

SPICE Up Your Class with Agriculture  
Mary Beth Bennett

Learn how exploring the diverse world of spices that surround us can add pizzazz to your classes by using materials that students are familiar with while increasing their interest in learning. Techniques will be demonstrated to help teach multicultural studies, art, history, science, and careers while allowing us to connect children to agriculture by showing teachers how to incorporate a variety of simple hands-on learning activities using readily available materials into the various subjects they teach. These hands-on activities help to expand problem solving, enhance observation, and stimulate student interest. Literature and resource information will be provided.



## Background

### Introduction to spices

What is a spice?

Defined in the *Oxford English Dictionary* as ‘one or other of various strongly flavored or aromatic substances of vegetable origin, obtained from tropical plants, commonly used as condiments’ spices are aromatic dried roots, bark, buds, seeds, berries and other fruits. The word “spice” derives from the Latin word *species*, meaning specific kind, and later, goods or merchandise.

The American Spice Trade Association (ASTA) defines spice as “any dried plant product used primarily for seasoning purposes.” Included are tropical aromatics (pepper, cinnamon, cloves, etc.); leafy herbs of the temperate zone (oregano, basil, sage, etc.); spice seeds (sesame, mustard, caraway, etc.); and dehydrated vegetables used as spices (onion, garlic, chile peppers, etc.)

Most of the important spice plants – cinnamon, pepper, ginger, cloves, nutmeg – are native to the Asian tropics; allspice, vanilla and chilies come from the West Indies and Central America; the Mediterranean basin produced many of the aromatic seeds – coriander, fenugreek, fennel, poppy, mustard; the colder regions have contributed caraway, dill and juniper.

Have spices always had the same role?

Spices were once one of the most expensive items in household accounts and were usually kept locked up in the drawers or compartments of special spice cupboards or boxes. In ancient times they were significant as medicines, preservatives and perfumes. Cassia, ginger and pepper were imported by the Greeks; anise, coriander seeds, saffron and poppy seeds were grown locally, as were thyme, mint and marjoram.

The widespread use of spices for cooking did not get to Europe until the late Middle Ages. At the end of the 14<sup>th</sup> century a Parisian housewife could buy spiced sauces from professional saucemakers.

By the 17<sup>th</sup> century spices were cheaper and more widely available. Today spices are an accepted part of our daily lives.

Spices had been used for thousands of years throughout Asia, Arabia and the Mediterranean region. Once valued as highly as gold, they were much sought after in the West and the quest for spices influenced the course of history dramatically. Countries vied to win control over their production, navigators set sail to discover new sea routes to the East, which eventually allowed small nations to build large empires. Although the days of warring over spices are now over, spices still play a significant role in the economies of many countries.

The United States is now the largest importer of spices in the world, followed by Germany, Japan and France. Singapore is the largest trading center for spices, notably pepper, vanilla, cinnamon, cloves, anise, coriander and cumin. Hong Kong is a significant trading center too, especially for ginger, chilies and cassia from China.

## U.S. Spice Supply

### Spices As Part of U.S. Agricultural Trade

As indicated earlier, the U.S. is the largest net importer of spices. The United States imports more than 40 primary types of spices each year. Seven major types (vanilla beans, capsicums, black and white pepper, sesame seed, cinnamon and cassia, mustard, and origanum) account for more than 75 percent of the total annual value of spice imports. While more than 50 countries regularly supply the United States with spices, 5 of these countries (Indonesia, Mexico, India, Canada, and China) regularly account for one-half of the annual value of spice imports. Three countries (India, Spain, and Morocco) regularly account for two-thirds of the value of spice oleoresin imports.

Vanilla beans rank as the leading U.S. spice import in terms of value. The trend toward natural flavoring in food products continues to keep demand for vanilla beans steady, despite strong competition from synthetic flavorings such as vanillin. Vanilla continues as the most popular ice cream flavor in the U.S. and accounts for nearly one-third of all ice cream sales. Ice cream is the largest use for natural vanilla, representing about one-half of the market. Legislation requiring the labeling of ice cream products to show whether real vanilla or artificial vanilla has been used has also aided real vanilla sales. U.S. imports of vanilla beans were valued at an annual average of \$61.6 million for 1990-94.

