

**Curriculum Development Overview  
Unit Planning for 3<sup>rd</sup> Grade Science**

<b>Unit Title</b>	You're Hot and You're Cold – States of Matter		<b>Length of Unit</b>	2 – 4 weeks
<b>Focusing Lens(es)</b>	Change	<b>Standards and Grade Level Expectations Addressed in this Unit</b>	SC09-GR.3-S.1-GLE.1	
<b>Inquiry Questions (Engaging-Debatable):</b>	<ul style="list-style-type: none"> <li>• Why does matter change from one form to another?</li> <li>• What would life be like if there was only one state of matter?</li> </ul>			
<b>Unit Strands</b>	Physical Science			
<b>Concepts</b>	matter, change, solid, liquid, gas, heating, properties, water, phases			

<b>Generalizations</b> My students will <b>Understand</b> that...	<b>Guiding Questions</b>	
	<b>Factual</b>	<b>Conceptual</b>
Solids, liquids and gases have distinguishable properties that identify their state of matter (SC09-GR.3-S.1-GLE.1-EO.c)	What are the states of matter? (SC09-GR.3-S.1-GLE.1-EO.c; IQ.1) What are the properties of solids, liquids and gases? (SC09-GR.3-S.1-GLE.1-EO.a,b,c)	How can the state of matter of any object be changed? (SC09-GR.3-S.1-GLE.1-EO.c; IQ.1) How can the state of matter of any object be identified? (SC09-GR.3-S.1-GLE.1; IQ.1)
Heating and removing heat changes the state of matter (SC09-GR.3-S.1-GLE.1)	Heating and removing heat changes the state of matter (SC09-GR.3-S.1-GLE.1-EO.b)	How does heating and cooling affect the state of matter? (SC09-GR.3-S.1-GLE.1-EO.b) Where around the school would snow take the longest to melt? Why? (SC09-GR.3-S.1-GLE.1; IQ.2)

<b>Critical Content:</b> My students will <b>Know</b> ...	<b>Key Skills:</b> My students will be able to <b>(Do)</b> ...
<ul style="list-style-type: none"> <li>• Matter freezes, melts, boils, and condenses (SC09-GR.3-S.1-GLE.1-EO.a)</li> <li>• That heating and removing heat affect states of matter (SC09-GR.3-S.1-GLE.1-EO.b)</li> <li>• The states of matter (SC09-GR.3-S.1-GLE.1-EO.c)</li> <li>• Examples of the distribution of water on Earth in different forms such as vapor, ice or glaciers, rivers, and freshwater or saltwater oceans (SC09-GR.3-S.1-GLE.1; RA.1)</li> <li>• That there is a limited amount of water available for human use (SC09-GR.3-S.1-GLE.1; RA.2)</li> </ul>	<ul style="list-style-type: none"> <li>• Analyze and interpret observations (SC09-GR.3-S.1-GLE.1-EO.a)</li> <li>• <b>Explain changes of state</b></li> <li>• <b>Examine changes of states in various forms of matter</b></li> <li>• Predict the boiling point of various liquids</li> <li>• <b>Comprehend that all matter can change states</b></li> <li>• Use evidence to develop a scientific explanation (SC09-GR.3-S.1-GLE.1-EO.b)</li> <li>• Observe how heat affects liquids</li> </ul>

**Curriculum Development Overview  
Unit Planning for 3<sup>rd</sup> Grade Science**

	<ul style="list-style-type: none"> <li>• Describe what happens when various solids are heated</li> <li>• Summarize the process of turning water into ice</li> <li>• Compare and contrast physical and chemical changes</li> <li>• Ask a testable question and design a method to find the answer, collect data, and form a conclusion (SC09-GR.3-S.1-GLE.1; N.1)</li> <li>• Demonstrate the importance of keeping accurate observations and notes in science (SC09-GR.3-S.1-GLE.1; N.2)</li> <li>• Share results of experiments with others, and respectfully discuss results that are not expected (SC09-GR.3-S.1-GLE.1; N.3)</li> </ul>
--	---

<p><b>Critical Language:</b> includes the Academic and Technical vocabulary, semantics, and discourse which are particular to and necessary for accessing a given discipline. EXAMPLE: A student in Language Arts can demonstrate the ability to apply and comprehend critical language through the following statement: <i>“Mark Twain exposes the hypocrisy of slavery through the use of satire.”</i></p>	
<p><b>A student in _____ can demonstrate the ability to apply and comprehend critical language through the following statement(s):</b></p>	<p><i>Matter exists in different states such a solid, liquid, or gas. Matter can change from one state to another by heating and cooling (removing heat).</i></p>
<p><b>Academic Vocabulary:</b></p>	<p>analyze, evidence, interpret, observation, scientific explanation</p>
<p><b>Technical Vocabulary:</b></p>	<p>freeze, melt, boil, condense, vapor, ice, glacier, river, freshwater, saltwater oceans</p>