



CLASS 6 SCIENCE · 2026-27

Separation of substances

Separation methods

30

QUESTIONS

25

MINUTES

3

EXERCISES

This belongs to _____ Date _____

WHAT YOU'LL GET GOOD AT

- Chooses the right separation method for a given mixture
- States the property difference the method depends on
- Explains why a different method would not work

Take your time, and have a go at every one. If you get stuck, look at the orange box — Ollie has already done one for you.

Separation of substances

Separation methods · 30 questions · tick each box as you finish

Exercise 1 of 3 · 12 questions Which method would you use, and why?



WRITE THE ANSWER

HERE'S ONE DONE FOR YOU

Stones from rice -> handpicking, because the stones are few, large enough to see and a different colour. The method is the easy half. The mark is for naming the difference the method uses - size, weight, colour, or whether it dissolves. If your child's answer does not name a difference, it has not answered the question.

1) Stones from rice

2) Husk from wheat grains

3) Sand from water

4) Salt from sea water

5) Tea leaves from tea

6) Cream from milk

7) Iron nails from sawdust

8) Pebbles from sand

9) Butter from curd

10) Chalk powder from water

11) Oil from water

12) Camphor from salt

Exercise 2 of 3 · 11 questions Why would this method NOT work? One sentence.

WRITE THE ANSWER

HERE'S ONE DONE FOR YOU

Filtration for salt water -> it would not work because salt dissolves, so it goes through the filter with the water. Questions asking why something fails are asking the same thing from the other side - name the property that makes the method unsuitable. These are the questions that separate a child who has learned the methods from one who has understood them.

1) Using filtration to get salt out of salt water

2) Using a sieve to separate sugar from water

3) Using winnowing to separate stones from rice

4) Using evaporation to get sand out of water

5) Using a magnet to separate copper wire from sawdust

6) Using handpicking to separate sand from sugar

7) Using sieving to separate cream from milk

8) Using decantation to separate salt from salt water

9) Using winnowing indoors with the fan switched off

10) Using filtration to separate two liquids that mix together

11) Using a sieve with large holes to separate flour from bran

Exercise 3 of 3 · 7 questions Answer in two or three sentences.

WRITE THE ANSWER

HERE'S ONE DONE FOR YOU

Muddy water -> sedimentation, then decantation, then filtration. Notice the answer names each step in order and says what it achieves. A three-mark answer usually wants three things - counting the marks before writing is a habit worth building now, because it decides a great deal from here to Class 10.

1) Describe how you would get pure water from muddy water.

2) Why is winnowing done on a windy day?

3) How would you separate a mixture of sand, salt and water?

4) Why is filtration better than decantation for getting clear water?

5) Explain how salt is obtained from sea water in coastal India.

6) Why does a mixture of oil and water separate on standing, but a mixture of salt and water does not?

7) How would you separate iron filings, sand and salt from one another?

**All done? How did that feel?**

Colour in a star. Three stars means you could teach it to someone else.



Tricky · Getting there · Easy now



Answer key

For grown-ups

Separation of substances · keep this page back until your child has finished.

1. Which method would you use, and why?

- 1) Handpicking, because the stones are few, large enough to see and different in colour.
- 2) Winnowing, because the husk is much lighter and is carried away by the wind.
- 3) Filtration or sedimentation, because sand does not dissolve and is heavier than water.
- 4) Evaporation, because salt dissolves in water but does not evaporate with it.
- 5) Filtration, because the leaves are solid and do not pass through the strainer.
- 6) Churning, because cream is lighter than the rest of the milk and collects on top.
- 7) A magnet, because iron is attracted to it and sawdust is not.
- 8) Sieving, because the pebbles are larger and will not pass through the holes.
- 9) Churning, because butter is lighter and separates out when the curd is churned.
- 10) Filtration or sedimentation, because chalk powder does not dissolve in water.
- 11) A separating funnel or decantation, because oil does not mix with water and floats on top.
- 12) Sublimation, because camphor turns straight into vapour on heating and salt does not.

2. Why would this method NOT work? One sentence.

- 1) Because salt dissolves, so it passes through the filter with the water.
- 2) Because sugar dissolves in water, so it is not left behind on the sieve.
- 3) Because stones are heavier than rice, so the wind would not carry them away.
- 4) Because it wastes the water and takes a long time, when filtration would do it at once.
- 5) Because copper is not magnetic, so the magnet would not attract it.
- 6) Because the grains are far too small and too alike to pick out one by one.
- 7) Because cream is not a solid lump - it is spread through the milk and would pass through with it.
- 8) Because salt is dissolved, so pouring off the liquid takes the salt with it.
- 9) Because winnowing needs moving air; with still air the husk falls straight back onto the grain.
- 10) Because both liquids pass through the filter paper, so nothing is held back.
- 11) Because both flour and bran would fall through holes that large.

3. Answer in two or three sentences.

- 1) First let the mud settle to the bottom (sedimentation) and pour off the clear water (decantation). Then filter it to remove the fine particles left in it.
- 2) Because winnowing needs moving air to carry the lighter husk away from the heavier grain. On a still day the husk would simply fall back with the grain.
- 3) Filter the mixture to remove the sand, since sand does not dissolve. Then evaporate the water from the filtered liquid, which leaves the salt behind.
- 4) Decantation only pours off the liquid and leaves the fine particles still floating in it. Filtration traps those fine particles in the filter paper, so the water that comes through is clear.
- 5) Sea water is let into shallow pans and left in the sun. The water evaporates, and the salt, which does not evaporate, is left behind and is then collected.
- 6) Oil does not dissolve in water, so it stays as a separate layer and floats. Salt dissolves, so its particles spread out between the water particles and cannot settle out on standing.
- 7) First use a magnet to pull out the iron filings. Then add water to dissolve the salt and filter it, which leaves the sand on the paper. Finally evaporate the filtered water to get the salt back.

WHILE YOUR CHILD WORKS

- The reason is the answer. If your child names the method and stops, ask 'what is the difference between the two things?' - that is the missing half.
- The 'why would this not work' questions are the best predictor of real understanding. A child who can do those has genuinely got the chapter.
- Count the marks before writing. A three-mark question wants three things, and this is the year to start noticing that.

**Spotted a gap while marking?**

A free assessment is one live class with a matched teacher - no card, nothing to cancel. Afterwards you get an honest note on what they noticed.

Book a free assessment - scholur.com/contact