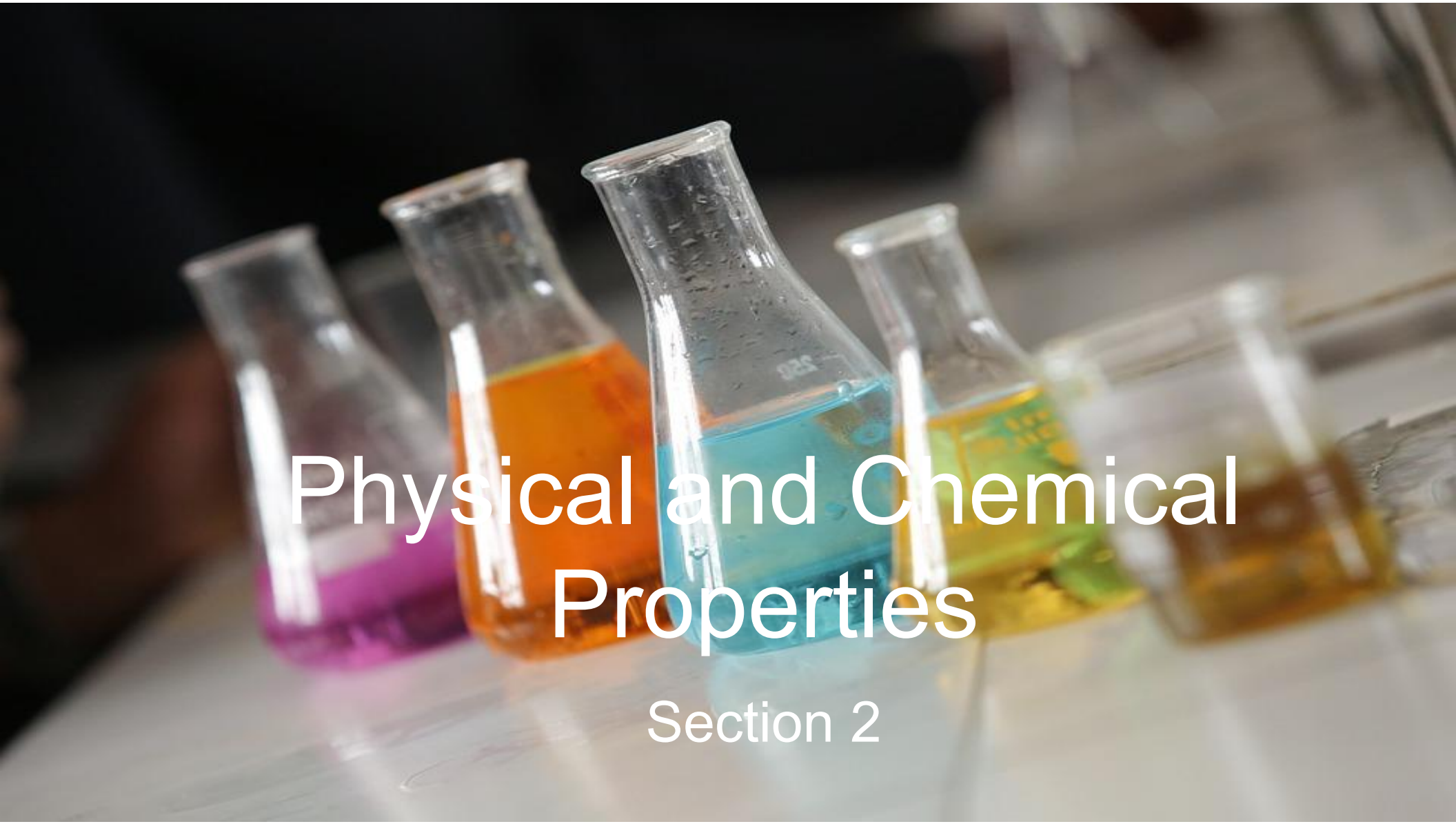
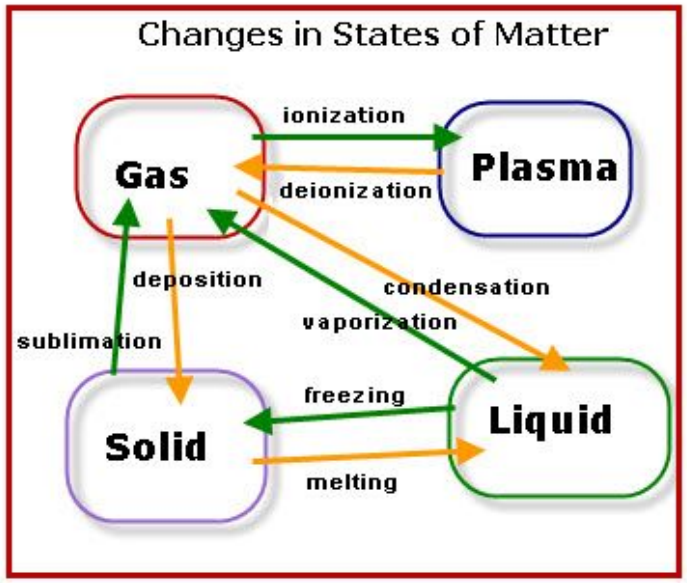


