

Water Systems Terminology Grade 8 Science

<h2 style="margin: 0;">Lesson Plan</h2>	Cross Curricular	Computational Thinking
	Safety Notes	N/A

<p>Big Ideas</p> <ul style="list-style-type: none"> Investigate appropriate terminology related to water systems. <p>Learning Goals</p> <ul style="list-style-type: none"> Students will learn appropriate terminology related to water systems, including water table, aquifer, polar ice-cap, and salinity. Students will learn about computational thinking. Students will create digital cue cards with computational thinking and coding. 	<p>Specific Expectations</p> <ul style="list-style-type: none"> Use appropriate terminology related to water systems, including, but not limited to: water table, aquifer, polar ice-cap, and salinity. Use a variety of forms to communicate with different audiences and for a variety of purposes.
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Description
 Students will learn appropriate terminology related to climate change, including, but not limited to: water table, aquifer, polar ice-cap, and salinity by coding digital cue cards.

<p>Materials</p> <ul style="list-style-type: none"> <i>Water Systems Terminology with Coding Teacher Copy</i> handout <i>Water Systems Terminology with Coding</i> handout <i>Water Sytems Terminology with Coding Scratch Brainstorming</i> PowerPoint. <i>Concept Map Example</i> PowerPoint Internet Internet Accessible Devices such as Chromebooks, Computers, or Ipads 	<p>Accommodations/Modifications Students have the opportunity to type, verbally record with speech-to-text software, and draw their answers.</p>
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Introduction

- Introduction: View refresher video for Computation Thinking: <https://www.youtube.com/watch?v=mUXo-S7gzds>
- After viewing the video, the educator will direct students, in pairs, to create a concept-map reviewing the concept of computational thinking on the *Water Systems Terminology with Coding* handout.
- Educators will show the *Concept Map Example* PowerPoint on a projector.

Action

- Educators will direct students to use a variety of sources, such as textbooks and the internet, to research and define the following terms, and relate the terms to climate change in the **Water Systems Terminology** section of the *Water Systems Terminology with Coding* handout.
 - Once a student completes the **Water Systems Terminology** section of the *Water Systems Terminology with Coding* handout, they will find a partner that is also finished to review each of the terms and how they relate to climate change.
 - Educators will review the **Water Systems Terminology** with the *Water Systems Terminology with Coding Teacher Copy* handout, asking students to volunteer their results and ideas.
 - Students will view and engage with Scratch program, *Water Systems Water Table Terminology Example*, <https://scratch.mit.edu/projects/279187507/>
 - Educators will direct students to brainstorm Scratch coding methods in the **Scratch Brainstorming** section of the *Water Systems Terminology with Coding* handout to solve the patter that will efficiently include the remaining terminology as digital cue cards: Water Table, Aquifer, Polar Ice-Cap, and Salinity
 - Students will collaborate to use computational thinking skills to remix the *Water Systems Water Table Terminology Example*, <https://scratch.mit.edu/projects/279187507/>, with the purpose of coding the remaining terminology into the program efficiently as digital cue cards.
 - Educators may provide students with ideas from the *Water Systems Terminology with Coding Scratch Brainstorming* PowerPoint.
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Consolidation/Extension

- Educators will share the *Water Systems Terminology* Scratch program, <https://scratch.mit.edu/projects/278594986/>, with the students to provide an example on how to efficiently code all of the required climate change terminology into the Scratch program.
 - Students will compare and contrast their remixed code and the *Water Systems Terminology* Scratch program, <https://scratch.mit.edu/projects/278594986/>.
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