Oregon Crops and Climate

Overview:
In this lesson, students learn about the climate of specific regions in relation to farm products and fruit crops grown in Oregon. Students will compare five maps and find the relationship between the product and the climate. Students will record their findings on a chart and then proceed to create their own map combining the information they found. After they have created their own map, students will present their findings to the class.

Geographic Question:
How does climate affect agricultural regions?

Connection to Curriculum:
Learning Level (3-5) Geography/Social Studies

Objectives:
After analyzing maps of agricultural products and climate, students will be able to create a map that shows the relationship between an agricultural product grown in regions of Oregon and its climate.

National Geography Standard:
#4 - The physical and human characteristics of places.

Oregon Geography Standards:
4.10. Explain the influence of Oregon and the Northwest’s physical systems on humans, including Native Americans.
4.12. Explain how people in Oregon have modified their environment and how the environment has influenced people’s lives.

English Language Proficiency Standards for ELD:
Describing People, Places, and Things – Students learn to understand and generate oral and written language with nouns, pronouns, and adjectives.

Language Objectives:
Function: Describing people, places, and things
Form: Nouns, pronouns, adjectives

Beginning: ________ grows in a ________.

Intermediate: _____________ has/have/had or is/are/were ____________.

Advanced: __________, located in __________, has/have/had__________.

In ____________ , ________ has/have/had __________.
Target Language Skills:
Reading: Students will read and interpret information found on maps.
Writing: Students will write notes, answer written questions, and write a presentation.
Listening: Students will listen to presentations.
Speaking: Students will answer questions and present information orally.

Key Vocabulary:
products        vineyard        annual
crops           orchard        key
climate         county         fruit
agriculture     coast          vegetable
regions         precipitation
farm            average

Materials:
• From the Student Atlas of Oregon www.studentatlasoforegon.pdx.edu, students will need a hard copy of: Counties and County Seats
• Each student or group needs access to the following maps:
  Average January Temperature
  Average July Temperature
  Average Annual Precipitation
  Farm Products
  Fruit Crops
  Major Crops
• Blank outline map of the Counties of Oregon for each student available at: http://geog.pdx.edu/oga/
• Re-size map on copier to match Temperature and Precipitation maps from Student Atlas. Each group will need a transparency of map. Pencils, colored crayons, and markers
• Graphic Organizer (copy included)

Presentation Steps:
1. Pre-teach vocabulary (a few words per day, prior to the lesson) using pictures or realia, or let students draw pictures to illustrate vocabulary. Post a vocabulary chart, with pictures and definitions, to be used as a resource throughout the lesson.
2. Ask students if they have ever been to a farm, vineyard, or orchard?
   - What was the weather like? Dry? Wet? Cold? Hot?
   - Share examples of fruits, vegetables, or animals found there, using realia or pictures.
3. Ask students to share experiences using Pair-Share-Quick Draw strategy.
4. Show students the Major Crops, Farm Products and Fruit Crops maps.

5. Ask students what they see and what they think the dots on the map mean. Share with partner. (We noticed…, We wonder…, We observed…)
6. Then show students the Counties and County Seats map.
   a. Ask students what county they live in?
   b. What counties are along the coast?
   c. In which county is the capital of Oregon located?

7. Show students the Average January Temperature, Average July Temperature, and Average Annual Precipitation maps.
8. In small groups, have students analyze the maps to answer questions showing the relationship between crops, precipitation, and temperature.
9. Introduce the graphic organizer provided. On the graphic organizer and the County map, teacher fills out information for wheat and students follow the teacher’s lead using the following maps: Counties and County Seats, Major Crops, Average Annual Precipitation, Average January Temperature, Average July Temperature.
   a. Review what each dot represents.
   b. Draw dots to represent where wheat is grown.
   c. Identify the amount of annual precipitation for counties where most of the wheat is grown, and write that amount on the chart.
   d. Create a new color key.
   e. Identify the average January and July temperatures for these counties and write those figures on the chart.

10. Divide students into partners or small groups, and assign each group an agricultural product.
11. Review what students need to include in their map. See Map Elements below.

**Assessment:**

*Formative Assessment*

- Give each group the five maps they are comparing and the graphic organizer.
- Have students complete and analyze data as a group.
- After students have finished the graphic organizer, give them each a blank map on which to transfer their data. Students create individual maps.
- After students have completed the Map Elements listed under Assessment, they will write a short narrative summary (1 or 2 sentences) and present their findings to the class.
- Teacher will observe student participation in discussions and critical analysis of their maps.
**Summative Assessment**

- Students will create a map of the counties with an agricultural product, average January/July temperature, and annual precipitation. Use “Quiz, Quiz, Trade” strategy to share information learned from maps.

**Map Elements:**
Title
Colorful map
Easy-to-understand key. Key includes:
- dot for specific crop
- color labeled for precipitation
Include range of high and low temperatures for January and July near where the crop is grown
Counties labeled
Map is visually appealing, neat, and easy to read

**Extensions:**
Students could take a field trip to a local farm.
Students could track the path a product takes to its destination.
Research other products that are grown in Oregon.
Consider using a Wheat Kit, available from Agriculture in the Classroom (Oregon State University).
Survey foods from home that are grown in Oregon and graph results.
Read *Apples to Oregon* by Deborah Hopkinson.

Original Authors: Jacy Nerz and Mary Cordle
The final editing and adaptations for an ELL classroom were completed by the OGA Spanish Student Atlas of Oregon Task Force 2011.
Product

Name: ____________________________________________________________

Names of group members: __________________________________________

<table>
<thead>
<tr>
<th>List 5 Counties where your product is grown.</th>
<th>Average January Temperature</th>
<th>Average July Temperature</th>
<th>Average annual precipitation</th>
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### Producto

Nombre: ____________________________________________

Nombres de los miembros del grupo: ________________________________

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<tr>
<th>Nombra 5 condados en donde se siembra el producto</th>
<th>Temperatura promedio en enero</th>
<th>Temperatura promedio en julio</th>
<th>Promedio de precipitación anual</th>
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