NCERT Solutions For Class 6 Science Chapter 5: Detailed and Easy-to-Understand Solutions

NCERT Solutions For Class 6 Science Chapter 5 *are given below in an easy-to-understand way for CBSE Class 6 Science students. Students can find the full solutions for Class 6 Science Chapter 5 here!*

NCERT Solutions For Class 6 Science Chapter 5: NCERT Solutions for Class 6 Science Chapter 5 Separation of Substances guides students in addressing various questions related to methods of separating different substances. These solutions are conveniently available in PDF format for downloading and easy access. This study material holds importance for CBSE Class 6 examinations, and to achieve good marks, it is recommended to thoroughly study the provided solutions.

The NCERT Solutions for Class 6 Science serve as crucial study resources, assisting learners in clarifying doubts related to the CBSE syllabus Chapter 5 of Class 6 Science. Answering fill-in-the-blanks, true or false questions, long-answer questions, and practical-based questions will enhance their understanding of important concepts for future studies. Access the PDF of this chapter's NCERT Solutions for Class 6 Science through the provided link below.

NCERT Solutions For Class 6 Science Chapter 5 Overview

NCERT Class 6 Science Chapter 6 acquaints students with various separation methods, including hand-picking, winnowing, threshing, sieving, sedimentation, decantation, filtration, and evaporation.

The NCERT Solutions for Class 6 Science for this chapter aim to enhance understanding through real-life examples, like separating husks and stones from grains, as well as the separation of solids from liquids. These solutions provide a comprehensive grasp of the separation processes discussed in the chapter.

NCERT Solutions For Class 6 Science Chapter 5

NCERT Solutions for Class 6 Science Chapter 5 Separation of Substances are provided here with simple step-by-step explanations.

Exercise Questions

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

Solution:

When two or more substances are mixed together, they form a mixture. Components of a mixture should be separated because some components may not be useful or may spoil the useful component of the mixture.

Examples:
Tea leaves are separated from the liquid with a strainer while preparing tea.
Removal of stone pieces from wheat, rice or pulses by hand.

2. What is winnowing? Where is it used?

Solution:
The method of separating the components from a mixture is known as winnowing. In this method, heavier and lighter components of a mixture are separated by wind or by blowing air. This method is used by farmers to separate lighter husk particles from heavier seeds of grain.

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

Solution:
Husk and dirt particles are separated from pulses by winnowing.

4. What is sieving? Where is it used?

Solution:
Sieving is a method in which fine particles are sieved through holes in the sieve while the bigger impurities remain on the sieve. Sieving is used in a flour mill to separate impurities like husk and stones from wheat before grinding it. It is also used at construction sites to separate pebbles and stones from sand.

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

Solution:
Sand and water are separated from their mixture by the following steps:
a) The mixture is allowed to stand without any disturbances.
b) Now, sand settles down.
c) Slowly pour the water into another container to obtain sand in the bottom.

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

Solution:
Yes, it is possible to separate sugar mixed with wheat flour by the following method:
a) Mix sugar and wheat flour in water.
b) Stir the solution to allow the sugar to dissolve.
c) Now, filter the mixture.
d) Filtrate contains the sugar solution, and the residue will be wheat flour.

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

Solution:
The following process should be carried out to obtain clear water from muddy water:
i) Allow muddy water to stand.
ii) Mud gets settled down in the water.
ii) Slowly pour water into another container.

8. Fill in the blanks.

(a) The method of separating the seeds of paddy from its stalks is called _____.

(b) 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 _____.

(c) Salt is obtained from seawater by the process of _____.

(d) 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 _____.

Solution:
(a) The method of separating the seeds of paddy from its stalks is called threshing.

(b) 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 filtration.

(c) Salt is obtained from seawater by the process of evaporation.

(d) 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 decantation.

9. True or false.

(a) A mixture of milk and water can be separated by filtration.

(b) A mixture of powdered salt and sugar can be separated by the process of winnowing

(c) Separation of sugar from tea can be done with filtration.

