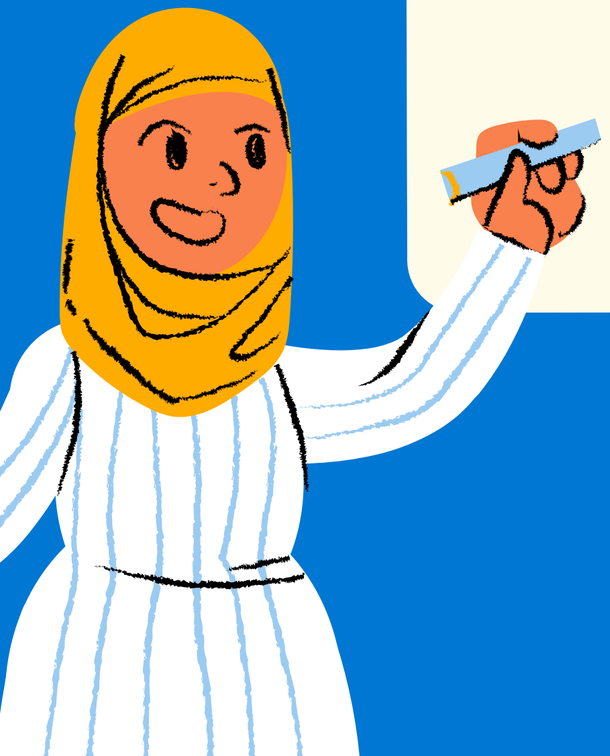
Mixtures

Types and Examples



Lesson Outline

- Mixture
- Types of Mixtures Based on Particle Size

Think About It!

Think of one mixture you've made at home, like your favorite drink.

- How many ingredients does it need?
- What happens to the mixture you've stirred? Did the particles settle out? Is the color uniform throughout?

Learning Outcomes

Define mixture.

Differentiate between homogeneous and heterogeneous mixtures.

Compare and contrast solutions, colloids, and suspensions.

What is a mixture?

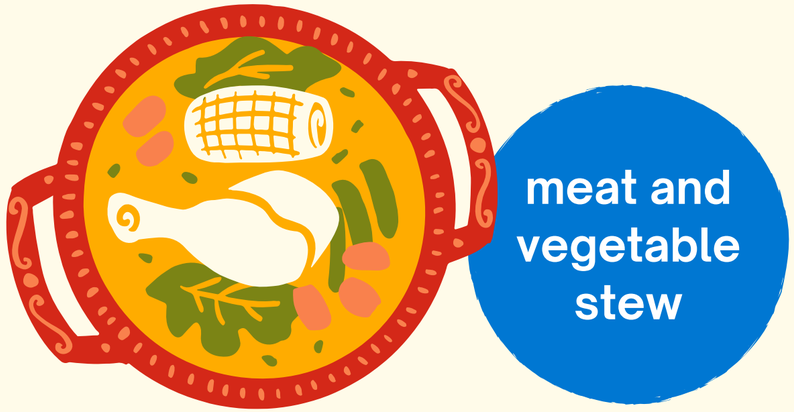
It is composed of two or more substances that are combined, yet can still be separated into the original parts.

