

<b>Science</b>	<b>SCI.V.3.3</b>	<b>Grade: K</b>
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**Strand:**            **Using Scientific Knowledge in Earth Science  
- Atmosphere and Weather**

**Standard:**            **All students will investigate and describe what makes up weather and how it changes from day to day, from season to season, and over long periods of time; explain what causes different kinds of weather; and analyze the relationships between human activities and the atmosphere. (Atmosphere and Weather)**

**Benchmark:**            **Explain appropriate safety precautions during severe weather.**

**Constructing & Reflecting:**

**SCI.I.1.5** - Develop strategies and skills for information gathering and problem solving.

**SCI.II.12** - Show how science concepts can be illustrated through creative expression such as language arts and fine arts.

**SCI.II.1.3** - Describe ways in which technology is used in everyday life.

**SCI.II.1.4** - Develop an awareness of and sensitivity to the natural world.

<b>Vocabulary / Key Concept</b>	<b>Context</b>
<ul style="list-style-type: none"> <li>• Safe location</li> <li>• Sirens</li> <li>• Alarms.</li> </ul>	<ul style="list-style-type: none"> <li>• Examples of local severe weather that changes with the seasons: <ul style="list-style-type: none"> <li>➤ thunderstorms</li> <li>➤ tornadoes</li> <li>➤ blizzards</li> <li>➤ wind chill</li> <li>➤ heat index</li> </ul> </li> <li>• Examples of local community safety precautions: <ul style="list-style-type: none"> <li>➤ weather bulletins</li> <li>➤ tornado sirens</li> </ul> </li> </ul>

<p style="text-align: center;"><b>Knowledge and Skills</b></p> <p>Appropriate safety precautions need to be taken during severe weather. Safety precautions include moving to safe locations, listening to sirens, and monitoring radio broadcasts for severe weather watches and warnings.</p> <p>Students will</p> <ul style="list-style-type: none"> <li>• Explain safety precautions during severe weather such as high wind chill events, high heat index, thunderstorms, tornadoes and blizzards.</li> <li>• Demonstrate safety precautions they should take during severe weather. (Practice tornado drills, dressing for winter weather etc.)</li> </ul>	<p style="text-align: center;"><b>Resources</b></p> <p>Coloma Resources:</p> <p style="padding-left: 40px;">Tornado drill policy</p> <p style="padding-left: 40px;">Severe weather policy.</p>
<p style="text-align: center;"><b>Instruction</b></p> <p><b>Benchmark Question:</b> What are the relationships between human activities and the atmosphere?</p> <p><b>Focus Question:</b> Where is a safe place in severe weather?</p> <p>Discuss and practice safety procedures.</p>	<p style="text-align: center;"><b>Assessment</b></p> <p>Informal – Teacher Observation</p> <p>Children will demonstrate safety procedures to be used during severe weather.</p>

**Teacher Notes:****Investigate and describe what makes up weather.**

Beginning in the elementary years, observation of the weather is a common school event. In many classrooms, daily calendar activities include a description of the weather. Infrequently, air temperature, cloud cover, or severe weather is mentioned. For students to understand the importance of air to atmosphere and the weather, they must understand that air is a substance, it is matter, and it has mass and volume. This is a very difficult concept for young children because they cannot see air. Interestingly, middle grade students seem to have the most difficulty with this concept.

Patterns of the weather require that scientifically literate students understand air masses, front systems, and have general map reading skills. In the elementary grades, students should start to see the patterns of weather in different seasons. In this case, however, it is important to point out the colloquial use of different season terms. For instance, when the first snow flies, we typically say that winter has come whether it is December 21st or not. Paying attention to the differences between the weather and what we call each season is important. In general, we can predict that, in Michigan, it will snow in winter, less frequently in the spring and fall, and almost never in the summer. In the middle grades students can use weather maps and satellite weather images to see the patterns of weather.