

Nova's Science Lab: Investigating Mixtures

Learning objective: To identify and explain how mixtures can be separated using different techniques such as filtering, sieving, and evaporation.

Today, we are helping Nova the owl sort out her messy laboratory! Use this experiment record to describe the mixtures you are testing, the method you choose to separate them, and the results you observe. Remember to use scientific vocabulary to explain why your method worked.

Word bank: mixture · solution · filter · sieve · evaporation · dissolve · insoluble · residue · filtrate

1. The Mixture: Describe the two substances you are mixing together. Are they solids or liquids? Do you think they will dissolve? (2 marks)

2. The Prediction: Which method (sieving, filtering, or evaporation) will you use to separate these substances and why? (3 marks)

3. The Method: Write a step-by-step list of how you performed the separation. Be clear and precise. (4 marks)

4. The Results: What was left behind? What passed through? Use your scientific terms to describe the final substances. (3 marks)

5. The Conclusion: Was your prediction correct? Explain why the separation method was successful for this specific mixture. (3 marks)

Extension challenge: Nova wants to know: If you had a mixture of sand, salt, and water, in what order would you use your separation tools to get all three substances back separately? Write a brief plan.