

Name _____

APPLES OR ORANGES?

You just bought a farm in Los Angeles. You want to grow apples or oranges but you know that the right climate determines what kind of fruit can grow best in an area. You are considering an apple variety called "Rome Beauty," which has been popular since the 1840s. It is excellent for baking and the trees grow apples from November to April. In order for the tree to produce apples, the temperature needs to drop below freezing (32 degrees).

You are also considering a new variety of orange called "Washington Navel." Eliza Tibbets, a friend living in Riverside, says it is a wonderful orange. It is seedless, very juicy, sweet, and easy to peel. The trees grow oranges from November to April. In order for the tree to produce oranges, the temperature cannot drop below freezing (32 degrees).

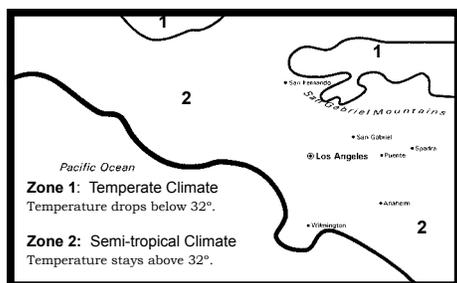
What will you grow? Apples or oranges? **Fill out the chart below to decide.**

| | Variety | Season | Climatic Needs | Best Zone |
|--------|---------|--------|----------------|-----------|
| Apple | | | | |
| Orange | | | | |

In which zone is Los Angeles? _____

Describe Los Angeles's climate zone. _____

What fruit will you grow in the Los Angeles area and why? _____



Background information: Although the apple is the most widely adapted deciduous fruit, the mild winters of the low desert and the marine and coastal climates of Southern California do not provide enough winter cold for most standard varieties. People who do grow apples in Southern California often live in higher elevations. The "Rome Beauty" used in this activity is a red striped apple first described in California in 1848. This apple is not as good as other varieties when eaten raw, but is excellent for baking.

Oranges, on the other hand, thrive on the mild winters of Southern California. The Los Angeles County area is well known for having produced oranges in great quantities in the late nineteenth and early twentieth centuries. The "Washington Navel" described in this activity became popular when it was introduced by Eliza Tibbets of Riverside in 1873 because it was sweet, juicy, seedless, and easy to peel.

APPLES OR ORANGES?

LESSON PLAN

Objectives:

1. To draw conclusions about the best conditions for growing apples and oranges
2. To read a climate chart and map legend to determine where apples and oranges can grow in California

Time: 20 minutes

Materials:

1. "Apples or Oranges?" activity sheet
2. Pencils

Directions:

1. **Distribute** "Apples or Oranges?" activity sheet.
2. **Review** the information regarding southern California's oranges as well as the background information.
3. **Review** with students the chart and map on their "Apples or Oranges?" activity sheet.
4. Students may **work** on the problems individually or as a class.
5. After students have finished, **discuss the answers** to the problems (see Answer Key).

Additional activities:

1. **Taste test:** Bring in different varieties of apples and oranges and have students taste them. Which apples and oranges do they like best? Have students line plot their preferences.
2. **Cookbook:** Have students gather recipes that use apples and oranges and create a cookbook.
3. **Art activity:** Have students create an apple or orange crate label.

Links to standards

Social Studies: 4.1.3, 4.1.4, 4.1.5

Language Arts: RI.4.1, RI.4.3, RI.4.7, RF.4.3, RF.4.4a&c, W.4.2a, W.4.6, W.4.7, W.4.10

Science: LS-3b

Math: 4.MD.4

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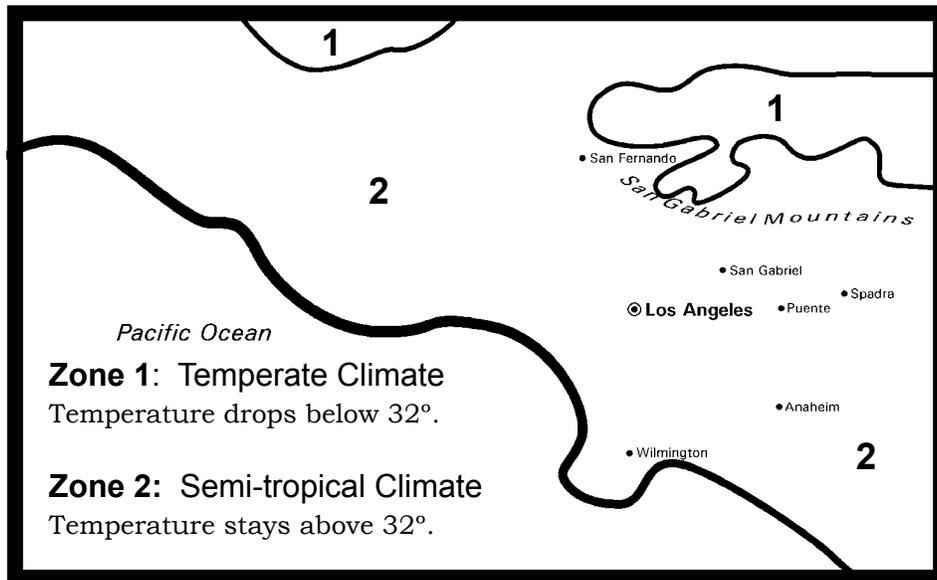
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Name Answer Key

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What will you grow? Apples or oranges? **Fill out the chart below to decide.**

| | Variety | Season | Climatic Needs | Best Zone |
|--------|------------------|---------|----------------|-----------|
| Apple | Rome Beauty | Nov-Apr | below 32° | 1 |
| Orange | Washington Navel | Nov-Apr | above 32° | 2 |

In which zone is Los Angeles? 2

Describe Los Angeles's climate zone. Semi-tropical climate.

The temperature stays above 32°.

What fruit will you grow in the Los Angeles area and why? Washington Navel oranges because oranges grow at a temperature above 32°.

