

Grade 9/10

Distance Learning Module 1: Week of: March 30th - April 3rd

Science: Biology - Modified from [Unit 3: Cell Transport](#)

Targeted Goals from Stage 1: Desired Results

Content Knowledge:

- The structure and interactions of matter at the bulk scale are determined by electrical forces within and between atoms

Vocabulary:

- atom, proton, neutron, electron, mixture, solution, solute, solvent, covalent bonding, ionic bonding, compound

Skills:

- Use a model to illustrate the organization of interacting systems that provide a specific function within a multicellular organism

Expectation:

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
Monday: <ul style="list-style-type: none">● Review atomic structure<ul style="list-style-type: none">○ Differentiate between protons, neutrons, and electrons○ Counting subatomic particles	<ul style="list-style-type: none"><input type="checkbox"/> Section 2-1 Atomic Structure notes<input type="checkbox"/> Atomic Structure - Counting subatomic particles	Options for evidence: <ul style="list-style-type: none"><input type="checkbox"/> Edulastic assessment questions counting subatomic particles<input type="checkbox"/> Hardcopy assessment questions counting subatomic particles<input type="checkbox"/> Edpuzzle on counting subatomic particles
Tuesday: <ul style="list-style-type: none">● Students become familiarized with vocabulary and fundamental understanding of compounds, mixtures and solutions	<ul style="list-style-type: none"><input type="checkbox"/> Section 2-1: Chemical Bonding Notes<input type="checkbox"/> Covalent Bond Tutorial<input type="checkbox"/> Ionic Bond Tutorial<input type="checkbox"/> Bozeman Science: Chemical Bonds	Options for evidence: <ul style="list-style-type: none"><input type="checkbox"/> Edpuzzle on types of chemical bonding

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
<ul style="list-style-type: none"> ○ Students review basic structure of the atom ○ Focus on the interaction among substances when solutions form 	<p><u>(0:00 - 4:00 min)</u></p>	
<p>Wednesday:</p> <ul style="list-style-type: none"> ● Students begin to investigate the unique properties of a molecule of water <ul style="list-style-type: none"> ○ Students complete a Process Oriented Guided Inquiry Lesson. (POGIL) 	<ul style="list-style-type: none"> <input type="checkbox"/> <u>POGIL: Properties of Water</u> <input type="checkbox"/> <u>Bozeman Science: Water A Polar Molecule</u> 	<p>Options for evidence:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <u>Edulastic assessment questions for the POGIL activity</u> <input type="checkbox"/> <u>Hard Copy assessment questions for the POGIL activity</u> <input type="checkbox"/> Google Form assessment questions for the POGIL activity
<p>Thursday:</p> <ul style="list-style-type: none"> ● Students use illustrations to construct a model of water as a solvent in PART I <ul style="list-style-type: none"> ○ Students view instructional video resources or participate in guided instruction. Guided instruction may be live or pre recorded. ○ Students expand on their initial model to include solutions ○ <p>TRANSFER TASK: POLAR MOLECULE - A MOLECULE OF A WATER SOLUTION</p>	<ul style="list-style-type: none"> <input type="checkbox"/> ZOOM or Google Meet live <input type="checkbox"/> Pre Recorded guided instruction <input type="checkbox"/> <u>Polar Molecule: A Model of a Water Solution</u> <input type="checkbox"/> <u>Bozeman Science: Water A Polar Molecule</u> 	<p>Options for evidence:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <u>Edulastic assessment questions for modeling activity PART I</u> <input type="checkbox"/> <u>Hard Copy assessment questions for modeling activity PART I</u> <input type="checkbox"/> Google Form assessment questions for modeling activity <p style="text-align: center;">and</p> <ul style="list-style-type: none"> <input type="checkbox"/> Screen Capture of completed illustration PART I <input type="checkbox"/> Google Draw illustration PART I
<p>Friday:</p> <ul style="list-style-type: none"> ● Students use illustrations to construct a model of a solution in PART II 	<ul style="list-style-type: none"> <input type="checkbox"/> ZOOM or Google Meet options <input type="checkbox"/> Pre Recorded guided instruction 	<p>Options for evidence:</p> <ul style="list-style-type: none"> <input type="checkbox"/> <u>Edulastic assessment questions for modeling activity</u>

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
<ul style="list-style-type: none"> ○ Students view instructional video resources or participate in guided instruction. Guided instruction may be live or prerecorded. 	<ul style="list-style-type: none"> <input type="checkbox"/> <u>Polar Molecule: A Model of a Water Solution</u> <input type="checkbox"/> <u>Bozeman Science: Water A Polar Molecule</u> 	<ul style="list-style-type: none"> <input type="checkbox"/> <u>Hard Copy assessment questions for modeling activity PART II</u> <input type="checkbox"/> <u>Google Form assessment questions for modeling activity</u> and <input type="checkbox"/> <u>Screen Capture of completed illustration PART I</u> <input type="checkbox"/> <u>Google Draw illustration PART I</u>

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

To show understanding, students must be able to....

1. Count the subatomic particles of an atom.
2. Explain why water is considered a polar molecule
3. Build a model that can be used to explain a kind of mixture called a solution

Students do not calculate solutions - Anchoring Phenomenon

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

- [Section 2-1 Atomic Structure notes](#)
- [Section 2-1: Chemical Bonding Notes](#)
- [Bozeman Science: Chemical Bonds \(0:00 - 4:00 min\)](#)
- [Concept Map of 2-1 vocabulary](#)
- [Bozeman Science: Water A Polar Molecule](#)
- [Concept Map 2-2 vocabulary](#)