

NCERT SOLUTIONS- SEPARATION OF SUBSTANCES

NCERT Solutions for Class 6 Science Chapter 5 Separation of Substances is the essential study material needed to perfect Separation of Substances topics. The NCERT Class 6 Science solutions provided here correctly answer NCERT textbook questions. Solutions curated in a comprehensive manner will help students understand the subtopics in this chapter in a better way.

IMPORTANT SUB-TOPICS MENTIONED IN THE NCERT CLASS 6 SCIENCE CHAPTER 5 SEPARATION OF SUBSTANCES:

NCERT Solutions for Class 6 Science Chapter 5 Separation of Substances has the following sub-topics as given below:

Sr. no	Topics
1.	Methods of separation

NCERT SOLUTIONS CLASS 6 SCIENCE CHAPTER 5 SEPARATION OF SUBSTANCES:

- 1. Why do we need to separate different components of a mixture? Give two examples.**

ANS- In mixtures, there are things that can be bad or not helpful. To get rid of these bad or useless things, we have to separate them. For example:

- When we make tea, we use a strainer to take out the tea leaves from the liquid.
- When we have wheat, rice, or pulses, we pick out any small stones by hand to make sure our food is safe to eat.

- 2. What is winnowing? Where is it used?**

ANS- The separation of heavier and lighter components of a mixture with the help of blowing air is called winnowing. People often use it for grains like rice or wheat to remove small sticks, husks, and other unwanted things. It's like a natural way to clean our food.

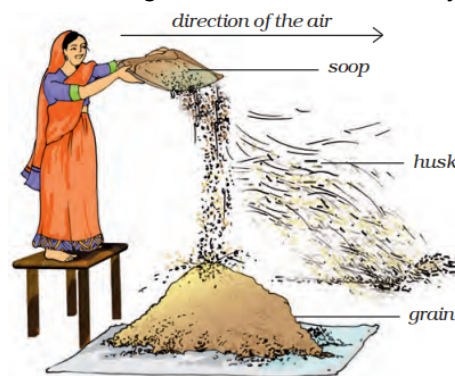


Fig. 3.5 Winnowing

- 3. How will you separate husk or dirt particles from a given sample of pulses before cooking?**

ANS- We can separate husk or dirt particles from pulses by winnowing as husk or dirt particles being lighter get blown by air.

4. What is Sieving? Where can it be used?

ANS- Sieving is a method of separating materials based on their size. It's like using a special tool called a sieve, which has tiny holes or a mesh. You pour a mixture through it, and the smaller particles go through the holes while the larger ones stay on top. It is used in the kitchen to separate flour from lumps, in gardening to remove big stones from the soil, and in industries to sort different-sized particles in things like sand and gravel.



Fig. 3.6 Sieving

5. How will you separate sand and water from their mixture?

ANS- To separate sand and water, you can use a process called "filtration." You pour the mixture through a filter, like a piece of cloth or a paper filter. The water passes through, leaving the sand behind.

We can also use the sedimentation or decantation method. We leave the mixture for a few minutes and the sand which is heavier between them, gets settled down on the bottom of the container. After this, you can pour the water into another glass.

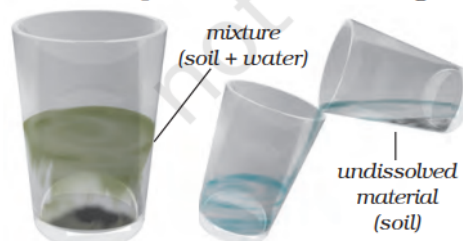


Fig. 3.8 Separating two components of a mixture by sedimentation and decantation

6. Is it possible to separate sugar mixed with wheat flour? If yes, how will you do it?

ANS- Yes, it's possible to separate sugar mixed with wheat flour. You can use the process of "sieving." When you pass the mixture through a sieve, the finer sugar particles will go through, and the bigger wheat flour particles will stay behind, allowing you to separate them.

7. How would you obtain clear water from a sample of muddy water?

ANS- We will get clean water from a sample of dirty water using the filtration method. A filter paper, like the one shown in Figure 5.12(a, b), has tiny holes. We follow these steps: We fold

the filter paper into a cone shape and put it in a funnel. Next, we pour the mixture onto the filter paper. The solid bits in the mixture can't go through, so they stay on the filter.



Fig. 3.9 Folding a filter paper to make a cone



Fig. 3.10 Filtration using a filter paper

8. Fill in the blanks:

- The method of separating seeds of paddy from its stalks is called _____.
- When milk, cooled after boiling, is poured onto a piece of cloth the cream (malai) is left behind on it. This process of separating cream from milk is an example of _____.
- Salt is obtained from seawater by the process of _____.
- Impurities settled at the bottom when muddy water was kept overnight in a bucket. The clear water was then poured off from the top. The process of separation used in this example is called _____.

ANS-

- threshing
- filtration
- evaporation
- sedimentation and decantation

9. True or false?

- A mixture of milk and water can be separated by filtration.
- A mixture of powdered salt and sugar can be separated by the process of winnowing.
- Separation of sugar from tea can be done with filtration.
- Grain and husk can be separated with the process of decantation.

ANS-

- False
- False
- False
- False

10. Lemonade is prepared by mixing lemon juice and sugar in water. You wish to add ice to cool it. Should you add ice to the lemonade before or after dissolving sugar? In which case would it be possible to dissolve more sugar?

ANS- We need to put ice into the lemonade after dissolving the sugar. When it's hot, the solution can hold more sugar. Once we add ice, it cools down, and then it can hold less sugar.

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