

Grade 9

Distance Learning Module 7: Week of: May 18th – May 22nd

Conceptual Chemistry - Modified from [Unit #2 - Water and Solutions](#)

Targeted Goals from Stage 1: Desired Results

Content Knowledge:

1. Hard water is water that contains cations with a charge of +2, especially Ca²⁺ and Mg²⁺
2. The pH scale is a logarithmic scale describing the concentration of hydrogen ions in solution.

Vocabulary: hard water, soft water, acid, base, pH, solubility, buffer

Skills:

1. Use words, pictures and chemical equations to describe the process of dissolving substances in water.
2. Distinguish between acids and bases and compare pH values in acidic, basic and neutral solutions.

Expectation:

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
Monday: Students will complete a reading explaining what hard water is and its effects on their everyday lives. Congruent with the reading will be a set of questions students should be answering as they read it. After, students will watch two edpuzzle videos. The first will give visual observations of soft and hard water when reacted with soap. The second	Article Discussing Hard Water: USGS website-(link posted in Google Classroom) Edpuzzle Video: Hard water Vs soft water Reading Questions Key: (Google document-posted in Google classroom)	Questions On Reading: (Google document-posted in Google classroom)

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reinforces the information from the reading.		
<p>Tuesday: Students will complete a phet simulation that investigates aqueous solutions. Students will follow the procedure laid out in the worksheet, and respond to questions that come up. After, the worksheet has critical thinking questions that students will use to show their ability to connect the idea of hard water to the topics in the simulation.</p> <p>Online Q&A/ Office Hours: 9:25 a.m.-10 a.m.</p>	<p>Phet Simulation: Phet.colorado.edu concentration simulation</p> <p>Worksheet Answer Key: (Google document-posted in Google classroom)</p>	<p>Simulation Worksheet: (Google document-posted in Google classroom)</p>
<p>Wednesday: Students will explore the basics of acids and bases. They will start by watching an edpuzzle videos that discusses what acids and bases are, and introduces the idea of the pH scale. The second video explains what the pH scale is actually measuring and introduces the calculations involved. The last video briefly introduces buffers and their impact in solutions. After, students will complete a comprehensive worksheet that reviews previous topics and assesses understanding of acids and bases.</p>	<p>Edpuzzle Videos: GCSE Chemistry - Acids and Bases #27</p> <p>pH and pOH</p> <p>Worksheet Answer Key: (Google document-posted in Google classroom)</p>	<p>Worksheet: (Google document-posted in Google classroom)</p>
<p>Thursday: Students will use a phet simulation to explore how acids and base concentration can impact pH. After, students will practice with a worksheet that guides students through a procedure and checks for content understanding.</p>	<p>Phet Simulation: phet.colorado.edu - ph-scale-basics_en.html</p> <p>Worksheet Answer Key: (Google document-posted in Google classroom)</p>	<p>Simulation Worksheet: (Google document-posted in Google classroom)</p>

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Online Q&A/ Office Hours: 9:25 a.m.-10 a.m.		
Friday: Review from the week Check answer keys for worksheets, retry if needed Office hours 9:25 a.m. to 10:00 a.m. Students will work on concept review worksheet before completing the week's content check. Google Form quiz of the week's topics	Review Worksheet Answer Key: (Google document-posted in Google classroom)	Review Worksheet: (Google document-posted in Google classroom)

Week criteria for success (attach student checklists or rubrics):

- watched all of the recorded videos and taken notes
- completed all google forms and checked for accuracy. Each incorrect answer on the google form will provide feedback as to why the correct answer is preferred. Students will incorporate this feedback into future attempts.
- Students will complete an end of the week assessment that checks on content understanding for the topics of the week.
- incorporated feedback, submitted second attempt, if needed on google classroom

Supportive resources and tutorials for the week (plans for re-teaching):

- online virtual Q and A help sessions (see Google Classroom for times and invite codes)