

Lesson 10: Is Making Kool-Aid a Chemical Reaction?

Brain Building Broadcast: Kool-Aid Distillation

Purpose

Watch the video located at any one of the following address

<https://goo.gl/JQfbA2>



https://www.youtube.com/watch?v=sB_3deBsooM

Watch the video carefully and be sure that you understand the lesson. Re-watch any part of the video that is unclear to you. After watching the video carefully, answer the following questions:

Word Wall

_____ is separating a solution's solute and solvents through heating and cooling.

Questions

1. In the video, Mr. Bingaman and Mrs. Ostrowski/Ms. Wong are trying to figure out

- a. What are the properties of yellow dye and red dye?
- b. What substance is used to sweeten Kool-Aid?
- c. Do you get a mixture or a new substance when you mix Kool-Aid powder and water?
- d. Is Kool-Aid delicious?

2. During the process of distillation you

- a. Boil a liquid, cool the gas, and condense it in a separate container.
- b. Cool a gas, condense it in a separate container, and then boil it.
- c. Freeze a liquid, melt the liquid, and then boil it.
- d. Boil a liquid until it is gone.

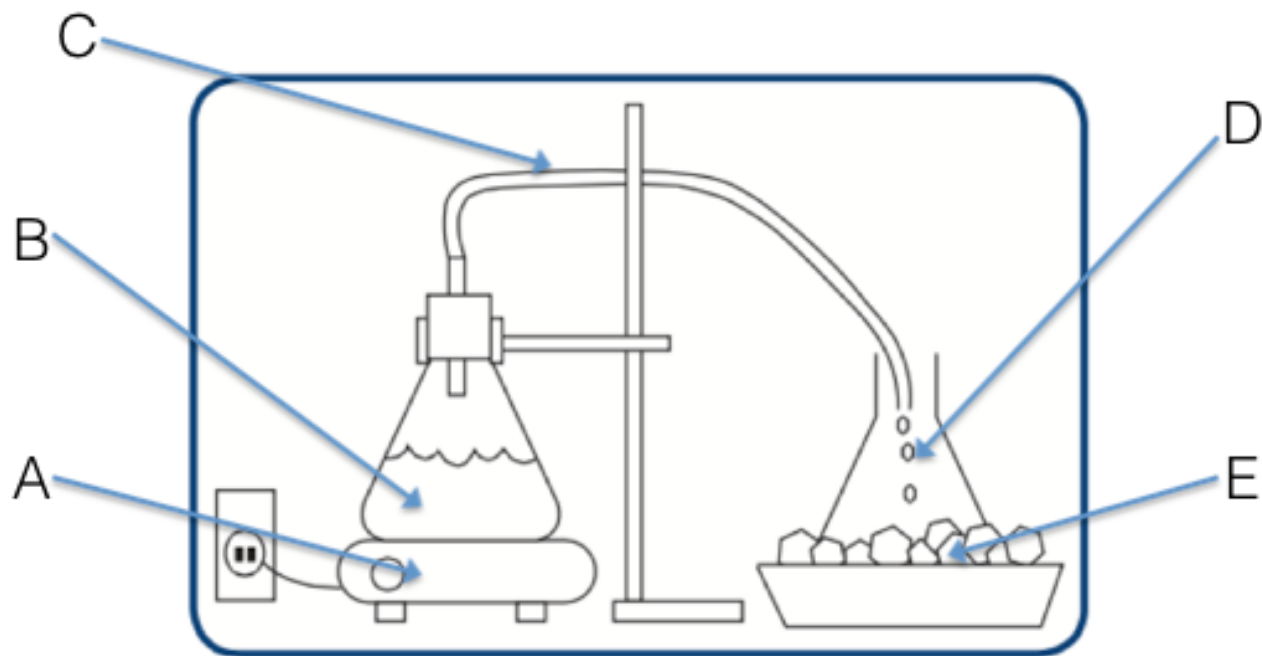
Your Progress:

- Mastery
- Proficient
- Developing
- Beginning

(CONTINUE ON BACK)

3. Match the following parts on the diagram to the corresponding letter based on the experiment you saw:

Word Bank: hot plate, Kool-Aid, water vapor, ice, liquid water



A: _____ B: _____ C: _____

D: _____ E: _____

4. If Kool-Aid is a new substance

- a. You **can** use a phase change to separate the Kool-Aid powder from the water.
- b. You **cannot** use a phase change to separate the Kool-Aid powder from the water.

5. What happens when you combine Kool-Aid powder and water?

- a. You make a new substance.
- b. You make a mixture.
- c. Properties change.
- d. Atoms rearrange.
- e. You make a chemical reaction.

6. (True or False) Chemical reactions will always occur when you combine substances. _____