

SOURCE Lesson Plans Detail

Chemical Equilibrium

Topic	Chemistry
Program	Brown Science Prep
Developed by	Michelle Kim
Developer Type	Undergraduate students

Overview / Purpose / Essential Questions

What is chemical equilibrium and Le Chatelier's Principle?

Performance / Lesson Objective(s)

Understand how to measure concentrations and how to write basic chemical equations using stoichiometry

Understand what dynamic equilibrium is

Learn what the equilibrium constant means and how Le Chatelier's principle applies in equilibrium.

Lesson Materials

Use different chocolates to represent different kinds of molecules.

Lesson Motivation

The idea of dynamic equilibrium can be found in not only the chemical systems but also biological systems, so it is important to understand the basic concepts of equilibrium

Lesson Activities

An activity with chocolates, a worksheet, and video clips

Procedure

Procedure for the demo on dynamic equilibrium:

- 1) draw (or make with long pieces of paper) a compartment (something like a semi-permeable cell membrane)
- 2) put in different chocolates in each side (one each on one side)
- 3) show them how some particles (smaller than the pores of the membrane) can go through and others cannot
- 4) how that even when it's at equilibrium and the number of particles stay the same, the particles still move across the membrane

Follow up

Additional lesson materials

Pre Assessment Plan

Administer the Chemical Equilibrium Work Sheet

Post Assessment Plan

Administer the Chemical Equilibrium Work Sheet

Alignment Info

Audience(s)	High school students
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STEM Area(s)	Chemistry
Standard(s)	<i>Physical Sciences (RI GSE) PS2.9–11.6a</i> Students demonstrate an understanding of physical, chemical, and nuclear changes by ... writing simple balanced chemical equations to represent chemical reactions and illustrate the conservation of matter.
Activity Type(s)	Hands-on Alternative Science Communication (e.g. Video, Sci-Toons, Multimedia) Lecture
Grade Level(s)	High School
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