

DAY 2 5TH GRADE SCIENCE



Matter and Mixtures

Performance Indicator: 5.P.2B.4 Construct explanations for how the amount of solute and the solvent determine the concentration of a solution.

Essential Question(s):

What happens to the concentration of a solution when the amount of solvent is changed?

I-Can Statements:

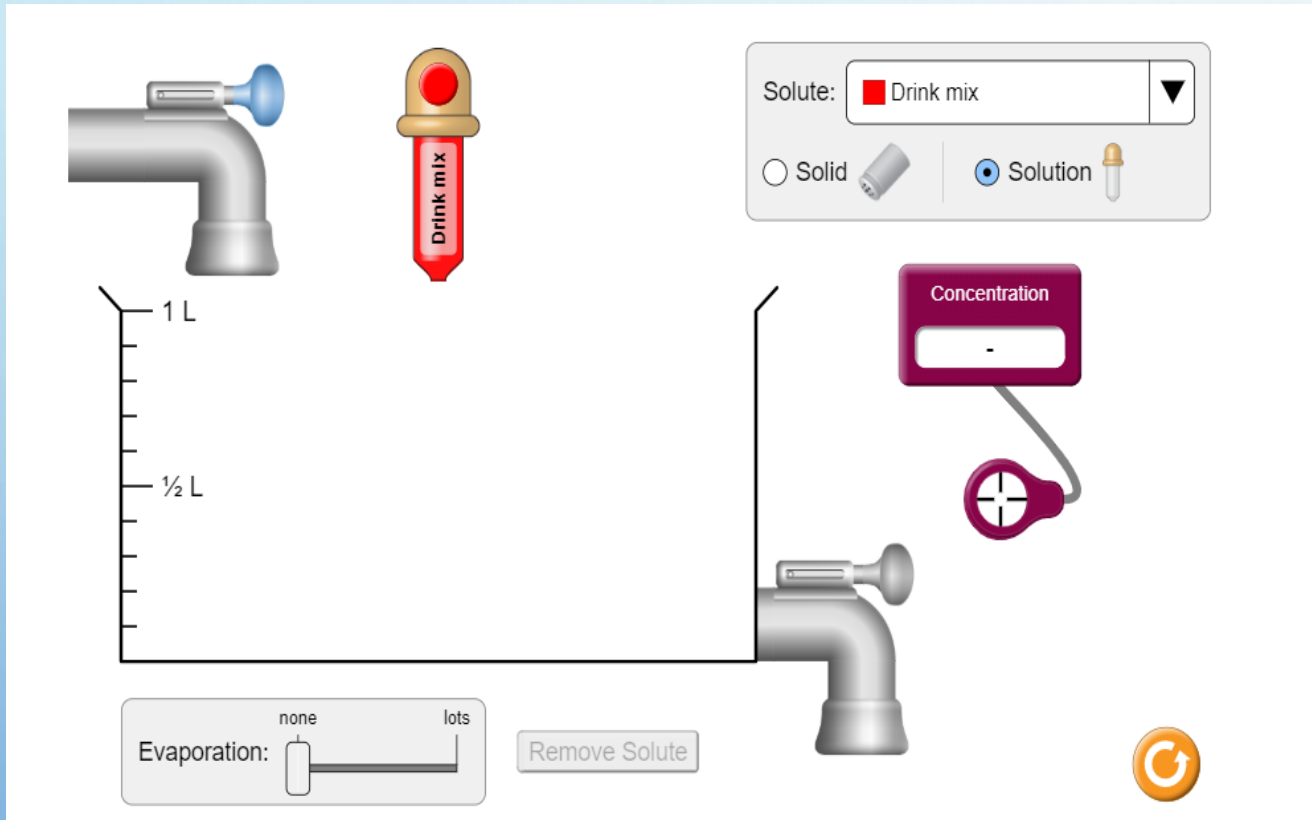
I can explain how the concentration of a solution is affected when you change amount of solvent.



Engage Activity

Click on the link below to access the Brainpop/PHET interactive simulation.