The average annual volume and value of spice and spice oleoresin imports into the United States (1990-94) was 530 million pounds and \$374 million. In import value terms, however, spices remain small compared with import values for the major tropical commodities – coffee, sugar, bananas, and cocoa. For 1994, the imports of these commodities totaled \$5.72 billion, accounting for 21 percent of the total value of agricultural imports. Coffee imports lead the group with imports values at \$2.49 billion, followed by sugar, \$1.13 billion ; bananas, \$1.07 billion; and cocoa, \$1.03 billion.

How many spices do you have or use on a daily basis?

## Teaching About Spices

Here are some ideas to use to teach about spices.

**Play the Spice Alphabet Game** – Have students come up with spice names to match the letters of the alphabet. A useful resource for this is *The Spice Alphabet Book; herbs, spices, and other natural flavors.* By Jerry Pallotta

For older students have them come up with a spice and then have them tell what part of the plant the spice comes from as well as where it is grown. Older students can do research in the individual spices and find recipes that you might try as part of a multicultural activity.

**What spice did you eat for breakfast?** - Ask students what they had for breakfast and if it had any spices. Remember a lot of cereals today have vanilla or cinnamon along with other flavorings.

**Use of spices** - Find recipes that call for spices. I'm attaching several recipes that I have used. If time allows have students make Cinnamon Applesauce Ornaments or Spice Ornaments. In the fall of the year Gingerbread is always a welcome treat. Make Gingerbread cookies or ornaments with the students and do the Gingerbread Man Unit activities included in the Website references.

**Identify Plant parts** - Go to the local grocery stores and see how many of the spices you can find. Have students bring in spices from home. Older students can also talk about how the spices are used by their families.

Have students do research to find out what part of the plant was used to get the spice they ate. The book *Flavor Foods: Spices & Herbs* by Meridith Sayles Hughes might be useful in this activity. They begin at the top of the plant with the spices made from flowers- cloves, capers, and saffron – and work to the fruits such as pepper and vanilla. The spices made from leaves are basil, rosemary, mint, and parsley, then the bark which is cinnamon. Roots and rhizomes include horseradish, licorice, ginger, and turmeric. And finally the seeds such as mustard, dill, cumin, and caraway and the seed nutmeg and its seed coat, mace.

## Interesting facts

Clove stems are a source of valuable oil that contains a chemical substance called eugenol. Eugenol has many uses. It is a painkiller for toothaches and is also found in mouthwashes and perfumes. What else is eugenol used for?

Saffron is the stigma of a crocus flower that blooms only for two weeks. Each purple flower contains only three of the tiny, reddish-yellow strands. A pound of saffron consists of 200,000 stigmas. Saffron is the rarest and most expensive of the spices. The saffron robes of Buddhist monks are dyed with saffron. Saffron is used to color Indian rice dishes.

Vanilla is the only member of the extensive family of orchids – the largest plant family in the world- that people use as food.

Chocolate might also be considered a spice since it comes from the cacao tree, native to Central America.

Leaves used as spices are generally plants referred to as herbs when they are used fresh.

Bark is the outermost part of a tree. Cinnamon is the bark of tropical evergreen trees of the laurel family. “True” cinnamon, also called Ceylon cinnamon, is native to Sri Lanka (formerly Ceylon), and island off the southern coast of India. Cassia, or Chinese cinnamon, grows throughout Southeast Asia. Its bark is slightly darker in color and subtly different in taste.

Rhizomes are underground stems that sprout roots and shoots. Both ginger and turmeric grow from rhizomes. Horseradish and licorice, are roots –underground structures through which the plant draws nourishment from the soil.

Many people around the world enjoy ginger preserved in syrup or crystallized in sugar, as a seasoning for baked goods, or in beverages such as ginger ale, ginger beer, and ginger tea.

Horseradish is neither a horse nor a radish, it is a member of the mustard family.

