

Lesson Plan

Learning Segment Focus: Weather and Climate: Summer
Course & topic addressed Science/ Math: Graphing Summer Weather
Grade: 3rd

Lesson: 3 of 7
Date: 04.01.2020

Student Outcomes

Specific learning objectives for this lesson.	Students will successfully collect data of summer weather temperatures in various parts of the United States for a week to compare and contrast. Students will successfully enter data to excel sheets and create graphs comparing these places and determining an average temperature.
Justify how learning tasks are appropriate using examples of students' prior academic learning.	Students will use their schema gained on prior lessons on the Earth's seasons of years, weather and climate of each season. Students will use prior knowledge on reading a thermometer and collecting data on temperatures. Students will have prior knowledge on reading weather forecasts. Students will have prior knowledge on how the earth's rotation causes weather differences in places around the world.
Justify how learning tasks are appropriate using examples of students' personal, cultural, linguistic, or community assets.	This class consists of 8 white, 10 African American, 1 Asian and 5 Hispanic. I have 4 who Have been identified as are English Language Learners and 2 who have been identified as SPED. My 4 ELL students are part of a pull- out program twice a week for 30 minutes each. My 2 SPED students are part of a resource class they have every day for an hour. I have 3 ACE students who are pulled for gifted and talented 2 days a week in the afternoon. With a great diversity in me classroom, my class is able to learn amongst their peers through cultural differences.

State Academic Content Standards

List the state academic content standards with which this lesson is aligned. Include abbreviation, number & text of the standard(s).	<p>3-ESS2-1 Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.</p> <p>3-ESS2-2 Obtain and combine information to describe climates in different regions of the world.</p> <p>MP.2 Reason abstractly and quantitatively.</p> <p>MP.4 Model with mathematics.</p> <p>MP.5 Use appropriate tools strategically.</p> <p>3.MD.A.2 Measure and estimate liquid volumes and masses of objects using standard units such as: grams (g), kilograms (kg), and liters (l); gallons (gal), quarts (qt), pints (pt), and cups (c). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units (e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.</p> <p>3.MD.B.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled picture graphs and scaled bar graphs.</p>
---	---

Key Vocabulary

What vocabulary terms/content specific terminology must be addressed for students to master the content?	<p>Fahrenheit degrees bar graph</p> <p>Thermometer Temperature data</p>
---	---

Academic Language Support

<p>What are the Academic Language Function(s) (the content and language focus of the learning task represented by the active verbs within the learning objectives/outcomes) and explain how they are utilized in the lesson plan? What planned Academic Language Supports will you use to assist students in their understanding of key academic language to express and develop their content learning and to provide varying supports for students at different levels of Academic Language development? How do these supports address all three Academic Language Demands (vocabulary, syntax, and discourse)?</p>	<p>Students will use their weather journal over the different temperatures they have collected from the 3 different places. They will learn and compare temperatures these places have during the month of August. They will collect their temperatures through a data weather journal by looking at a thermometer for the Jonesboro, AR part that has a class we have outside. We will check the temperature at 2:00 pm every day. With Arizona and Alaska, we will go online and look at the forecast. They will learn about highs and lows. They will learn about which weather to calculate. They will then go in Excel and plug in their data to the chart to get their averages and graphs.</p>
---	---

Materials

<p>Materials needed by teacher for this lesson. (such as books, writing materials, computers, models, colored paper, etc.)</p>	<ul style="list-style-type: none"> ● 24 Macbooks ● Filled out Example Weather Journal ● Example of worksheets fill out
<p>Materials needed by students for this lesson. (computers, journals, textbook, etc.)</p>	<ul style="list-style-type: none"> ● 24 Macbooks ● Filled out Weather Journals ● Excel program in each computer

Lesson Timeline with Instructional Strategies & Learning Tasks

Amount of Time	Teaching & Learning Activities (This should be a BULLETED LIST)	Describe what YOU (teacher) will be doing and/or what STUDENTS will be doing during this part of the lesson. (This should be VERY DETAILED)
5 minutes	<u>Introduction:</u>	“Boys and girls, we are going to finish collecting our data in our weather journal for the month of August. Today is the last day! After we have looked at our class thermometer and looked up the forecast for our other 2 places, then go ahead and grab the Macbook and open up to Excel. Do not do anything else.”
35 minutes	<u>Instruction:</u>	“This whole week we have learned about climate and weather. What kind of weather are we mainly learning about?” *Student raises hand and answers correctly* “Yes, that is correct. We are learning about summer weather since we are still in summer. We have learned about typical weather conditions we find in summer. We learned about how hot weather can affect our Earth, land, and