[Concentration](#)



Engage Activity

You have just finished exploring concentrations. During your exploration, you used various solutes and solvents. As a result, the concentrations of your solutions changed as well. Based on your exploration, what observations were you able to make about the concentration of solutions? Write your responses below.

A large empty rectangular box with a black border, intended for writing responses. The box is positioned at the bottom of the slide, below the text. The background of the slide is light blue with several water droplets of various sizes scattered around.

Exploration Time

Solutions are a special type of mixture in which one substance is dissolved evenly into another substance.



The substance in a solution that has the greatest amount is the **solvent**. It is usually the liquid.






The substance in a solution that has the least amount is the **solute**. It is usually the solid.



Concentration is a measure of the amount of solute dissolved in a solvent.

Exploration Time

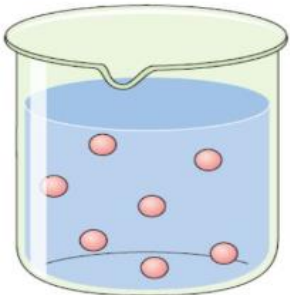
SOLUTIONS

Diluted solution	Concentrated solution	Saturated solution
		 Excess solute
Has very little solute in it	Has a lot of solute in it	Has the maximum amount of solute in it
Can dissolve a lot more solute	Can dissolve a little more solute	Cannot dissolve any more solute

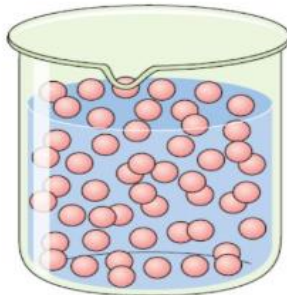
Dilute & Concentrated Solutions

A **dilute** solution has a small amount of solute in a large amount of solvent.

A **concentrated** solution has a large amount of solute in a small amount of solvent.



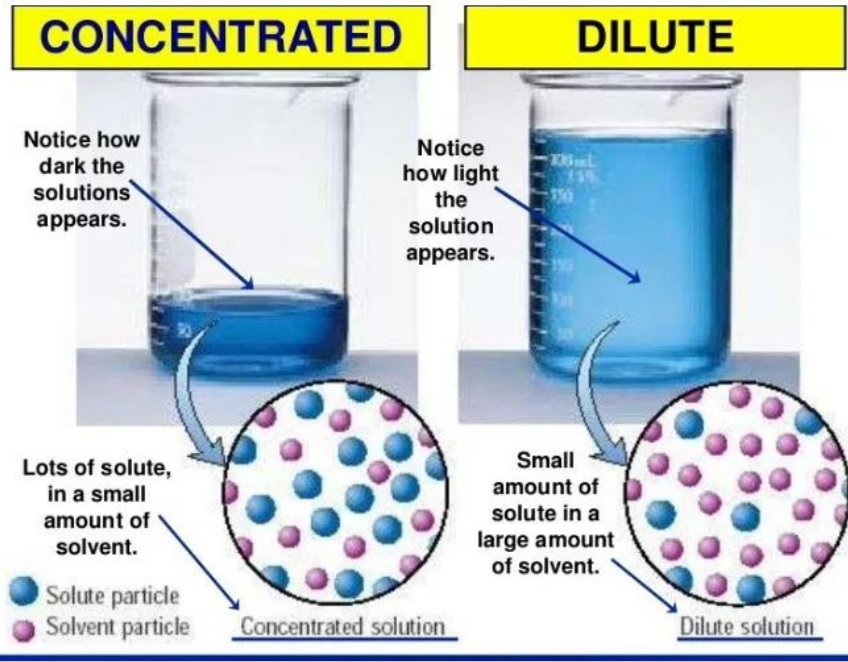
Dilute solution



Concentrated solution

Dilute solution example

eschool



Study the solution and concentration images to your left. As you study the images, pay close attention to the relationship of the solvent and the solute to the concentration of the solution.

Exploration Time

Click on the link underneath the picture and log into your Discovery Education account, and watch the video



Concentration of Solutions

[Concentration of Solutions](#)

Use the information that you learned from the video to answer the questions on slides 7 and 8. You may watch the video again if you need to. On slide 7 place your answers to each question in the boxes to the right. The answers for slide 8 should be placed in the boxes below the fill in the blank activity.

