



# Weather Demonstration

<b>Lesson Source(s)</b>	Walter S. Walker, WPAFB 88 <sup>th</sup> Weather Squadron, W.O.W! Wizard
<b>Grade Level</b>	Suggested grades K-8
<b>Abstract</b>	Meet the WPAFB Weather Specialists who monitors weather and environmental conditions worldwide. This W.O.W! demonstration describes the general forces behind daily weather. The weather wizard will introduce students to the flow of energy in the atmosphere that leads to weather patterns and phenomenon such as thunderstorms, lightning, tornadoes, and hurricanes.
<b>Objectives</b>	<ul style="list-style-type: none"> <li>▪ Students will know that short-term weather conditions (e.g., temperature, rain, and snow) can change daily, and weather patterns change over the seasons.</li> <li>▪ Students will know that air is a substance that surrounds us, takes up space, and moves around us as wind.</li> <li>▪ Students will describe forces that cause motion in the atmosphere.</li> <li>▪ Students will discuss the unique combination of variables that come together to create severe weather conditions, such as tornadoes, hurricanes, and lightning.</li> <li>▪ Students will explain how the different parts of the earth's surface, such as the ocean or deserts, affects the temperature of surrounding environments.</li> <li>▪ Students will list different types of cloud formations.</li> <li>▪ Students will explain how wind is created.</li> <li>▪ Students will discuss how air masses differ according to where they form.</li> <li>▪ Students will define a front and explain how they form.</li> </ul>
<b>Pre-Visit</b>	<p>_____ Complete the <i>W.O.W! Photo Release Form</i></p> <p>_____ Wizard will require a demonstration table and a nearby water source</p> <p>_____ Wizard will require projection screen/wall with a nearby electrical outlet</p>
<b>Photo/Video</b>	<b>Kit Photo(s):</b>
<b>Post-Visit</b>	<p>_____ Complete the brief post-visit survey</p> <p><a href="http://www.surveymonkey.com/s/WOWDemoSurvey">http://www.surveymonkey.com/s/WOWDemoSurvey</a></p>
<b>Best Teaching Practices</b>	<ul style="list-style-type: none"> <li>▪ Learning Cycle</li> <li>▪ Real-life Applications</li> <li>▪ Probing Questions</li> </ul>

<b>Standard Alignment</b>	<p>As a result of the demonstration, students should develop an understanding of</p> <ul style="list-style-type: none"> <li>▪ Earth and Space Science</li> <li>▪ Scientific Ways of Knowing</li> <li>▪ Science and Technology</li> </ul>
<b>Content Knowledge</b>	<p>Recipe for Weather-  Ingredients: Temperature, Pressure, Volume, Density  Combine ingredients in the troposphere, mix thoroughly and you will have weather!</p> <p>The Weather Channel Kids! <a href="http://www.theweatherchannelkids.com">www.theweatherchannelkids.com</a></p>
<b>Safety</b>	n/a
<b>Applications</b>	<p><b>Career field:</b> Meteorology  Every day weather events</p>
<b>Assessment</b>	<p>Observe student participation in the activity  Student’s participation in discussion</p>
<b>Other Considerations</b>	<ul style="list-style-type: none"> <li>▪ Bill Nye – <i>Wind</i> – DVD with supplement materials</li> <li>▪ NOVA – <i>Weather Gone Wild</i> – DVD with downloadable materials</li> <li>▪ <a href="http://www.weatherwizkids.com">www.weatherwizkids.com</a> - for additional weather experiments</li> </ul> <p>All materials available from the W.O.W! Lending Library upon request</p>
<b>Skillsheet(s)</b>	n/a