Licorice candy used to be made exclusively from the hard, dried, yellow root of *Glycyrrhiza glabra*, a member of the pea family. It was discovered in the tombs of Egyptian pharaohs, including that of Tutankhamen.

Another important spice derived from a plant’s seed is actually two spices in one –the nutmeg which is the seed kernel, and mace, which is the lacy aril (seed coat). The two spices grow on a tree native to the Molucca Islands.

Additional resources are included.

## Spice Websites

<http://www.nationalgeographic.com/xpeditions/lessons/16/gk2/spices.html> - Spices of the World Lesson Plan

<http://www.nationalgeographic.com/xpeditions/activities/16/spiceworld.html> - Spice World Lesson

<http://www.nationalgeographic.com/xpeditions/lessons/16/g68/ingredient.html> - Spice Geography

<http://nabataea.net/stime.html> - Spice Route Time chart

<http://www.learner.org/exhibits/renaissance/spicetrade/> - Become a Spice Trader

<http://www.spiceadvice.com/encyclopedia/index.html> - Spice Advice Encyclopedia

[http://www.uni-graz.at/~katzer/engl/spice\\_large.html](http://www.uni-graz.at/~katzer/engl/spice_large.html) - Alphabetic Spice Index

Ginger bread sites:

<http://www.topmarks.co.uk/stories/gingerbread.htm> - the Traditional Gingerbread Man story

<http://www.kidzone.ws/thematic/gingerbread/index.htm> - Gingerbread Man Theme Unit

<http://www.storyit.com/Classics/Stories/gingerbreadman5.htm> - Interactive Gingerbread Man story

<http://www.dltk-teach.com/minibooks/gingerbread-man/index.htm> - Mini book unit

Other Spice websites

<http://www.ers.usda.gov/Publications/AIB709/> - The Spice Market in the U.S.

<http://unitproj.library.ucla.edu/biomed/spice/index.cfm?displayID=20> – UCLA Biomedical Library: History & Special Collections - Spices

<http://depts.washington.edu/aog/spices2.html> - Microbial Organic Geochemistry at the University of Washington

<http://spectre.nmsu.edu/dept/welcome.html?t=chile> - The Chile Pepper Institute, New Mexico State University

