

Florida Strawberry Handout Packet



A student's guide to the
Florida Strawberry Industry

www.straw-berry.org

Historical Facts About Strawberries

Strawberries have been considered a tasty and nutritious treat for hundreds of years. **A member of the rose family**, the strawberry sometimes gives off a rose-like aroma. The plant grows close to the ground and has a short woody stem. **Strawberry leaves grow on the stem in groups of three.** The plant has a shallow root system and small white flowers that have a pleasant odor. **The greenish white fruit grows from the flower and eventually ripens into a deep red berry.** Many speculate how the luscious fruit was discovered. It is known that the strawberry goes as far back as the Romans and perhaps even the Greeks.

The strawberry plant was originally grown in Northern Europe, but wild species are also found in Russia, Chile and North America. At one time, wild strawberries grew everywhere from Canada to the Carolinas

and westward beyond the Appalachian Mountains. The Native Americans and our pioneer ancestors descended upon the dewy wild strawberry meadows in the early summer morning with great glee.

Wild strawberries were reportedly a favorite food of



Daniel Boone who walked miles out of his way to spend an hour in a ripe berry patch. **Thomas Jefferson's** writings abound with references to wild strawberries, strawberry recipes and other culinary uses for strawberries.

A day of "strawberring" before modern refrigeration meant a long day of picking followed by gorging on delicious strawberry treats—pies, tarts, shortcake and all the fresh ripe strawber-

ries the family could consume. **Berries that were not eaten were preserved as jam, jelly, sauce, strawberry vinegar and strawberry tonic, a medicinal drink.** The remaining berries were dried on flat rocks for several days. These dried berries would be used throughout the fall and winter in breads, cakes, puddings and porridge.

The first American species of strawberry was cultivated in about 1835. Today, the strawberry is the leading small fruit crop in the U.S. It is farmed from Florida to Alaska, with the largest strawberry growing centers located in California and Florida.

Strawberry Stumper: How did the strawberry get its name? *From the common practice of growing berries under straw to protect them from winter cold and late spring frosts.*

Florida Strawberry

WORD SEARCH

Find these words:

strawberry

red

delicious

shortcake

vitamin C

whipped cream

potassium

ellagic acid

milkshake

festival

Plant City

seed

yummy

pizza

winter

sugar

healthy

grow

soil

tasty

flavor

firm

eat

S	V	M	I	L	K	S	H	A	K	E	W	W	V	E
T	H	D	E	I	D	X	F	E	S	T	I	V	A	L
R	C	O	W	O	E	C	A	Y	C	A	N	W	M	L
A	P	O	R	S	L	T	T	N	N	S	T	P	L	A
W	I	W	E	T	I	I	J	E	I	T	E	O	H	G
B	Z	S	D	E	C	Y	U	M	M	Y	R	T	E	I
E	Z	U	F	T	I	A	V	E	A	M	O	A	A	C
R	A	G	N	R	O	V	K	B	T	R	V	S	L	A
R	K	A	X	G	U	O	S	E	I	I	A	S	T	C
Y	L	R	R	P	S	K	E	L	V	F	L	I	H	I
P	F	O	L	E	G	W	E	I	I	C	F	U	Y	D
F	W	H	I	P	P	E	D	C	R	E	A	M	L	G

Strawberry Nutritional Facts

Berries as Cancer Fighters

Did you know that the cancer inhibitors in raspberries, strawberries and blackberries could **save your life**?

According to the Ohio State University Extension Service, a research team from OSU is studying berries to determine if they can stop or **slow some of the biological processes** that contribute to the development or spread of certain types of cancer.

In lab studies, Gary Stoner, director of the Cancer Chemoprevention Program in Ohio State's Comprehensive Cancer Center, found that berries **inhibited the development of oral, esophageal and colon cancers** in rodents that ate enough of the fruit.

These tiny fruits contain a number of **compounds that have been shown to have anti-carcinogenic properties**, said Joe Scheerens, an associate professor with the Department of Horticulture and Crop Science based on the Ohio Agricultural Research and Development Centers.

Important compounds include vitamins A, C, E and folic acid, selenium, calcium polyphenols such as ellagic, ferulic and coumaric acids, quercetin, anthocyanins and phytosterols.

Source: Ohio State Agriculture Medical Researchers Test Berries as Cancer Fighters

<http://extension.osu.edu/~news/story.php?id=3171>



Nutrition Facts

Fresh Strawberries per 4 ounce serving, 1 cup

Calories:	55
Protein:	1 g
Sodium:	1 mg
Potassium	244 mg
Carbohydrates	12.5 g
Fat	0.7 g

Protein	*
Vitamin A	*
Vitamin C	150%
Thiamin	3 %
Riboflavin	6 %
Calcium	4%
Iron	8%

* Contains less than 2% USRDA

Strawberry Stumper: How big was the World's Largest Strawberry Shortcake, created in Plant City in 1999? 827 square feet. Made with 7,800 pints of fresh Florida Strawberries!



*Do all strawberries
taste the same?*



No! Different varieties of strawberries have different flavors. Strawberry breeders develop new varieties to fit different marketing situations. Different varieties have different **textures, colors and flavors**. Cool nights and sunny days increase the sugar content in strawberries.