(d) Grain and husk can be separated with the process of decantation.

Solution:
a) False
b) False
c) False

d) 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?

Solution:
Ice should be added to lemonade after dissolving sugar. It is possible to add more sugar before adding ice.

Benefits of NCERT Solutions for Class 6 Science Chapter 5

NCERT Solutions for Class 6 Science Chapter 5 offer numerous benefits to students, aiding in their understanding and mastery of the subject matter. Here are some detailed benefits:

1. Concept Clarity: The solutions provided in Chapter 5 aim to clarify fundamental concepts related to the separation of substances.
Through detailed explanations, students gain a clearer understanding of the methods involved in separating different substances.

2. Comprehensive Coverage: The NCERT Solutions comprehensively cover all topics and subtopics of Chapter 5, ensuring that students are well-prepared for examinations.
Various types of questions, including fill-in-the-blanks, true or false, long-answer, and practical-based questions, are addressed to provide a holistic learning experience.

3. Real-life Examples: The solutions incorporate real-life examples, such as separating husks and stones from grains, making the learning experience more relatable and practical for students.
These examples help students connect theoretical knowledge with everyday situations, enhancing their understanding of the application of separation methods.

4. Easy Accessibility: The NCERT Solutions are readily available in PDF format, making them easily accessible for students to download and study at their convenience.
This accessibility ensures that students can refer to the solutions both online and offline, facilitating flexible learning.

5. Exam Preparation: The solutions serve as an excellent resource for exam preparation, providing a thorough revision of the chapter.
By studying these solutions, students can gain confidence in answering different types of questions that may be asked in the examinations.

6. CBSE Curriculum Alignment: The NCERT Solutions align with the CBSE curriculum, ensuring that students cover the prescribed syllabus effectively.
This alignment is crucial for students preparing for CBSE Class 6 examinations, as it helps them focus on the essential topics outlined by the educational board.

7. Self-assessment and Improvement: The solutions enable students to self-assess their understanding of the chapter by attempting various types of questions.
Through self-assessment, students can identify areas of improvement and focus on reinforcing their knowledge in those specific areas.

8. Facilitation of Active Learning: The solutions encourage active learning by prompting students to think critically and apply their knowledge to solve problems.
This approach fosters a deeper understanding of the subject matter and promotes a more engaged learning experience.

How to Prepare With NCERT Solutions for Class 6 Science Chapter 5

Preparing with NCERT Solutions for Class 6 Science Chapter 5 can significantly enhance your understanding of the subject. Here's a detailed guide on how to effectively prepare using these solutions:

1. Familiarise Yourself with the Chapter: Begin by reading Chapter 5 thoroughly to understand the concepts related to the separation of substances.
Pay attention to definitions, processes, and examples provided in the chapter.

2. Systematic Reading of NCERT Solutions: Start with the NCERT Solutions for Class 6 Science Chapter 5, going through each question and its corresponding solution systematically.
Understand the step-by-step explanations and reasoning behind each solution.

3. Active Participation: Engage actively with the solutions by attempting to solve the questions before referring to the provided answers.
This approach enhances your problem-solving skills and ensures a more effective learning experience.

4. Focus on Real-life Examples: Concentrate on the real-life examples given in the solutions, such as the separation of husks and stones from grains.
Relate these examples to practical scenarios, reinforcing your understanding of how separation methods are applied.

5. Practise Different Question Types: NCERT Solutions cover various question types, including fill-in-the-blanks, true or false, long-answer, and practical-based questions.
Practice solving each type to be well-prepared for the diverse questions that may appear in examinations.

6. Use Visual Aids: If applicable, use diagrams and visual aids to represent separation methods, helping you grasp concepts more easily.
Visualising the processes can enhance your understanding and make the learning experience more enjoyable.

7. Self-assessment and Review: Regularly assess your understanding by attempting self-assessment quizzes and review questions provided in the NCERT Solutions.
Identify areas where you may need further clarification and revisit those sections for reinforcement.