<http://www.fiery-foods.com/dave/drying.asp> - Information about Drying Chiles

<http://www.apinchof.com/allspice1007.html> - All About Allspice

<http://www.apinchof.com/anise1081.htm> - All About Anise

<http://www.apinchof.com/cayenne1039.html> - All About Cayenne Pepper

<http://www.apinchof.com/chipotle1022.html> - All About Smokin' Chipotles

<http://www.apinchof.com/cloves1074.html> - All About Cloves

<http://www.apinchof.com/crushred1048.html> - All About Crushed Red Pepper

<http://www.apinchof.com/pepper1060.html> - All About Peppercorns

<http://www.apinchof.com/fenugreek1064.html> - All About Fenugreek

<http://www.apinchof.com/ginger1021.html> - All About Ginger

<http://www.apinchof.com/cumin1043.html> - All About Cumin

<http://www.apinchof.com/mustard1053.html> - All About Mustard

<http://www.apinchof.com/nutmeg1025.html> - All About Nutmeg

<http://www.apinchof.com/mace1097.htm> - All About Mace

<http://www.apinchof.com/paprika1019.html> - All About Paprika

<http://www.apinchof.com/poppy1036.html> - All About Poppy Seeds

<http://www.apinchof.com/saffron1055.html> - All About Saffron

<http://www.apinchof.com/sesame1015.html> - All About Sesame Seeds

<http://www.apinchof.com/cumin1043.html> - All About Cumin

<http://www.apinchof.com/coriander1042.html> -All About Coriander

<http://www.apinchof.com/curry1008.html> - All About Curry Powder

<http://www.apinchof.com/vanilla1057.html> - All About Vanilla

<http://www.apinchof.com/tahini1083.htm> - All About Tahini

### **A Timeline of Spice History**

5000 BC	MiddleEast	Evidence of spices being used
3000 BC	Egypt	Use of spices in embalming

2000 BC	Arabia	Monopoly of spice trade (for 2000+ years)
1500	Egypt	Queen Hathepshut imports spices from Punt (East Africa)
1000	Palestine	Use of spices in anointing oil and incenses
992	Arabia	Queen of Sheba brings spices to King Solomon
500	Greece	Importance of spices in diet as medicine
200	China	Cloves imported from Spice Islands
1 <sup>st</sup> Century AD	Rome	Extravagant use of spices
	Rome	Developed sea-trade with India, lasted 3 centuries
500	Europe	Spices form Moluccan Islands
	Arabia	Controlled spice trade until Middle Ages
1100	Europe	Crusades stimulated interest in spices
1200	England	Guild of Pepperers established, merged with Spicers
1250	Europe	Spices regarded as aphrodisiacs
1300	Italy	Marco Polo's book stimulates interest in Oriental spices
1350	Europe	Spices used as medicines & fumigants during Black Death
	Italy	Venice and Genoa control spice trade
1400	England	Spicers' Guild became Grocer's Company
	Portugal	Henry the Navigator stimulates sea discoveries
1450	Turkey	Controls spices, forced other sea route discoveries
	Spain	Columbus finds spices in Caribbean islands.
1500	Portugal	Controls spice trade after Vasco da Gama sails to India
1521	Spain	Magellan's expedition circumnavigates the globe
	Italy	Venice's spice wealth helps finance Renaissance
1550	England	Drake Circumnavigates globe; imports spices into England
1600	Holland	Gradually wrests Spice Islands from Portugal



	Spain	Competes for spice trade
1650	Holland	Controls spice trade from East Indies
1700	Ceylon	Coffee trees planted; later, grown in Brazil
	Europe	Coffee, chocolate and tobacco favored over spices
1750	France	Peter Poivre brings nutmegs and cloves to Mauritius and Reunion
	Holland	Destroys spices to try and create price increases
1800	England	Take over Spice Islands, briefly
	America	Pepper trade with East Indies make millionaires in Salem, MA
1850	Europe	Spices are of decreasing significance
		Sugar becomes favored flavor
1900	World	Dietary fashions change; spices decrease in importance

# History of The Spice Routes

## **The Trade in Spices**

The Spice Routes is the name given to the network of sea routes that link the East with the West. They stretch from the west coast of Japan, through the islands of Indonesia, around India to the lands of the Middle East – and from there, across the Mediterranean to Europe. It is a distance of over 15,000 kilometers and, even today, is no easy journey.

## **History of Spice Routes**

From our very earliest history, people have traveled the Spice Routes. At first they probably only ventured short distances from their home ports but over the centuries their ships sailed further and further across the oceans. They braved treacherous seas and a possibly hostile reception on arrival in an unknown land. These journeys were not undertaken purely in the spirit of adventure – the driving force behind them was trade. The Spice Routes were, and still are, first and foremost trade routes.

## **How did spice routes develop?**

Trade is a central part of our lives. When we buy something we are trading, exchanging one item (usually money) for another. However, our purchase is the final link in a long chain of buyers and sellers: from the supplier of raw materials, to the manufacturer, to the wholesaler, to the shop – and if the goods we buy come from abroad there may well be several stages in between. The journey of the goods between all these links in the chain is called a trade route (in fact, the word ‘trade’ derives from a term meaning a track or a course).

## **Links were created**

In the case of the Spice routes the links were formed by traders buying and selling goods from port to port. The principal and most profitable goods they traded in were spices – giving the routes their name.

## **Goods were exchanged**

As early as 2000BC, spices such as cinnamon from Sri Lanka and cassia from China found their way along the spice routes to the Middle East. Other goods exchanged hands too – cargoes of ivory, silk, porcelain, metals and dazzling gemstones brought great profits to the traders who were prepared to risk the dangerous sea journeys.

