

Where Does Your Candy Come From?

*A lesson from the New Jersey Agricultural Society
Learning Through Gardening program*

OVERVIEW: Pair your Valentine celebrations with some real learning by having your students investigate what their candy is made of and where it comes from. Your students no doubt will be surprised to learn that although their chocolate bar looks nothing like the green plant on the windowsill, almost all its ingredients come from plants! Encourage your students to trace the source of sugar to sugar beets in the Midwest and sugar cane in Louisiana, and chocolate to cacao beans in the rain forest. They will appreciate plants more when they take those sweet bites.



OBJECTIVE: The student will be able to:

- Describe how most of the ingredients in candy come from plants
- Track one or more ingredients in a piece of candy back to its agricultural source.

GRADES: K-5 Kindergarteners and first graders as a class can track the source of chocolate to cacao beans in the rain forest. Second and third graders can work in small groups to investigate the source of one or more ingredients in a piece of candy. Fourth and fifth graders in small groups can divide the ingredients in a piece of candy and each research the source of one. All students will enjoy sampling the candy at the end of the lesson!

CAUTION: This lesson involves the handling and eating of various candy products. Carefully check your students' food allergies and do not use a candy that contains a product (such as peanuts) to which a student may be allergic.

MATERIALS:

The New Jersey Agricultural Society's power point presentation *Where Does Your Candy Come From?* available to download from the Learning Through Gardening Teacher Tool Box: <http://www.njagsociety.org/teaching-social-studies-in-the-garden.html>.

For grades 3-5: *Candy Investigation Worksheet* copy for each student

Samples of the candy you will investigate for the source of its ingredients.

If you are working with kindergarteners or first graders, you might want to limit your investigation to cocoa or cocoa and sugar. For higher grades, you should pick the number of ingredients to investigate based on the age and capabilities of the students. Here is an example of candies and their ingredients to be sampled and researched:

Hershey's chocolate bar

chocolate
sugar
soybeans

Jellybeans

sugar
corn syrup
pectin (apple)

Reese's peanut butter cups

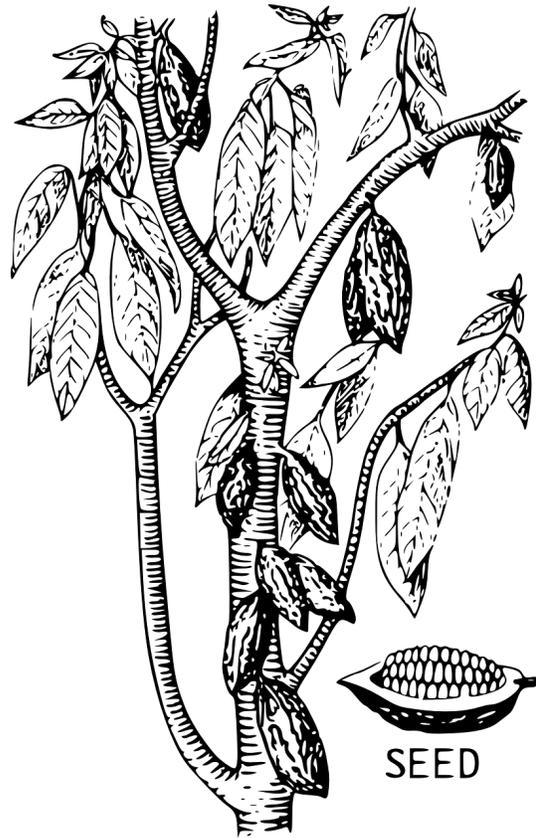
sugar
cocoa butter
peanuts

Conversation hearts

sugar
corn starch
corn syrup

Junior mints

sugar
chocolate
peppermint oil – use mint leaves



Older students may choose to bring in a sample of the candy they want to research and select ingredients to investigate by reading the label.

Other Optional Resources:

Raw cacao beans

Read-aloud books related to candy research:

Chocolate, A Sweet History, by Sandra Markle

From Cacao Bean to Chocolate, by Ali Mitgutsch

How Monkeys Make Chocolate, by Adrian Forsyth

The Story of Chocolate, by C.J. Polin

Online videos related to candy research:

How Sugar is Made: www.sucrose.com

How Chocolate is Made: www.kids-cooking-activities.com/how-is-chocolate-made

Sugar Beets: How to Make Everything, Thanksgiving Dinner :

<https://www.youtube.com/watch?v=ZVxPkv0r7JY>

Illinois Agriculture in the Classroom *Where Candy Comes From Resource Guide*,

<http://www.agintheclassroom.org/TeacherResource>

PROCEDURE:

Hold up a chocolate bar and ask students if they know what it is made of. Ask if they know where those ingredients come from. Tell them that you are going to become candy researchers who will learn the ingredients of your favorite candy and where they come from.

Kindergarten and first grade: Show the power point presentation *Where Does Your Candy Come From?* Explain the meaning of the word 'ingredient.' Show the students where to find the list of ingredients on the candy wrapper. Read some ingredients the students will recognize, such as sugar, milk, chocolate, cocoa butter, and write them on the board.

Optional: Read one of the books on chocolate production or show a video on YouTube of the process of making chocolate. Show the students some raw cacao beans and ask, do they look like chocolate?

Second through fifth grade: Show the power point presentation *Where Does Your Candy Come From?* Make sure the students understand the meaning of the word 'ingredient.' Show students where to find the list of ingredients on the candy wrapper.

Divide the students into small groups, each with a different type of candy. You can either ask each group to choose one or more ingredients (depending on the students' age and capabilities) or assign ingredients to the groups. Tell students they will research what the ingredient is made of and where it comes from. Students can use reference books from the library or the Internet for their research. Students use the *Candy Investigation Worksheet* to record the information they find.

Once the students have completed their research, have the small groups report their findings to the whole class. Discuss the results and ask if the students were surprised by any of them.

Students eat the candy.

EVALUATION:

Completed Candy Investigation Worksheet.
Report to class on research findings.

EXTENSIONS:

Older students can use the information on their *Candy Investigation Worksheets* to write a brief report on their research.

Provide samples of the candy ingredients for students to view and sample. For example, those researching a chocolate bar could see and sample cocoa powder, sugar, and edamame (soy) beans. Have each student bring one ingredient from home for this activity, or ask your homeroom parents to arrange the activity.



New Jersey Learning Standards

Science: K: LS1.C 1: LS1.A 2:LS2.A 3:LS1.B 4:LS1.A 5:LS2.A

Social Studies: K-2:6.1.2.Geo.HE.4, 6.1.2.EconEM.1,2; 6.1.2.EconNE.1
6.1.2.EconGE.1, 2
3-5: 6.1.5.GeoHE.2, 6.1.5.EconEM.1, 2; 6.1.5.EconGE.2, 3

English Language Arts: 3:W.3.2.A-D, W.3.4,8 4:W.4.2.A-E, W.4.4,8
5: W.5.2.A-E; W.5.4,8

Name _____

Candy Investigation Worksheet

The candy I researched is _____

The ingredient I researched is _____

My ingredient is made from _____

which can be found in _____
(what parts of the world.)

Some other things I learned about my candy ingredient are:

1. _____

2. _____

3. _____