8. Consistent Revision: Plan a schedule for consistent revision of the chapter to reinforce your learning.
Regular revision ensures that the concepts stay fresh in your memory, making it easier to recall information during exams.

9. Utilise Additional Resources: While NCERT Solutions are comprehensive, you can supplement your learning with additional resources, such as reference books or online tutorials, to gain a more in-depth understanding.

10. Seek Clarification: If you encounter difficulties or have doubts, don't hesitate to seek clarification from your teacher, classmates, or online resources.
Understanding each concept thoroughly is crucial for effective preparation.

11. Simulate Exam Conditions: To enhance exam readiness, simulate exam conditions by practising with a time limit and adhering to the exam pattern.
This practice helps you manage time effectively during the actual examination.

12. Reflect and Improve: Reflect on your performance in practice tests and identify areas for improvement.
Focus on refining your problem-solving skills and addressing any weaknesses in your understanding of the chapter.

NCERT Solutions for Class 6 Science Chapter 5 – Separation of Substances

Important Topics

In NCERT Class 6 Science Chapter 5, Separation of Substances, students will learn essential concepts, including:

1. Methods of separation
2. Hand-picking
3. Winnowing
4. Threshing
5. Sieving
6. Sedimentation, decantation, and filtration
7. Evaporation
8. Use of more than one method of separation
9. Can water dissolve any amount of a substance?

Important Points

- Separation is the process of isolating one or more components from a mixture.
- Handpicking is a common method for separating large-sized impurities like dirt, husk, and stones from pulses, wheat, and rice.
- Threshing involves beating stalks to separate grains from harvested crops, either using machines or manually.
- Sieving separates larger particles, typically impurities, by passing the mixture through a filter or sieve.
- Filtration removes solid particles from the fluid component of a mixture using a filter.
- Sedimentation settles heavier components in a mixture after adding water, and decantation is used to remove water along with impurities.

5.1 Methods of Separation

NCERT solution for Class 6 Science Chapter 5 simplifies the different separation methods, including hand-picking, winnowing, threshing, sieving, evaporation, sedimentation, and filtration.

- Hand-picking is a basic method for separating large substances, like removing rocks from garden soil or plastic from debris.
- Threshing separates grains from stalks, commonly used for rice or wheat, involving thrashing stalks on a stone or wooden slab.
- Winnowing separates heavier from lighter substances, demonstrated by villagers separating seeds from seed covers using wind.
- Sieving separates smaller substances from larger ones by passing the mixture through a mesh or sieve.
- Sedimentation separates suspended solids from a liquid, and decantation removes water with impurities.
- Filtration uses gravitational force to separate finer particles from a liquid through a filter paper.
- Evaporation separates dissolved particles from a liquid by applying heat, converting the liquid into gas, and leaving particles in the container.

Multiple methods can be employed for separation, such as winnowing or sieving for sand and salt, or using water to dissolve salt, which can be separated from sand through evaporation.

Water, considered a universal solvent, has limited solubility for substances, leading to saturated solutions beyond a certain concentration.

NCERT Solutions For Class 6 Science Chapter 5 FAQs

1. **What is separation of substances in Class 6 Science?**
   Separation of substances in Class 6 Science involves various methods to isolate different components, such as solids from liquids, through techniques like filtration, evaporation, etc.
2. **What is sieving in Class 6?**

In Class 6, sieving is a separation method where a sieve or mesh is utilised to separate larger particles from smaller ones based on their size.

3. **What is winnowing in Class 6?**
   Winnowing in Class 6 refers to the process of separating grains from chaff by letting them be blown away by the wind.
4. **What is a strainer in Class 6?**
   In Class 6, a strainer is a device with holes or a mesh used for separating solid particles from liquids by allowing the liquid to pass through while holding back the solid particles.
5. **What is size separation in Class 6?**
   Size separation in Class 6 involves sorting particles based on their sizes using methods like sieving or filtration to separate larger particles from smaller ones.