When nights are warm, the berry plant uses sugars to support cellular activity. When nights are cool, the extra sugar goes into the fruit, thus increasing the flavor and sweetness. **Strawberries must be picked at the peak of ripeness for optimum flavor**, as they do not continue to ripen after being picked.

Florida's Strawberry Varieties

Carmine

Released by the University of Florida in 2002, this variety produces a lot of fruit early in the season (December through February) and is known for its firmness, juiciness and attractive deep red color.

Strawberry Festival

This variety was also developed by researchers at the University of Florida in 2000. It grows from December through March. It is firm and can be shipped long distances because of its long shelf-life. The berry was named after the Florida Strawberry Festival, which is an annual celebration of the fruit that made Plant City famous.

Earlibrite

This variety was developed by the University of Florida in 2000. It is orangish in color and is similar to the Sweet Charlie variety but slightly firmer. It is grown December through March and is known for its large size.

Treasure

This variety was developed by a private breeder in Naples, Fla. It tends to grow from late November through March. It has a deep red color and is bigger than the Sweet Charlie variety. It has a tart flavor and is firm, making it a good variety for farmers to ship around the world.

Winter Dawn

This variety was also a product of the University of Florida and was named for its tendency to show up very early in the season (end of November through February.)

FUN ACTIVITY...

Serve your class fresh strawberries and ask them to describe all of the different characteristics that determine variety. (i.e. overall flavor, sweetness, acidity, texture, hollowness, juiciness, color, seediness, berry size, leaf size, etc.)

Planting Your Own Strawberry Patch



Starting your Strawberry Patch

- * Check with your local extension agent to see **which variety will grow best** in your climate and soil type. Ask what time of year is best to plant your berries. (order plants in August & September)
- * Choose a **sunny spot** and work plenty of **fertilizer** into the soil to give your plants a good start.
- * Plant your plants in a **raised bed** or in rows about 15 inches apart.
- * Use a garden trowel to **dig a hole** about six inches deep.
- * Place the plant in the hole and separate or **spread out the roots** to avoid overcrowding.
- * Set the crown **just above the soil level**; roots may dry out otherwise.
- * Mulch plants with a couple of inches of **sawdust or straw** to retard the growth of weeds and retain moisture
- * **Water frequently.**
- * **Remove weeds.**
- * **Protect plants from freezing temperatures** by covering them with about 6 in. of straw- leave covered until spring

Become a Plant Breeder

There are 200 seeds on the average strawberry. Each of these seeds has the genetic potential to become a new variety of strawberry since no two seeds are the same. This is how plant breeders develop new varieties of strawberries. Once the plant breeders develop a winning variety, nurseries grow thousands of baby plants of that one variety. Since strawberry farmers want to grow all the same variety, they plant the baby plants in their fields instead of seeds. The following experiment will allow the class to become honorary plant breeders.



Equipment You Will Need:

Blender

Water

Small Cooking pot

Fine Strainer

Sponge

1 pint of fresh strawberries

First

Fill blender half full of water



Second

Cut off the strawberries' stems and put the berries in the blender

Third

Blend on high until the strawberries have turned into mush

Fourth

Pour blender contents into the small cooking pot and place under running water until water runs clear. The seeds that float are no good, only the seeds that sink to the bottom.

Fifth

Pour the water and viable seeds through the fine strainer. Dump the strainer contents on a paper towel and dry. When dry, place the seeds on a damp sponge and place in a warm sunny place like a window sill. Keep the sponge damp until the seeds sprout. When the seeds sprout, they may be transplanted to seedling trays (ask your local nurseryman for these.)



MILK SHAKES

Strawberry Milk Shakes

Materials Needed:

Blender (average blender makes 15 cups)

Ice Cream Scoop

Measuring Cup

Ice Cream (vanilla, strawberry)

Milk

Florida Strawberries (fresh or frozen)

Cups



First add to blender:

5 scoops ice cream

2 cups Florida strawberries

2 cups milk

Blend until all is uniform in blender. Pour into individual cups and serve.

IDEA!! To let the kids help, have them take turns filling the cups with ingredients. Have all the kids count the number of cups put into the blender. Have a student push start button on blender and pour shakes into cups.

Fun Activity...

While the kids are waiting for their milkshakes, have them come up with as many words as they can using the letters in

STRAWBERRY MILKSHAKE

i.e. straw, berry, milk, shake, saw, brat, hat, lime, share, etc.

Chocolate Covered Strawberries

Ingredients Needed:

1 can Dulci Frutta Chocolate

3 cups ripe Florida strawberries with stems intact

Waxed Paper

Melt Dulci Frutta wafers according to the package directions until softened. Stir until smooth. Holding fruit by the stem, dip into melted Dulci Frutta allowing excess to drip off. Place on waxed paper to cool until chocolate hardens. Lift carefully from waxed paper and ENJOY!!!!



For nutty berries, dip berries in Dulci Frutta and then roll in ground pecans. Set aside to cool.

More recipe ideas:

You can also dip strawberries in yogurt for a healthy snack. Or combine halved strawberries and fresh blueberries in vanilla yogurt and top with granola.

YUM!!!

Or make a strawberry pizza. Using sugar cookie dough make a pizza-like crust on a pizza pan. Cook and cool crust. Spread cool whip, vanilla frosting or cream cheese on the cooled crust. Top with strawberry pie filling. Cover entire pizza with sliced fresh strawberries. MMMMMM!!!!