## **Knowledge was shared**

But precious goods were not the only things to be exchanged by the traders. Perhaps more important was the exchange of knowledge: knowledge of new peoples and their religions, languages, artistic and scientific skills. The ports along the Spice Routes acted as melting pots for ideas and information. With every ship that swept out with a cargo of valuables on board, fresh knowledge was carried over the seas to the ship’s next port of call.

## **The demand for spices**

Today, it seems strange that the demand for spices should be one of the central causes for such large scale trade across such massive distances. We probably think of them simply

as flavoring for food. Yet, the word 'spice' comes from the Latin 'species', which means an item of special value, as compared to ordinary articles of trade.

### **Origins and Geography**

The great distances are easy to explain: many of the important spices grew only in the tropical East, from China south to Indonesia, southern India and Sri Lanka. In particular, they grew in the Moluccas or, as they are better known, the Spice Islands. These are mountainous islands strung out like jewels in the Pacific Ocean between Sulawesi (Celebes) and New Guinea. From here came the fragrant spices of cloves and nutmeg which grew nowhere else in the world. To reach the spice markets found across Asia and Europe, The spices had to be transported thousands of kilometers over the seas.

### **The Spread of Demand**

How people came to know and value these spices which grew so far away is an impossible question to answer exactly. As trading links from Indonesia fanned out through south and central Asia, so they met with links that spread from the Middle East and the north. Goods were exchanged and the traders would return to their homeland carrying the beautifully scented, exotic species. Perhaps it was their strangeness and rarity that led great medicinal and spiritual values to be attributed to them.

### **Increasing Uses**

From the dawn of civilization, spices were burned as incense in religious ceremonies, purifying the air and carrying the prayers of people heavenward to their gods. They were also added to healing ointments and drunk as antidotes to poisons. To hide the many household smells, people burned spices daily in their homes. They were used as cooking ingredients very early on – not only to add flavor, but also to make the food, which often far from fresh, palatable, particularly in hot climates.

# Pizza & Spices

Spices come from the leaf, seed, bark, bud, root, or flower of certain plants, most of which grow in tropical climates. The term *herb* is often used in referring to mild leafy spices.

The main spices used in pizza sauce are herbs that come from the mint family, which includes oregano, basil, thyme, marjoram, savory, sage, and mint. Also finding use in pizza sauce are anise-flavored spices, comprised of fennel seed, tarragon, and anise seed.

## PIZZA SPICE RANKINGS

Tied for first place, the two most important and popular spices for pizza sauce are *oregano* and *basil*. Many recipes use them in equal proportion.

Placing a distant second, the next three most popular spices are fennel seed, parsley, and bay leaf.

In third place are a potpourri of also-rans, which include thyme, marjoram, paprika, tarragon, savory, anise, sage, and rosemary.

Of course there are numerous other spices, many of which could impart a unique flavor to pizza sauce. The easiest way to get ideas is to visit the spice rack of a well-stocked deli or grocery store. Names that would probably show the most promise are caraway seed, celery seed, chervil, cinnamon, coriander seed, cilantro, cumin seed, dill seed, mint, and mustard powder.

We'll discuss the five most common spices in pizza sauce—oregano, basil, fennel seed, parsley, and bay leaf.

## OREGANO

Along with basil, oregano—also known as origan and oreganum—is by far the most popular pizza spice. It's a member of the mint family and has a piney-minty aroma and an assertive, pleasantly bitter flavor. It comes from small leaves about 1/2 inch to 1 inch long, olive-drab on top side and purplish underneath.

There are two groups: Mediterranean and Mexican. The Mediterranean group includes Greek, Turkish, and Italian varieties. Greek and Turkish versions have a distinctive flavor and "piney" aroma that many pizzeria owners prefer. Roman and Sicilian (i.e., Italian) varieties are milder, but some pizzerias prefer that. Mexican oregano—which, botanically speaking, is not true oregano—is mainly used in chili and Mexican dishes. However, some pizzeria operators swear by it for pizza

sauce. Which is best? It's the one that gives the flavor your customers prefer most.

