Nova’s Guide to Marvellous Mixtures

Get mixing, get observing, and get discovering the science behind the scenes!

- **A mixture is formed when two or more substances are combined, but each substance keeps its own identity and can often be separated again.**
- **Filtration is a clever method used to separate an insoluble solid from a liquid by passing the mixture through a porous material.**
- **Evaporation allows us to recover a soluble solid from a liquid by heating the solution until the solvent turns into gas, leaving the solid behind.**
- **Sieving is an effective technique for separating mixtures of solids that have different particle sizes, such as separating flour from large pebbles.**
- **Magnetic attraction is a specific technique used to separate magnetic materials, like iron filings, from a mixture of non-magnetic substances.**
- **Reversibility is a key concept; most mixtures can be separated back into their original components using physical methods, without creating a new substance.**

Did you know? Did you know that not all mixtures are created equal? If you stir salt into water until it disappears, you have made a solution! However, if you stir sand into water, the sand stays solid because it is insoluble. Nova the owl loves to use a filter paper to separate the sand from the water, proving that science can help us clean up even the messiest experiments!

Key vocabulary: Solution · Soluble · Insoluble · Filtration · Evaporation · Sieving · Suspension · Decanting