


UNIT 3:

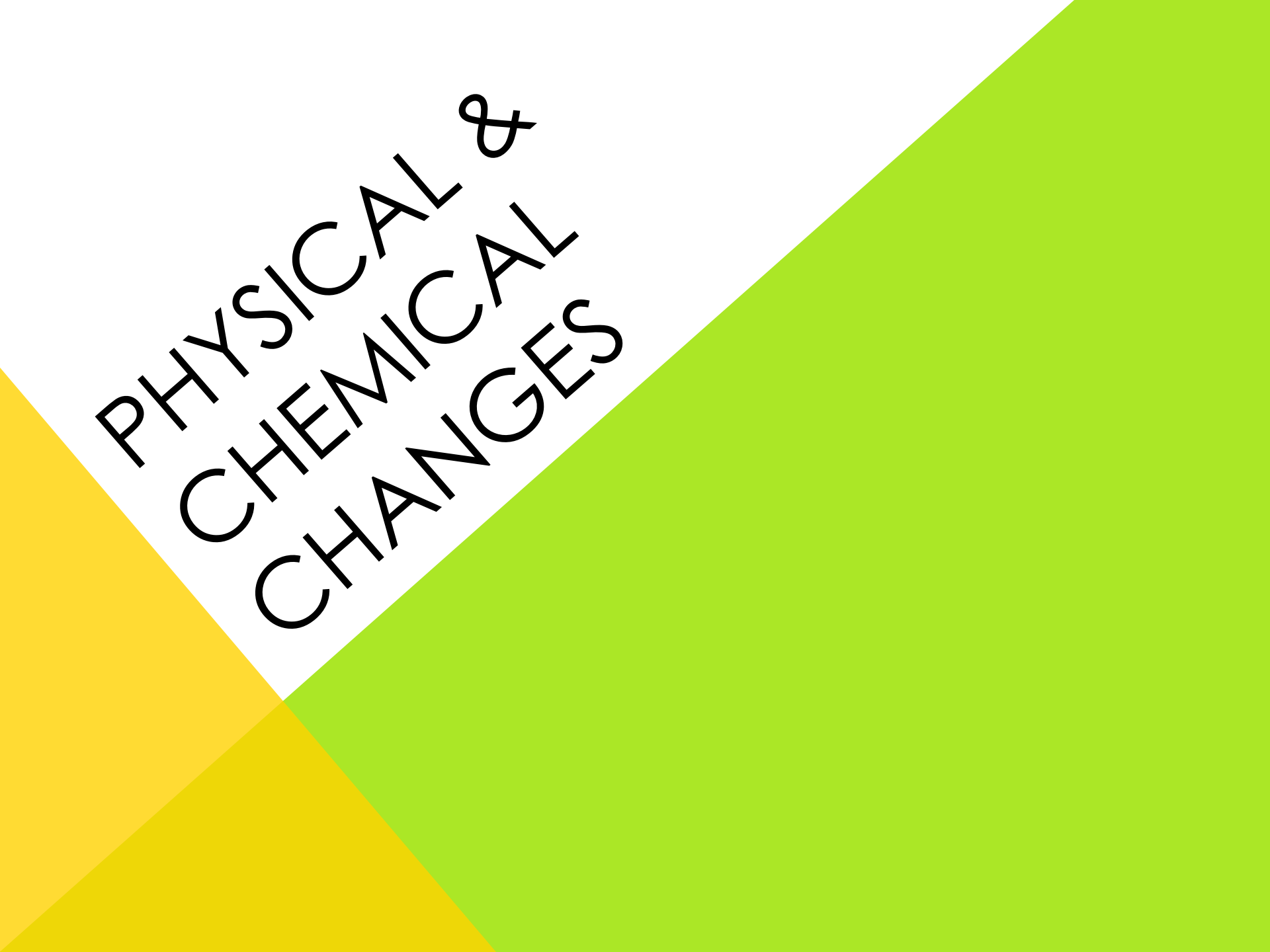
MATTER AND CLASSIFICATION

Topics Covered:

- Physical and Chemical Changes
- Physical and Chemical Properties
- Types of Matter
- Naming

UNIT OBJECTIVES

- Understand physical and chemical changes and the conservation of mass
 - Understand matter in terms of definition, states, changes in state, and chemical and physical properties
 - Name inorganic ionic and molecular compounds
- 



PHYSICAL &
CHEMICAL
CHANGES

PHYSICAL AND CHEMICAL CHANGES

Law of Conservation of Mass:

*Applies to physical and chemical changes

PHYSICAL AND CHEMICAL CHANGES

Physical Change:

Examples:



PHYSICAL AND CHEMICAL CHANGES

Chemical Change:

Examples:



PHYSICAL AND CHEMICAL CHANGES

Types of Chemical Changes

1. Formation of a Precipitate

PHYSICAL AND CHEMICAL CHANGES

Types of Chemical Changes

2. Color Change

*Dilution is NOT a chemical change

PHYSICAL AND CHEMICAL CHANGES

Types of Chemical Changes

3. Gas Production



PHYSICAL AND CHEMICAL CHANGES

Types of Chemical Changes

4. Heat Exchange


- Exothermic:
- Endothermic:



PHYSICAL &
CHEMICAL
PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES

Physical Properties of Pure Substances

1. Electrical Conductivity
 2. Heat Conductivity
 3. Melting Point
 4. Boiling Point
- 

PHYSICAL AND CHEMICAL PROPERTIES

Physical Properties of Pure Substances

5. Density


6. Index of Refraction

7. Malleability

8. Ductility

PHYSICAL AND CHEMICAL PROPERTIES

Chemical Properties of Pure Substances

1. Reaction with acids and bases
 2. Reaction with oxygen (combustion)
 3. Acting as oxidizing/reducing agent
 4. Reaction with other elements
- 

PHYSICAL AND CHEMICAL PROPERTIES

Chemical Properties of Pure Substances

5. Decomposition into simpler substances

6. Corrosion

PHYSICAL AND CHEMICAL PROPERTIES

Intensive Property:

Examples:



PHYSICAL AND CHEMICAL PROPERTIES

Extensive Property:

Examples:

