Separating Mixtures with Bea the Bee

Learning objective: To identify and illustrate methods for separating mixtures, including filtration, sieving, and evaporation.

Follow the drawing prompts to create a scientific diagram of a laboratory setup. Once your diagram is complete, use the word bank to label the equipment and the substances in your mixture.

Draw: Draw a clear, scientific diagram showing a filtration experiment. In the center, draw a retort stand holding a glass funnel. Inside the funnel, draw a cone of filter paper. Show a muddy liquid being poured from a test tube into the funnel. Below the funnel, draw a beaker collecting clear liquid. The style should be clean, line-based, and easy to label with a pencil.

Label words: Filter paper · Funnel · Beaker · Residue · Filtrate · Mixture · Solute · Solvent

Steps:

1. Step 1: Draw a funnel sitting inside a beaker. Draw a piece of folded filter paper inside the funnel.
2. Step 2: Label the solid particles trapped by the paper as 'Residue' and the liquid that passes through as 'Filtrate'.
3. Step 3: If Bea had a mixture of sand and water, which method would you use to separate them? Explain why.
4. Step 4: If Bea dissolved salt into water, would filtration work to separate it? Why or why not?

5. Step 5: Name one other method, besides filtration, that could be used to separate a mixture of solid and liquid.