Just Peachy

Objective

Students will use their map skills to locate Oklahoma and a variety of other places on a world map. Students will write poems about peaches using rhyming words and adjectives. Students will conduct simple science experiments using inquiry.

Background

"An apple is an excellent thing, until you have tried a peach."
—George du Maurier, British illustrator and author

Peaches were a favorite of the native tribes making their homes in Indian Territory long before Oklahoma became a state. Travelers through the area reported peaches as one of the foods offered by their Indian hosts. Peaches were also an important crop to settlers who moved into the area with the land runs. According to one early account, peaches were being shipped out by railroad carload as early as eight years after settlement. Porter, Stratford and Guthrie were some of the areas where peach production was reported early in the history of our state. In 1904, Ben Marshall, a Creek man from Porter, received a gold medal at the Louisiana Purchase Exposition for the quality of his peaches. Commercial production of peaches in the state took off after that.

Peaches need a reasonably fertile, well-drained soil to grow. Major problems for growing them in Oklahoma include unpredictable weather, disease and insect pests. Spring storms bring hail and high winds which may cause limb damage and loss of fruit during the critical growing period. Peach borers damage trees, and other insects can cause the fruit to be unattractive to customers. Extreme cold temperatures in the winter can affect production, but in most years peaches are a good crop in Oklahoma.

Peach production includes spraying regularly for pests and pruning the trees as soon as the leaves start dropping in the winter. Orchard work also involves grading fruit, choosing and setting out new trees, fertilizing and thinning the tiny green fruit so each peach has space to develop.

The first ripe peaches appear in June. Most of the peaches grown in Oklahoma are consumed within the state and must be hand harvested. Because consumers want peaches with few flaws, harvesters must exercise care in harvesting and handling to avoid bruising. Most of the peaches grown in our state are sold from farmers' markets, roadside stands or directly from the farm. Some grocery stores in the state sell local peaches as well.

There are two basic types of peaches. One is the clingstone, in which the flesh of the fruit clings to the stone, or seed. Most clingstones are taken ripe from the field and canned within 24 hours of picking. The other variety is the freestone, which can be loosened from the pit with relative ease. These are the fresh peaches most often found in grocery stores. Some popular varieties grown in oklahoma include autumn Gold, Candor, Cresthaven, Elberta, Fairtime, Glohaven, Loring,

Oklahoma Academic Standards

GRADE 3
English Language Arts—1.R.1,2,3; 2.R.1; 3.R.7; 4.R.1,2,3; 1.W.1,2; 3.W.2; 2.F.1
Social Studies Content—2.3; 3.1ABE,2AB; 4.1,5
Science—LS1.1; 3.1; 4.3
Math—D.1.1

GRADE 4
English Language Arts—1.R.1,2,3; 2.R.1; 3.R.7; 4.R.1,2,3; 1.W.1,2; 2.F.13.W.2
Social Studies Content—1.2D,3,4
Science—LS1.1
Math—D.1.1,2

GRADE 5
English Language Arts—1.R.1,2,3; 3.R.6; 4.R.1,2,3;; 1.W.1,2; 3.W.2
Social Studies Content—2.3
Science—LS1.1; 2.2
Math—D.1.2

GRADE 6
English Language Arts—1.R.1,2,3; 3.R.6; 4.R.1,2,3; 1.W.1,2; 3.W.2
Social Studies Content—1.1,2,5; 4.1,4; 5.2
Science—LS2.1

GRADE 7
English Language Arts—1.R.1,2,3; 3.R.6; 4.R.1,2,3; 1.W.1,2; 3.W.2
Social Studies Content—1.2,3,5; 4.1
Science—LS1.4,5; 3.2; 4.6
Math—D.1.1

Materials

fresh (if available), frozen, dried and canned peaches

ingredients for snack foods—granola, nuts, etc.

peach pits

potting medium

zip-closing bags

Nectar, Ouachita Gold, Ranger, Redhaven, Reliance, Sentinel, Starks Encore, and White Hale. Peaches are sometimes called "stone fruits" because of their pits.

English Language Arts

1. Read and discuss background and vocabulary.
   —Ask students if they agree with the quote at the beginning by George du Maurier.
2. Provide samples of canned, fresh (if available), dried or frozen peaches for students to taste. (Save additional samples for the math activity below.)
   —Students will list adjectives that describe the peaches.
3. Students will brainstorm words that rhyme with peach.
   —Students will write poems about peaches, using the rhyming words and the adjectives from the tasting activity above.
4. Provide frozen or canned peaches unless fresh peaches are available (normally June and July) and assorted healthy snack foods such as yogurt, granola, nuts, etc.
   —Students will develop healthy snack recipes, using peaches and the other ingredients you have provided.
   —Students will write the recipes and demonstrate preparing them.
5. Students will develop posters or flyers to advertise Oklahoma peaches or the healthy snacks they have created.

Social Studies

1. Provide copies of the Reading Page included with this lesson for students to read independently or as a group.
   —On a map of the world, students will trace the migration of the peach, from China to Oklahoma.
   —Students will develop a timeline of the migration of the peach, based on the Reading Page.
   —On an Oklahoma road map, students will locate Porter and Stratford, the two major peach-growing areas in the state. Which location is nearest your town?
   —Students will identify latitudes and longitudes of the migration locations and compare with the latititudes and longitudes of the Oklahoma locations.
   —Students will research the climates of the locations mentioned and compare them with the climates of the Oklahoma locations.

Math

2. Provide samples of canned, fresh (if available), dried and frozen peaches.
   —Students will use the survey sheet provided to conduct a taste test to determine which form of peaches they like best. If you are using fresh peaches out of season, discuss the likelihood that they taste best when they are left to ripen on the tree in season. (An unripe peach may be left out to ripen further. It is ripe when it smells like a peach and the stem side is pressed down a bit from the weight and softening of the peach as

it ripens.)
—Students will develop graphs to record the results of the classwide taste test.