		<p>communities. Some places even have droughts from this type of weather in hot and dry places, like Arizona or California because they are desert. Here in Jonesboro, it's hot and humid, because we get a lot of rain. We experience summer storms. What about places like Alaska? Alaska is a little cooler in the summer. Maybe you saw that as you collected data on Alaska. Alaska is a tundra and is closer to the North Pole. Remember, that because it is so North; it is hard for the sun to hit closer to Alaska's surface. The sun's rotation and tilt have a lot to do with our weather."</p> <p>This is what I want you to do. Take your temperatures for every day this whole month. Under week 1 you are going to plug- in the numbers of temperatures you discovered for each day. You will keep doing that for the rest of the charts. As you put in the number you will see graphs forming. Look at the bar graph and see how the temperature is different every day and week. At the end you will see a comparison chart comparing all the places. I want you to pay close attention to that one because we will discuss the differences you saw. Go ahead and start."</p> <p>Students will work on excel plugging in their data. We will discuss with a Venn diagram on the difference and similarities of each place temperature wise. We will discuss the weather of each place and how that can affect the community and its people.</p>
5 minutes	Closure:	<p>"Alright, let's finish up and turn in our charts and graphs. After you have finished, you may come and enjoy your summer treat! Make sure you clean your computer off and charge it."</p>

Accommodations/Modifications

<p>How might I modify instruction for: <i>Remediation?</i> <i>Intervention?</i> <i>IEP/504?</i> <i>LEP/ESL?</i> (All students who have plans mandated by federal and state law.)</p>	<p>With ELL and IEP/504 students, depending on their level, I will provide different modifications. The lower level students will be assigned partners to take them around with a word bank/fill in their weather journals. Intermediate level students will receive sentence frames/anchor charts to help them build sentences, conversations and fill in their weather journal. Gifted students will have to create their charts and graphs instead of plugging the numbers into the chart. If finished early, they will help other students with Excel.</p>
--	--

Differentiation

<p>How might you provide a variety of techniques (enhanced scaffolding, explicit</p>	<p>Students will have anchor charts around the room that provide information on. There will be a word wall with math and science</p>
--	--

instruction, contextualized materials, highlighters/color coding, etc.) to ensure all student needs are met? (All students who are not on specific plans mandated by federal and state law.)	vocabulary related to data, graphing, weather and climate. Advanced students will act as peer tutors if needed. They will create their own charts and graphs.
--	---

Assessments: Formative and/or Summative

Describe the tools/procedures that will be used in this lesson to monitor students' learning of the lesson objective(s) (include type of assessment & what is assessed).	<input type="checkbox"/> Formative / <input type="checkbox"/> Summative	Data collected in weather journal
	<input type="checkbox"/> Formative / <input type="checkbox"/> Summative	Making sure numbers are plugged in where they need to go.
	<input type="checkbox"/> Formative / <input type="checkbox"/> Summative	Charts and graphs are correctly created

Research/Theory

Explain connections to theories and/or research (as well as experts in the field or national organization positions) that support the approach you chose and justify your choices using principles of the connected theories and/or research .	Vygotsky: There is social interaction and discussion amongst peers on the different weather in places. Constructivism: Students must use their prior knowledge to collect data and temperatures.
--	---

Lesson Reflection/Evaluation

What went well ? What changes should be made? How will I use assessment data for next steps?	<i>TO BE FILLED IN AFTER TEACHING</i>
---	---------------------------------------

Include supporting material such as slides, pictures, copy of textbook, and handouts for any activities students will be using as part of your lesson.

*adapted from: <http://webcache.googleusercontent.com/search?q=cache:EsQcNWuG1Zoj:web.mnstate.edu/harms/StudentTeachers/edTPA-LessonPlan.doc+&cd=2&hl=en&ct=clnk&qI=us>; <http://www.moreheadstate.edu/getmedia/cd3fd026-939f-4a47-a938-29c06d74ca01/Lesson-Plan-and-Reflections.aspx>;
<http://www.mcneese.edu/f/c/9cb690d2/Lesson%20Plan%20Rubric%20Aligned%20with%20InTASC.docx>;
<https://www.uwsp.edu/education/Documents/edTPA/Resource12.pdf>;
<https://www.uwsp.edu/education/Documents/edTPA/Resource11.pdf>;
<https://www.uwsp.edu/education/Documents/edTPA/Resource11a.pdf>;
<https://www.uwsp.edu/education/Documents/edTPA/LessonPlanTemplateSOE.docx>;
<https://www.uwsp.edu/education/Documents/edTPA/SpecEdLessonPlanGuide.docx>;
<https://www.uwsp.edu/education/Documents/edTPA/SpecEdLessonPlanTemplate.docx>