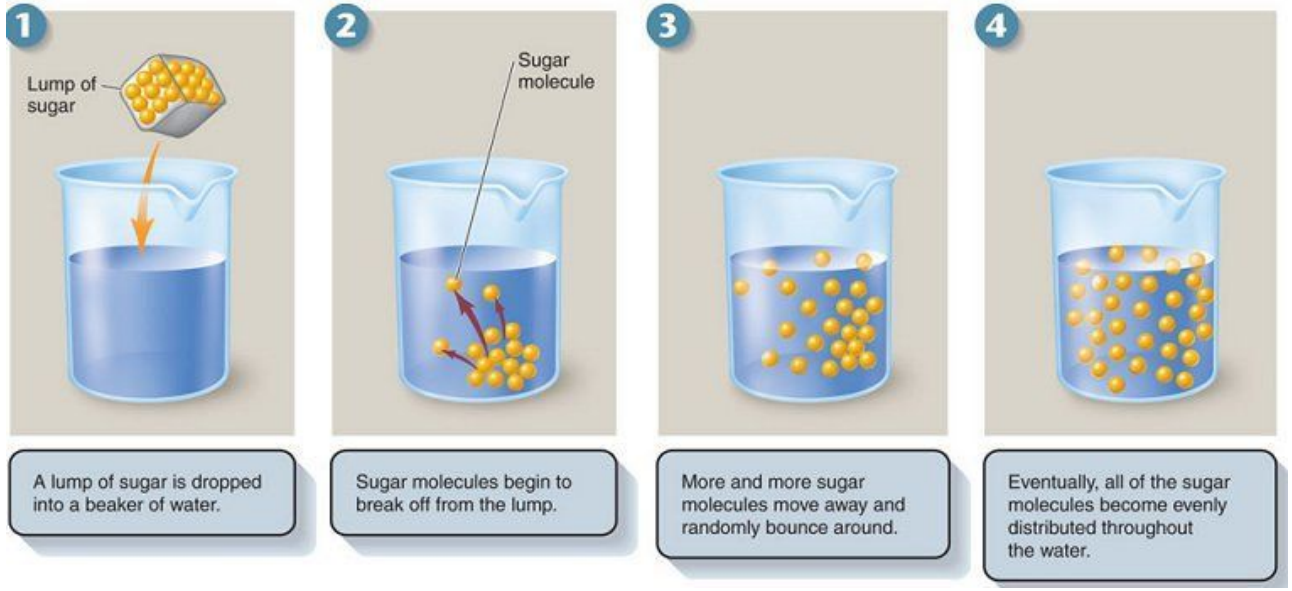
Physical and Chemical Properties

Section 2

A. **Physical change**—Form or appearance of matter changes, but composition stays the same.

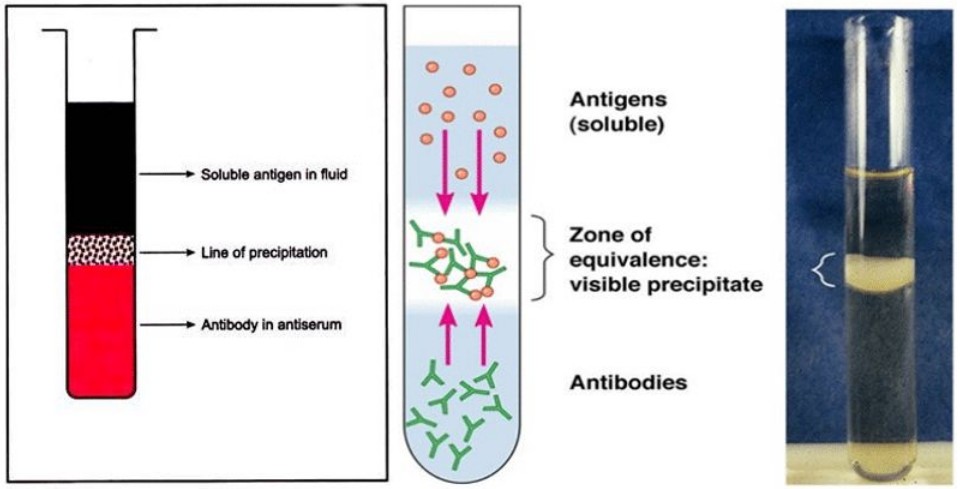
1. Shape can change, but substance does not.
2. Dissolving a solid into a liquid is a physical change.
3. Changing states through vaporization, condensation, sublimation, or deposition does not change the composition of matter.

