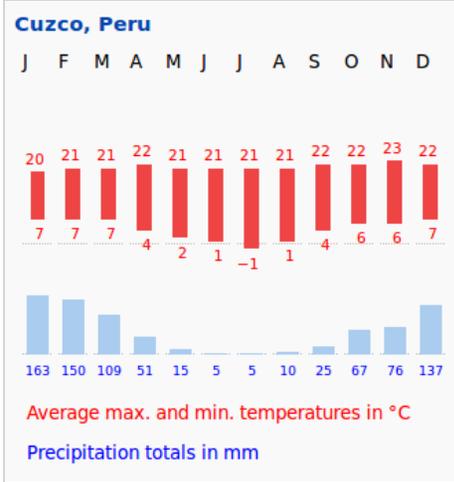| 3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.			
PE Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season. [Clarification Statement: Examples of data could include average temperature, precipitation, and wind direction.] [Assessment Boundary: Assessment of graphical displays is limited to pictographs and bar graphs. Assessment does not include climate change.]	DCI • Scientists record patterns of the weather across different times and areas so that they can make predictions about what kind of weather might happen next.	CCC • Patterns - Patterns of change can be used to make predictions.	Practices Analyzing and Interpreting Data – *Analyzing data in 3-5 builds on K-2 experiences and progresses to introducing quantitative approaches to collecting data and conducting multiple trials of qualitative observations. When possible and feasible, digital tools should be used.* Represent data in tables and various graphical displays (bar graphs and pictographs) to reveal patterns that indicate relationships.
Activity Whole Class: Introduce the overarching project for this unit: creating a poster to advertise the best time to travel to a U.S. city. Ask students what characteristics of the city they would need to know in order to make good recommendations.	Question What characteristics of the city would you need to know in order to decide the best time to travel?	Objectives / *Next Steps* • Weather / Climate are an important consideration when making any travel plans. • The local geography / landforms and local water can help determine the kinds of activities available. *What is the geography like in your city?*	Notes Throughout each of the activities in this unit, students should be considering how what they have learned will improve the advice they would give as a travel agent. There are questions in the notes section of each activity to help guide them.

Small Groups: Use electronic or paper resources to describe the local and regional geography for your assigned capital city.
  Options: Olympia WA; Sacramento, CA; Springfield, IL; Austin, TX; Washington, DC.
	What is the geography of your city and surrounding area?	• Each of the cities we are investigating has unique geography.
		  • Olympia is (West) coastal
		  • Sacramento is in a valley, isolated from the coast and from the nation's interior by mountains
		  • Springfield is surrounded by flat land
		  • Austin is isolated in a temperate desert
		  • Washington is (East) coastal
		  Each city is located at one or more regional rivers.
		
		What is the weather like in your city?
			Travel questions to answer:
			• What kind of activities does the geography allow? (Swimming, rafting, hiking, etc.)

Small Groups: Create a graph showing the average low and high temperatures for each month in your city, as well as the average precipitation. This graph will be displayed as part of your travel poster. (See the sample.) Note: Sample link not yet active.	What is the weather like in your city?	• Weather / climate graphs show how temperatures and precipitations generally change over the course of the year. This graph is often presented by overlaying line graphs (for high and low temperature) on a bar graph (of precipitation), but it can also be displayed using two bar graphs (as shown below). *What can you do in your city?*	Temperature and Precipitation Data by Month is available for students to use, as is a graphing template. Travel questions to answer: • Is one part of the year more ideal for travel than others? • What clothes should travelers pack? • Will travelers need a raincoat?
Small Groups: Combine your work into a single poster to describe the best time(s) of the year to travel and what travelers can do in your city. Be sure to address the travel questions we have answered along the way, but feel free to answer other questions travelers might have as well. Include your graphs, but be sure to explain what travelers can learn by studying them.	When / why would travelers want to visit your city?	• The local geography / landforms and local water can help determine the kinds of activities available. • Weather changes in predictable ways over the course of the year, but specific days and weeks can deviate from predictions.	Travel questions to answer: • What attractions are nearby if you want / need to spend a day inside? • Will the weather match your predictions all of the time?