

CLIMATE CHANGE & HURRICANES

LESSON PLAN

TITLE	Climate Change and Hurricanes
SUBJECT	Climate Change
AUTHOR	Karolyn Burns, The CLEO Institute
GRADE LEVEL	Grades 6-8
DURATION	60 minutes
FLORIDA STANDARDS	<p>6TH GRADE STANDARDS: LAFS.6.RL.1.1, LAFS.6.RI.1.1, LAFS.6.RI.3.7, LAFS.6.SL.2.4, LAFS.6.W.1.1, LAFS.6.L.3.4, SC.6.E.7.1, SC.6.E.7.2, SC.6.E.7.3, SC.6.E.7.4, SC.6.E.7.5, SC.6.E.7.7, SC.6.E.7.8, SS.6.G.1.1</p> <p>7TH GRADE STANDARDS: LAFS.7.RI.1.1, LAFS.7.RI.3.8, LAFS.7.SL.2.4, LAFS.7.W.1.1, SC.7.N.1.7, SC.7.P.11.1, SC.7.P.11.4, SC.7.E.6.6</p> <p>8TH GRADE STANDARDS: LAFS.8.RL.1.1, LAFS.8.RI.2.4, LAFS.8.SL.2.4, SC.8.N.4.1, SC.8.N.4.2, SS.8.G.5.1, SS.8.G.5.2</p>
OVERVIEW	After instruction on the forces that drive hurricane formation, students will use maps of sea surface temperature to make predictions about where and when hurricanes are likely to form.
OBJECTIVE	Students will be able to describe the mechanism behind hurricane formation and describe why climate change and warming oceans contributes to more intense storms, using maps.
MATERIALS	Sea surface temperature maps or presentation (either one set per group, or a large class set viewable by all students), student handout, CER graphic organizer
ACTIVITIES & PROCEDURES	<p>Use the following video to introduce the concept of hurricanes and climate change from Dr. Katharine Hayhoe and PBS Learning media. https://www.youtube.com/watch?v=yfkS7LqCMDQ</p> <p>A PowerPoint presentation is also included and can be used for class data for a projector or used in virtual learning.</p> <p>In small groups, have students read the passage, go over vocabulary, and answer the following questions on the worksheet:</p>

<p>ACTIVITIES & PROCEDURES <i>CONT'D</i></p>	<p>What are the temperature conditions necessary for a hurricane to form? At what latitudes do hurricanes normally form? Why? At what time of year are hurricanes most likely to form? Why? What is latent heat and why is it important to hurricane development?</p> <p>Using the maps provided and the CER template in the worksheet, students will make a claim as to which scenario is most likely to support hurricane formation. Which months comprise hurricane season, and why? How might that change on a planet where SST is elevated for longer periods, and in more places?</p> <p>Extrapolate into the future. Who is most likely to be affected by these hurricanes? How can we prepare for, and help, the people in harm's way?</p>
<p>EXTENSIONS & ACCOMMODATIONS</p>	<p>Interdisciplinary Skills: Students can use the C-E-R graphic organizer to plan a written assignment to elaborate on their knowledge of hurricanes and create a scientific argument.</p> <p>Use the discussion questions as a launch point for a unit on severe weather, planning, and preparation. What is the role of individuals, communities, and governments in planning for hurricane season? Students can write to their elected officials regarding hurricane preparedness and the need to address stronger storms in the future.</p> <p>Accommodations and strategies: Work can be completed in partners or small groups, or individually. Vocabulary terms can be independently researched or discussed with students before the background reading passage.</p> <p>C-E-R assessment can be presented orally, via poster, or as a written assignment.</p>
<p>CONCLUSIONS</p>	<p>Students will use real-world data to draw a conclusion about hurricane formation and use that data to support their claim, following a CER framework. Using that information, they will make predictions about future trends in hurricanes and human impact.</p>