Chemistry

Example: To Invite a local chemist to discuss their work and its applications, inspiring students' interest in the field.

These practices are designed to enhance student engagement and understanding in both science and chemistry classes.

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