

Mixtures and Solutions Review

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Understanding Separation Techniques

Name: _____

Date: _____

Answer the following questions based on what you learned about mixture separation.

1. What is the first step in designing a separation strategy?

- A. Testing the mixture
- B. Identifying the components
- C. Throwing it away

2. Proverbs 2:4-5 teaches us to search for understanding like we search for ___ and hidden treasures.

3. Why is careful observation important in scientific investigations?

4. All mixtures can be separated using the same technique.

- True False

5. What are two different techniques you could use to separate a mixture? Explain why each technique works.

6. Which of the following is NOT a common separation technique?

- A. Filtration
- B. Evaporation
- C. Digestion

7. To solve a mixture separation problem, you should apply the ___ method.

8. Developing patience is important when investigating mixtures.

- True False

9. What worked well in your separation strategy during the challenge?

10. What is the goal of the Separation Strategy Challenge?

- A. To make a mess
- B. To design and test separation procedures
- C. To finish quickly

Answer Key

1. Identifying the components 2. silver 3. Careful observation helps scientists notice details that can affect the outcome of their experiments. 4. False 5. You could use filtration for solid and liquid mixtures, and evaporation for solutions. Filtration works because it separates solids from liquids, while evaporation leaves the solid behind as the liquid turns to gas. 6. Digestion 7. scientific 8. True 9. Our strategy worked well because we systematically tested each step and made adjustments based on our observations. 10. To design and test separation procedures