Video Comprehension Questions

Answer the following questions in the spaces to the right.

1. What is concentration?
2. Which cup of tea had the greater concentration? How do you know?
3. What is the solvent in the water tea solution?
4. What can we do to a solution to make it less concentrated? How can we make it more concentrated?

1.

2.

3.

4.

Concentration of Solutions

1. _____ is a measure of the amount of solute dissolved in a solvent.
2. The darker glass of tea had a _____ concentration than the other glass.
3. Additional blue _____ was added to one beaker in order to make it more concentrated.
4. You can add more _____ to a solution if you want I to become less concentrated.

1.

2.

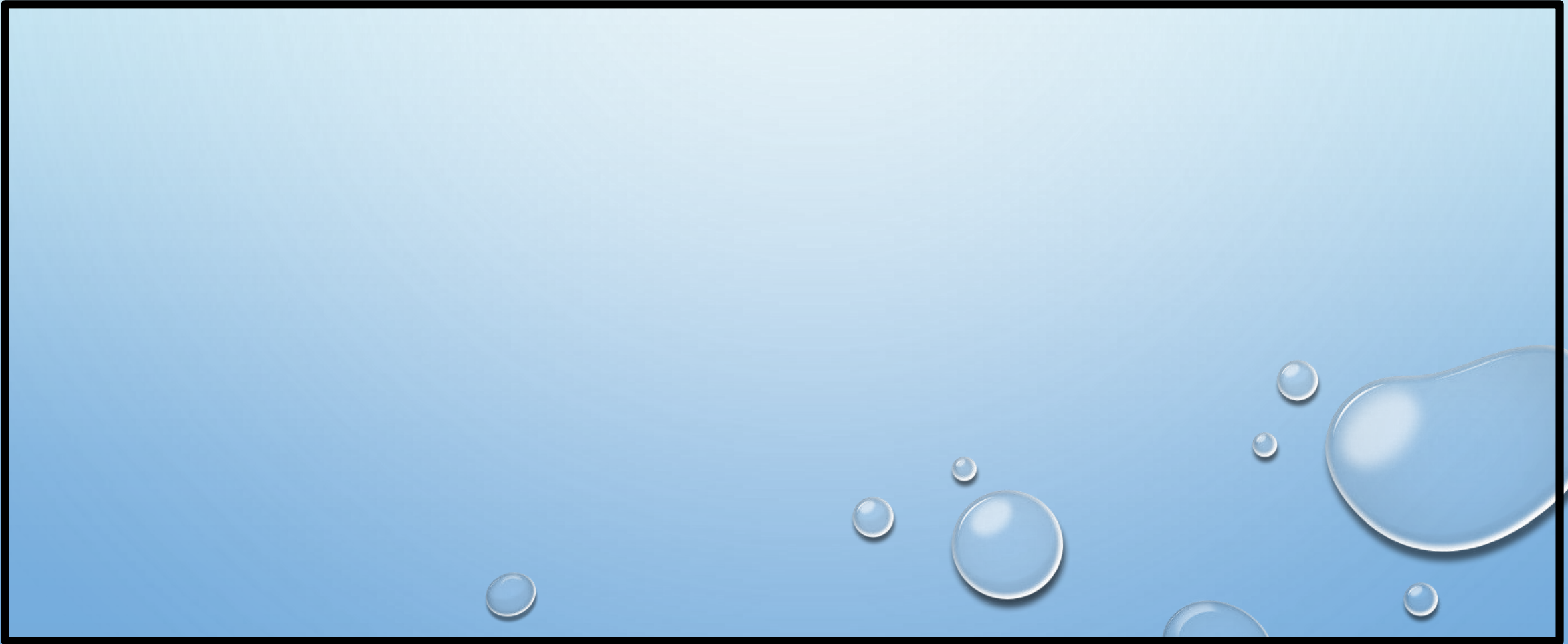
3.

4.

Read each statement from the video and decide which vocabulary word is missing. Write your answers on a piece of paper.

So What Have I Learned?

Use a piece of paper to write a paragraph summarizing what you have learned about solutions, solvents, solutes and concentrations.

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