

SCIENCE
CLASS 6
CHAPTER 5-
SEPARATION OF
SUBSTANCES

WHY DO WE NEED TO SEPARATE SUBSTANCES?

- We need to separate different components of a mixture to:
- 1. Separate or remove impurities.
 - A) To remove stones from grains or pulses.
 - B) Remove husk from grains
- 2. Separate 2 different but useful components
 - A) Cream from milk
 - B) Mixture of orange and guava
- 3. Separate useful and non useful components
 - A) Tea leaves from tea
 - B) Pulp from juice

METHODS OF SEPARATION

- HANDPICKING
- THRESHING
- WINNOWING
- SIEVING
- SEDIMENTATION/DECANTATION
- FILTRATION
- EVAPORATION/CONDENSATION

EXPLANATION:

Handpicking– The process of separating solid particles from a mixture by hand is called handpicking. Eg: Separating stones from rice.

Threshing– The process of separating grains from stalks by beating them on a hard surface is called threshing. Eg: Separating wheat grains from stalks.

Winnowing–The process of separating lighter and heavier particles by using wind or blowing air is called winnowing. It is used to separate heavier wheat grains from lighter husk particles.

Sieving–The process of separating very fine particles from a bigger one by using a sieve is called sieving. It is used to separate bran from flour and pebbles from sand at construction site..

Sedimentation/Decantation–When we allow the mixture to stand for a while, the sand settles down. This process is called sedimentation. When we carefully pour out water, this process is called decantation.

Filtration–Filtration is a process by which insoluble solids can be removed from a liquid by using a filter paper.

Evaporation– The process of conversion of water into vapour form on heating is called evaporation.

Condensation– The process of conversion of water vapour into liquid form is called condensation.

SATURATED SOLUTION

- The solution that has maximum amount of dissolved solute in it and cannot dissolve further amount of solute at that temperature is called saturated solution.
- solubility is increased on heating as the space between water molecules increases.
- cooling decreases the solubility.