

MIXTURES OF MATERIALS

Evaporating

Did you know that: SOLIDS WHICH HAVE BEEN DISSOLVED CAN BE RECOVERED BY EVAPORATING THE LIQUID FROM THE SOLUTION ?

Well, they CAN and this is what you need to remember from today's science work.

YOUR TASK

Aim: to make a salt solution then try to get the salt back. (Copy down your aim in your science books).

1. Predict what will happen when you evaporate a salt solution. (When a salt solution is evaporated, I think . . .).
2. Make a salt solution (use the second smallest measuring spoon of salt and between 40ml and 70ml of water).
3. Using a petri dish and your salt solution, set up your experiment.
4. Draw a labelled diagram to show what you used and what you did. Remember, diagram in pencil, labels in pen.
5. Under the heading Results, write down what happened in your experiment. **YOU MAY NOT BE ABLE TO DO THIS FOR A DAY OR TWO !**
6. Under the heading Conclusions, write down what you found out. (I found out that it was possible/impossible to separate a soluble solid from a liquid by evaporation).

Brain teasing questions

1. Why do puddles on the playground disappear?
2. How would you separate a mixture of water, sand, iron filings and salt (remember the salt will be dissolved in the water)?
3. How could you make a petri dish of water evaporate more quickly?

EVAPORATION

Use this table of data to plot a line graph showing how a puddle of water evaporates over time.(Plot time along the bottom of the graph).

Time (24 hour clock)	Amount of water evaporated (ml)
0800	0
0900	50
1000	100
1100	200
1200	400
1300	800
1400	1200
1500	1600
1600	1800
1700	1850
1800	1900
1900	1950
2000	2000

Solve these, if you can...

1. When did the water in the puddle start to evaporate?
2. From 0800 how long did it take for 400ml of water to evaporate?
3. What time was it when 1800ml of water had evaporated?
4. How much water evaporated between 1200 and 1500?
5. What was the rate of water evaporation between 1200 and 1500? (give your answer in ml per hour).
6. What was the rate of water evaporation between 0800 and 1200? (give your answer in ml per hour).
7. What was the rate of water evaporation between 1600 and 2000?
8. This was a sunny day during September. Why was the fastest rate of water evaporation between 1200 and 1500?

Recording sheet

Aim

We wanted to make a _____ solution then try to get the salt back by _____ off the water.

Method

We _____ some salt in water to make a salt _____ . Next we put some of the solution into a petri-dish and put this _____.

Results

After _____ days the _____ had evaporated leaving solid _____ crystals behind.

Conclusions

We found out that it was _____ to get salt back from a salt solution by _____ off the water.

Word Bank

Salt	evaporating	dissolved
Solution	water	possible