## **BASIL**

Also known as sweet basil, it's tied with oregano as the most popular pizza spice. In fact, some traditional recipes use basil only, no oregano. It's a member of the mint family and has a sweetish flavor, not as strong or bitter as oregano. It comes from a bright green leaf, about 2 inches long.

There are several varieties, including imported and domestic (U.S. grown). Some people consider French basil to be the finest imported variety. Domestic basil is excellent also, with California stock being considered the best by some folks.

## **FENNEL SEED**

Although a member of the parsley family, fennel has a delightful, mild anise-like flavor. It's a common spice in Italian sausage. When added to pizza sauce in small amounts it can impart a pleasant, distinctive aroma and taste. It's imported from Egypt, India, and Argentina. Indian fennel seed is light colored; Argentine is dark. Use it in ground form.

## **PARSLEY**

Being mild flavored, parsley must be used in relatively large amounts to affect a flavor change. Used in small amounts it adds a look of "fresh herbs" to a sauce without greatly changing the flavor. Parsley comes in two forms: curly moss leaf and flat leaf, also known as Italian parsley. The flat variety has more flavor.

## **BAY LEAF**

Also called laurel, bay leaf comes in leaves about 3 inches long. It has a distinctive pungent flavor. Because it mostly comes in whole leaf form it's mainly used in cooked sauces where it can be removed afterward. It comes from Turkey, Greece, Portugal, and Yugoslavia.

## **SUBSTITUTE SPICES FOR TESTING**

As a partial substitute for basil or oregano, try other members of the mint family—namely, marjoram, thyme, savory, or sage. As a complement to or substitute for fennel seed, try anise seed or tarragon. As a substitute for bay leaf, try rosemary. And as a substitute for parsley, try chervil, celery seed or cilantro leaf.

## **PURCHASING, STORAGE, USAGE**

Herbs, or leafy spices, can be purchased three basic ways: fresh, frozen, and dry. Most pizzerias use the dry form for pizza sauce. However fresh and frozen herbs offer an opportunity for creating a

unique flavor profile. For example, many people feel that the flavor of fresh basil is distinctly superior to that of dried basil. Basil is domestically grown, so there's a fairly plentiful supply of the product. An option (albeit unfeasible for most pizzerias) is to grow it in a greenhouse or hydroponic garden. To preserve large amounts, basil leaves can be pureed in a blender, mixed with a little vegetable oil to form a paste, and then kept refrigerated or, for longer periods, frozen.

Another plentiful fresh herb is parsley. If you're using the dried form, consider testing the fresh variety to see if it improves flavor. When substituting fresh herbs for dry, the general rule is to double the portion.

There are companies that grow herbs in greenhouses and ship them frozen in whole, chopped, and pureed forms. The product flavor in many cases is very good, making it an acceptable substitute for fresh herb. A couple such suppliers are Garden Herbs (800-388-9397) and SupHerb Farms (209-664-2222 and 800-787-4372).

When purchasing dry herbs, buy from a supplier who can deliver the freshest goods. Stock that sits a long time in a warehouse loses flavor and aroma. If possible, find an herb wholesaler and try to get what's known as "freshly dried herbs."

Most dry herbs come in both whole leaf and ground forms. The whole leaf form may be a whole leaf, as with bay leaf, or crushed into pieces or flakes, as with oregano. Ground herb is a powder. Since the finer an herb is ground, the more aroma it loses, it's usually best to go with whole or crushed rather than ground, as whole herbs retain flavor longer in storage.

Dry spices come packaged in many sizes, with 1 oz, 4 oz, 1 lb, 6 lb, and 10 lb packages being most common. To save money some pizzeria owners buy large quantities that last 6 to 12 months. For some goods that might be a wise practice but for spices it's foolish. Spice flavor and aroma comes from volatile oils that dissipate over time. Dissipation is speeded-up by moisture and heat. For best quality, *buy only what will be used within a month.*

For pizzerias that don't want to stock and measure individual spices there are companies that sell pre-mixed spices. They offer generic blends and also will custom mix your formula. The spices are packed in airtight bags and can be portioned for one batch of sauce. A bag contains everything but the tomatoes.