Homogeneous

has uniform composition all throughout

Heterogeneous

has varying composition

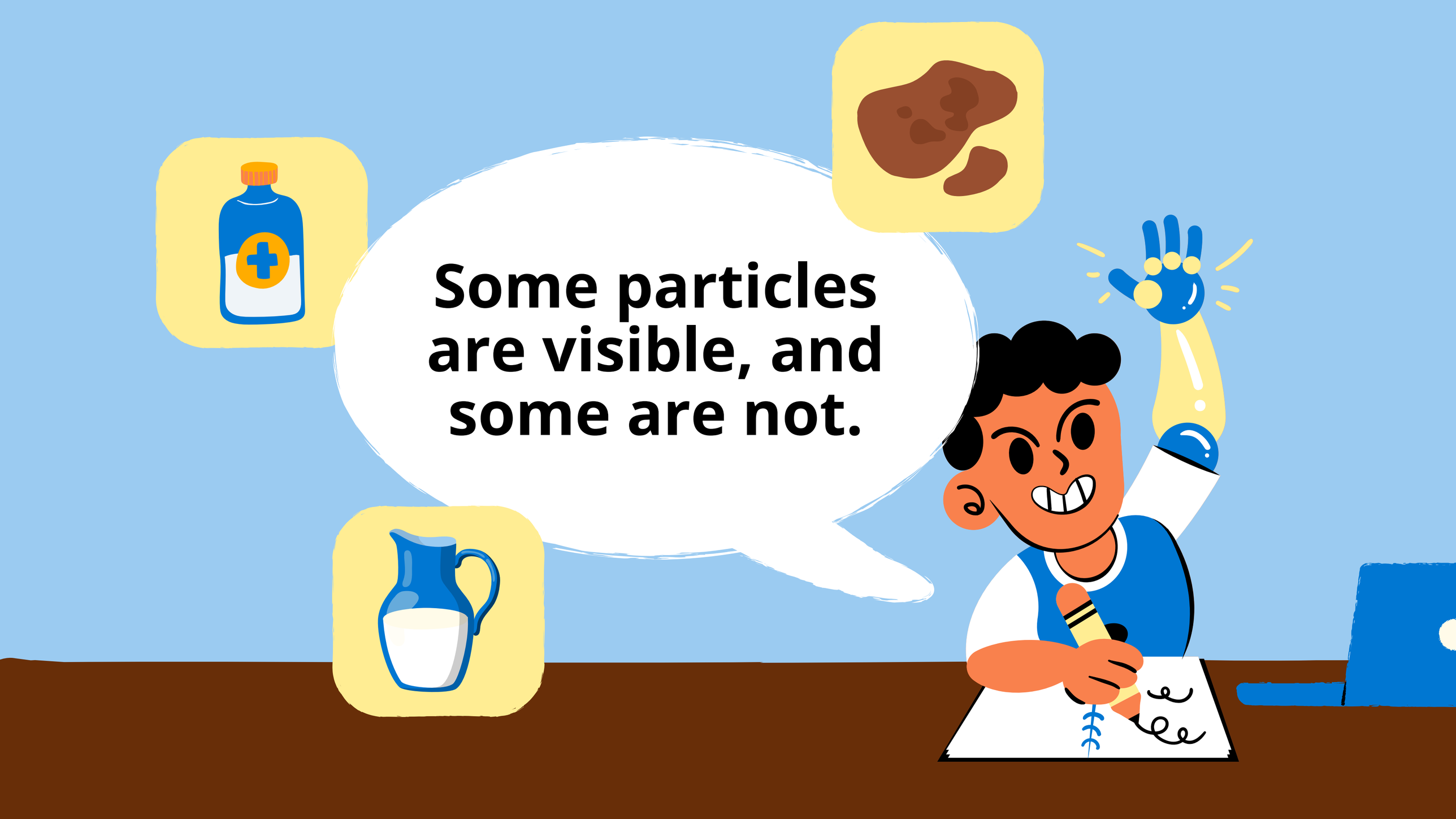


What are the differences between the mixtures below?

rubbing alcohol

milk

muddy water


Some particles are visible, and some are not.

What are the **types of mixtures according to particle size?**

SOLUTION

- homogeneous
- particle size: 0.01-1 nm (nanometer)
- cannot be separated by filtration

iced tea

rubbing alcohol

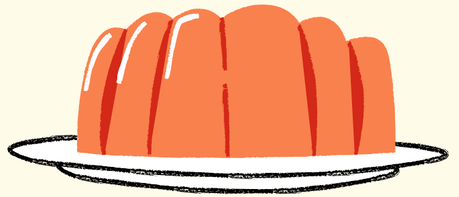
salt dissolved in water

COLLOID

- heterogeneous
- particle size: 1 to 1000 nm
- particles do not separate on standing
- cannot be separated by filtration

mayonnaise

milk



gelatin

SUSPENSION

- heterogeneous
- particle size: over 1000 nm
- particles are large enough to settle
- can be separated by filtration