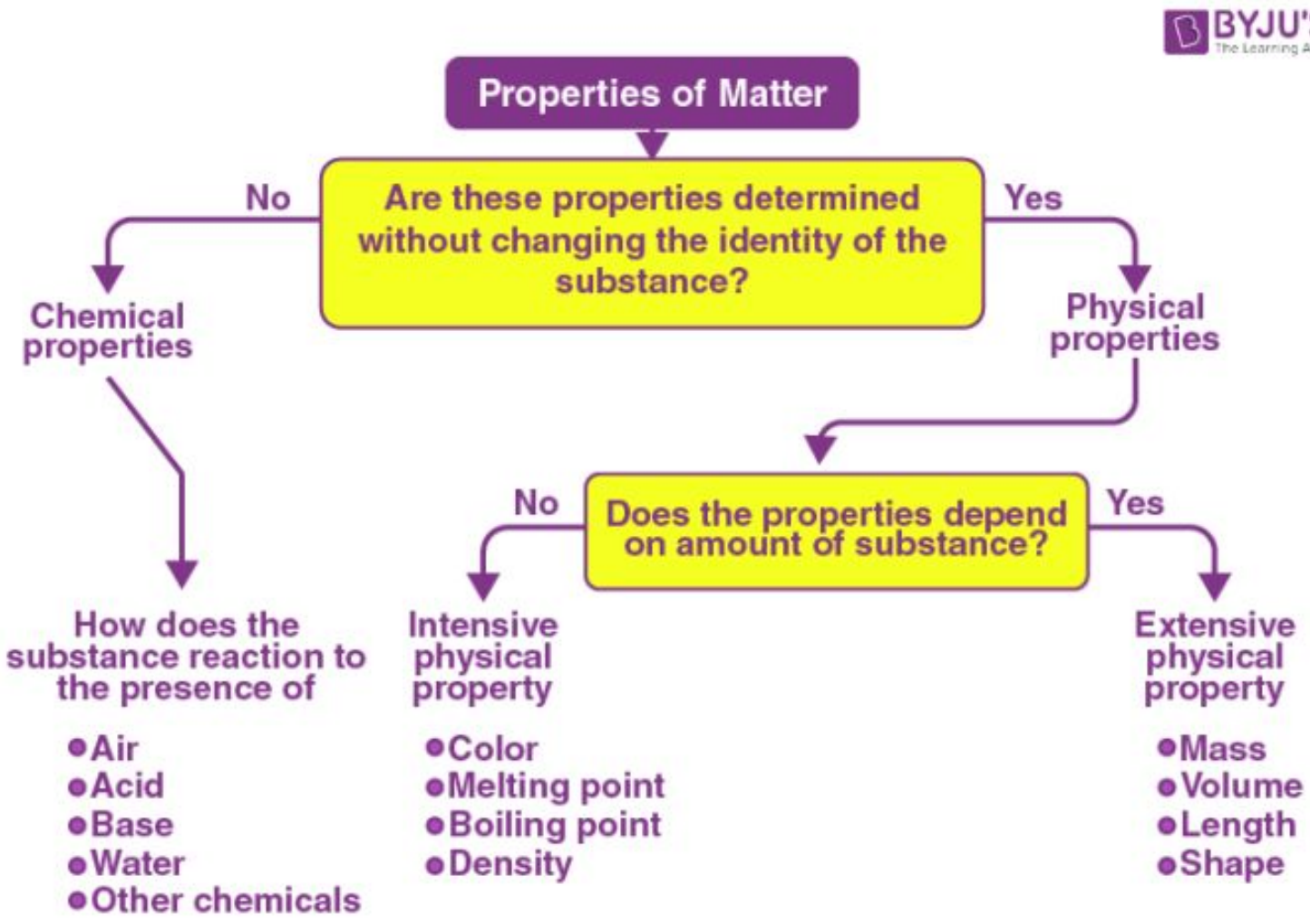




B. **Chemical change** results in a change in the substance's composition.

1. Color can change as a chemical reaction occurs.
2. Energy may be gained or released during a chemical change.
3. Substances may change odor as a result of a chemical change.
4. Formation of a gas or the precipitation of a solid can indicate a chemical change.
5. Chemical changes are not easily reversed.

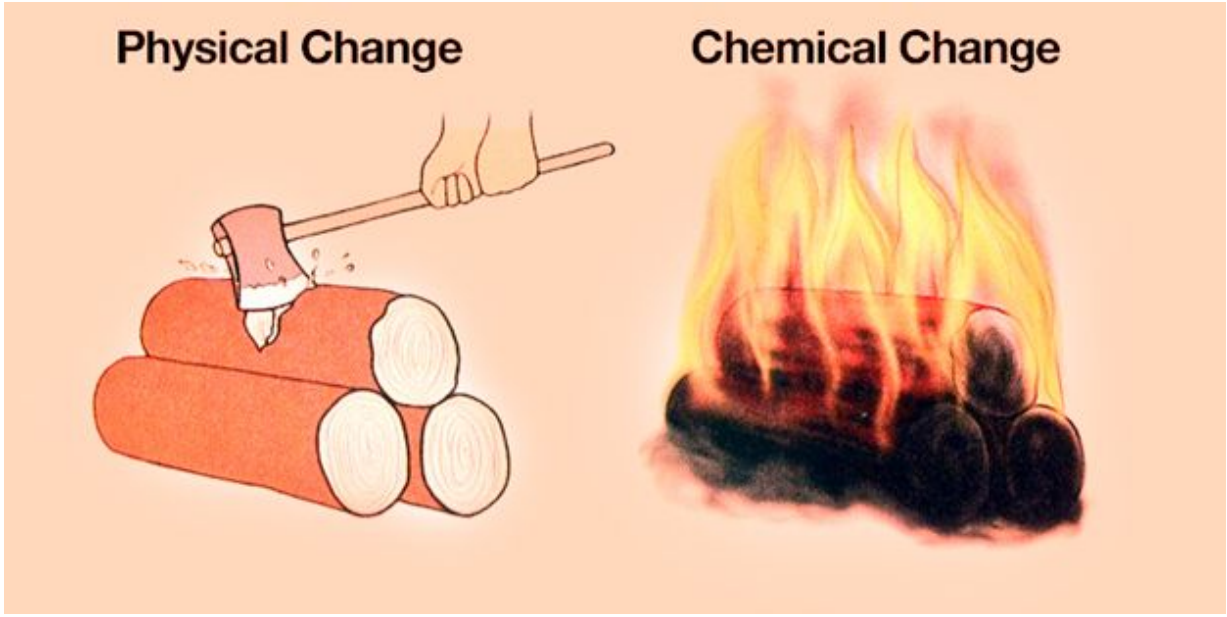



BYJU'S
The Learning App
Properties of Matter
Are these properties determined without changing the identity of the substance?
No
Yes
Chemical properties
Physical properties
How does the substance reaction to the presence of
Air
Acid
Base
Water
Other chemicals
Does the properties depend on amount of substance?
No
Yes
Intensive physical property
Color
Melting point
Boiling point
Density
Extensive physical property
Mass
Volume
Length
Shape

C. Chemical changes alter the composition of substances; physical changes do not alter the composition of substances.

1. Water freezes or evaporates—amount of matter stays the same; physical change

1. Wood burns—ashes, smoke, and gases still total the same amount of matter; chemical change



D. Law of <u>Conservation of Mass</u>—particles of matter are not created or destroyed as the result of physical or chemical changes.