To retard flavor loss, store dry spices in a cool, dry place in airtight, light-proof containers. Or, for long periods, freeze spices in a tightly

sealed moisture-proof bag or container. In short, minimize contact with air, moisture, and heat.

## Apple – Cinnamon Ornaments

### Ingredients needed

4 oz. ground cinnamon  
10 tbsp. applesauce

Combine cinnamon with applesauce. Roll out and cut with a cookie cutter. Pierce with a hole for hanging. Bake on an ungreased cookie sheet at 200 degrees for 20 to 30 minutes. Watch to ensure that edges don't curl. Makes about 12 small ornaments. Very fragrant but definitely NOT EDIBLE (they aren't toxic, they just don't taste good).



# Applesauce Spice Ornaments

5 days for drying and 1 hour preparation

3/4 cup [ground cinnamon](#)

1 tablespoon [allspice](#)

2 tablespoons [ground cloves](#)

1 tablespoon [nutmeg](#)

1 cup [applesauce](#)

1. Combine spices.
2. Add applesauce.
3. Roll dough onto ungreased cookie sheet to 1/4-inch thickness.
4. Cut into desired shapes with cookie cutters.
5. Remove excess dough and repeat process on other cookie sheets.
6. Make a hole in top of each shape.
7. Allow to dry for 5 days.
8. Tie ribbon or yarn through hole.
9. May be decorated with acrylic paint.

# Gingerbread Cookies

- 2/3 cup shortening
- 1/2 cup brown sugar, packed
- 1 tsp cinnamon
- 1/4 tsp ground cloves
- 2 tsp ground ginger
- pinch salt
- 3/4 cup molasses
- 1 egg
- 3 cups flour
- 1/2 tsp baking powder
- 1 tsp baking soda



Cream together first 6 ingredients. Add egg and mix. Add molasses and mix again.

Mix together flour, baking powder and baking soda in a separate bowl. Sift. Add to the creamed mixture and stir until well blended. Chill 1 hour.

Preheat oven to 375 F. Roll out dough 1/4 at a time to 1/8" thickness or slightly thicker on a lightly floured board. Cut with a cookie cutter and transfer to a greased (or non stick) cookie sheet.

Repeat with remaining dough. Before baking, decorate with raisins as you like.

Place in oven for 8 - 10 minutes.

Cool on a wire rack

Decorate with icing, m&m's, chocolate chips or any other items you wish.

# Ice Cream In A Bag

## MATERIALS

- 🍷  $\frac{1}{4}$  Cup sugar
- 🍷  $\frac{1}{2}$  Teaspoon vanilla
- 🍷 1 Cup milk
- 🍷 1 Cup half & half
- 🍷 Crushed ice (1 bag of ice will freeze three bags of ice cream)
- 🍷 1 Cup rock salt (approximately 8 cups per 5 lbs)
- 🍷 1 quart-size and 1 gallon-size Ziploc freezer bags
- 🍷 Duct tape
- 🍷 Bath towel



Put the milk, whipping cream, sugar and vanilla in the 1 quart freezer bag and seal. For security, fold a piece of duct tape over the seal.

Place the bag with the ingredients inside the gallon-size freezer bag.

Pack the larger bag with crushed ice around the smaller bag. Pour  $\frac{3}{4}$  to 1 cup of salt evenly over the ice.

Seal the outer bag. Wrap both in a towel and shake for 10 minutes. Open the outer bag and remove the inner bag with the ingredients. Wipe off the bag in order to keep the salt water from getting into the ice cream.

Cut the top off and spoon into cups. Serve plain or top with nuts, coconut or fruit.

## ENJOY!

This unit was developed by Mary Beth Bennett in 2007.

Contact information:

Mary Beth Bennett  
Berkeley County Extension Agent  
400 West Stephen Street, Suite 302  
Martinsburg, WV 25401  
Telephone 304-264-1936  
Fax 304-264-2153  
Email: [MBBennett@mail.wvu.edu](mailto:MBBennett@mail.wvu.edu)