Science

NOTE: PATIENCE REQUIRED. THIS EXPERIMENT CAN TAKE FROM TWO WEEKS TO THREE MONTHS.

3. Students will use the Scientific Study Format provided with this lesson to design their experiment.
   —Save peach pits.
   —If the pits have dried out, soak them overnight in water.
   —Plant peach pits in 2 to 3 inches of potting medium. Some pits will germinate after 2 or 3 weeks, some after 2, 3 or more months. Some may not germinate at all, so try different varieties.
4. Peach pits sometimes germinate better after a cold treatment. This process is called stratification.
   —Put the pit in a zip-closing bag with enough potting medium to cover. The soil should be just barely moist.
   —Put the bag in a refrigerator. It may take 2 to 3 months to see growth.
   —Transplant to a pot once the root is a 1/2 inch or more in length.
   —Instead of working with a whole pit, you can use hand clippers to remove the hulls from the pits before stratifying. This increases the chances for successful stratification and germination. However, it takes practice to avoid nicking the brown cover of the hull. Follow the same procedure as described above.

Extra Reading

Anderson, Jodi Lynn, *Peaches*, HarperTeen, 2006.
Dahl, Roald, and Lane Smith, *James and the Giant Peach*, Puffin, 2000.
Mulder, Michelle, *After Peaches*, Orca, 2009.
Wada, Stephanie, and Kano Naganobu, *Momotaro and the Island of Ogres*, George Braziller, 2005.

Vocabulary

clingstone—a fruit (as a peach) whose flesh sticks strongly to the pit
commercial—of or relating to the buying and selling of goods especially on a large scale and between different places
erosion—the state of being worn away by or as if by the action of water, wind, or glacial ice
fertile—producing vegetation or crops plentifully
freestone—having or being a fruit stone to which the flesh does not stick when the fruit is split open
grade—to arrange according to quality
immortality—the state or quality of living or lasting forever
orchard—a place where fruit or nut trees are grown
overgrazing—allowing animals to graze (as a pasture) to the point of damaging the vegetation
pit—the seed-carrying stone of a fruit (as the cherry or peach) that is a drupe
production—the act of process of bringing something out by work
propagate—to have or cause to have offspring
prune—to cut off the parts of a woody plant that are dead or not wanted
stone fruit—fruit that contains a stony seed or one (as of a peach or plum) enclosed in a stony cover
transport—to transfer or convey from one place to another

The Geography of Peaches

Most experts believe China is the native home of peaches because of the wide range of wild peach types that grow in the countryside there. Originally the peach grew in north China in areas of erosion and overgrazing. They were a symbol of fertility and affection and of immortality and unity. The peach tree is considered to be the tree of life.

Peaches traveled west from China to Persia (now Iran) on the silk roads. In Persia, peaches were discovered by Alexander the Great, who introduced them to the Greeks. By 50 to 20 BC, the Romans were growing and selling peaches. The Romans called them "Persian apples." In fact, the name for peach in numerous languages is the name for Persia.

French—*peche*	German—*pfirilch*
Italian—*pesca*	Spanish—*melocoton*
Portuguese—*pessego*	Danish/Norwegian—fersken
Swedish—*persika*	Finnish—persikka
Russian—*persik*	Polish—*brzoskwinia*
Serbo-Croat—*breskva*	Romanian—*piersica*
Bulgarian—*praskova*	Greek—*robakinon*
Turkish—*seftail*	Hebrew—*afarseq*
arabic—*khukh*	Persian—*hulu*
Hindi—*aru*	Chinese—*tao*
Japanese—*momo*	Indonesian—*persik*

Spaniards brought peaches to South America, and the French introduced them to Louisiana. The English took them to their Jamestown and Massachusetts colonies. Columbus brought peach trees to America on his second and third voyages.

Several Native American tribes were particularly fond of peaches. In Pennsylvania, William Penn wrote that there was "not an Indian plantation without them." It is probable that the spread of peaches was due to the Native Americans. Thomas Jefferson planted peaches at Monticello in 1802.

Early peaches were propagated by seed, the easiest way to transport the peach plant. Budded trees became available in America around the time of the American Revolution. Dried peaches traveled with Americans setting out across the western frontier.

1. On a map of the world, trace the migration of peaches, from China to Oklahoma.
Create a timeline of peaches, based on the information above.
2. Based on what read above about the migration of the peach, which of the above words for peach in other languages are probably NOT the name for Persia.

Oklahoma Ag in the Classroom is a program of the Oklahoma Cooperative Extension Service, the Oklahoma Department of Agriculture, Food and Forestry and the Oklahoma State Department of Education.

Name_____

Just Peachy

On a scale of 1-4, put the following in order from most-liked (1) to least-liked (4). In the space below, explain your choices.

_____Canned

_____Dried

_____Fresh

_____Frozen

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Name_____

Scientific Method Format

Title of Experiment or Study:

I. Stating the Problem:

What do you want to learn or find out?

II. Forming the Hypothesis:

What is known about the subject or problem, and what is a prediction for what will happen?

III. Experimenting: (Set up procedures)

This should include: materials used; dates of the experimental study; variables, both dependent and independent (constant and experimental); how and what was done to set up the experiment; fair testing procedures.

IV. Observations:

Includes the records, graphs, data collected during the study.

V. Interpreting the data:

Does the data support/defend the hypothesis?

VI. Drawing Conclusions:

Justify the data collected with concluding statements about what has been learned. discuss any problems or concerns. use other studies to support the conclusion. Give alternative ideas for testing the hypothesis.

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