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**CLASS: JS 1 EMERALD**

**SUBJECT: BASIC TECHNOLOGY**

**1. What is Safety?**

- Safety refers to the condition of being protected from harm, injury, or any danger. In various contexts, especially in technology and industry, safety encompasses measures, protocols, and practices put in place to prevent accidents, injuries, or hazards.

**2. State Five Safety Rules and Regulations:** While safety rules and regulations can vary depending on the context (e.g., workplace, laboratory, construction site), here are five general safety rules:

- Always wear appropriate personal protective equipment (PPE) such as helmets, gloves, and safety goggles when necessary.
- Follow established procedures and guidelines for operating machinery and equipment.
- Never operate machinery or equipment without proper training or authorization.
- Keep work areas clean and organized to avoid potential hazards.
- Report any unsafe conditions, incidents, or near-miss events to supervisors or appropriate personnel immediately.

### 3. Define Plastic and Glass:

- **Plastic:** Plastic is a synthetic material made from polymers, which are long chains of molecules. Plastics can be molded into various shapes while in a soft state and retain their form when they cool or harden. They are widely used in numerous applications due to their versatility, durability, and lightweight nature.
- **Glass:** Glass is a hard, brittle, transparent or translucent material made primarily from silica (sand), soda ash, and limestone. It is produced by melting these raw materials at high temperatures. Glass is known for its clarity, heat resistance, and chemical stability, making it suitable for a wide range of applications, from windows and containers to optical devices.

### 4. Mention Three Properties of Ceramics and Glass:

- **Hardness:** Both ceramics and glass are known for their hardness, making them resistant to wear and abrasion.
- **Brittleness:** Ceramics and glass are inherently brittle materials, meaning they can break or fracture easily under applied stress without significant deformation.
- **Thermal Stability:** Ceramics and glass exhibit high thermal stability, allowing them to withstand high temperatures without melting or deforming. This property makes them suitable for applications requiring heat resistance.