muddy water

kimchi in vinegar

salad dressing

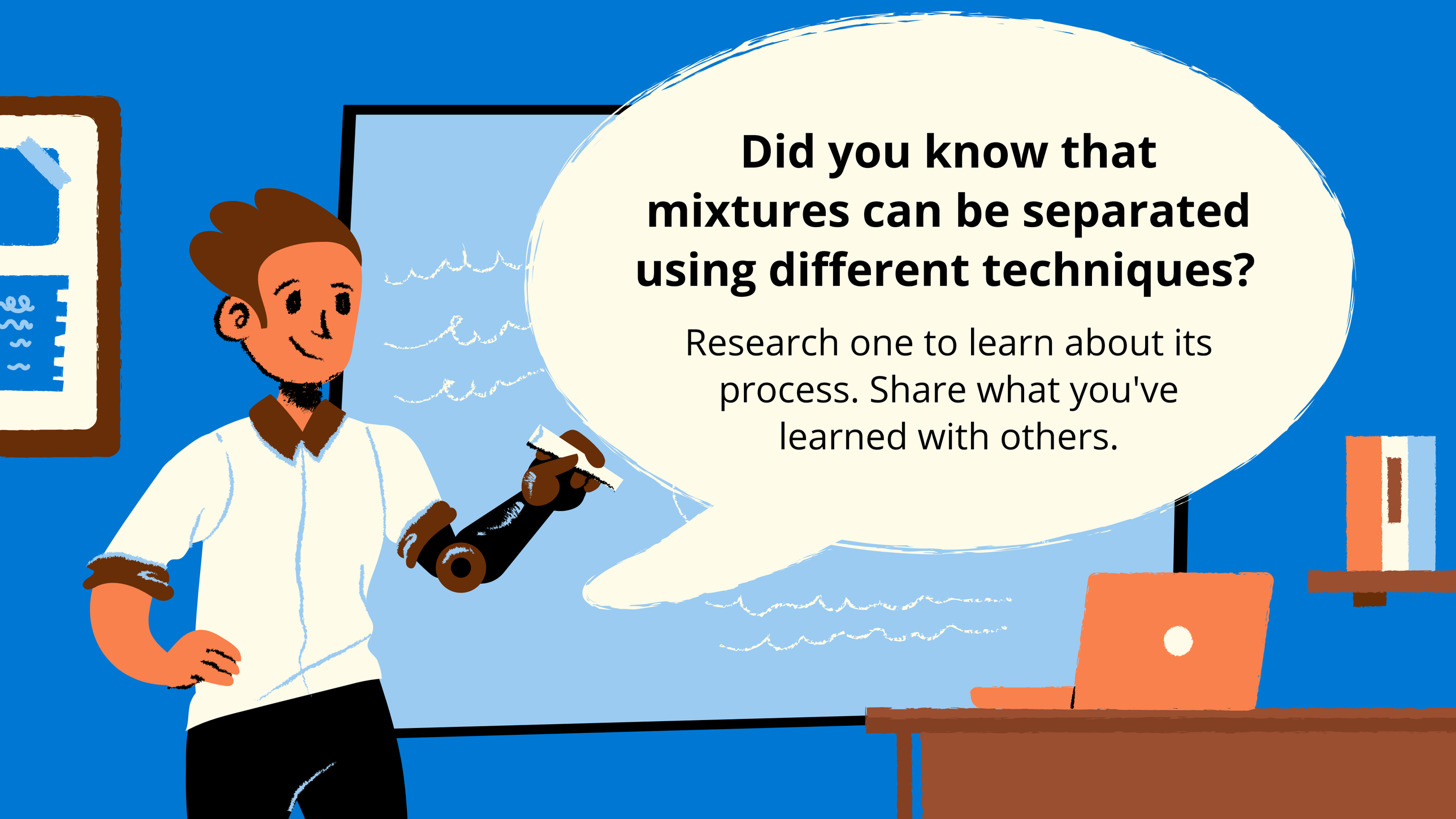
Let's Review

Mixture

- two or more substances combined, yet can still be separated into the original parts
- can be homogeneous or heterogeneous

Types of Mixtures

- Solution - particle size between 0.01 - 1 nm
- Colloid - particle size between 1 to 1000 nm
- Suspension - particle size greater than 1000 nm


Did you know that mixtures can be separated using different techniques?
Research one to learn about its process. Share what you've learned with others.