



# Be a Food Detective

## Overview

Students will explore the exciting area of food and nutrition and answer specific questions about prepared food products, such as, what a food is made from, the source of its ingredients, and how the ingredients were grown.

## Suggested Grade Level

9 - 12

## Estimated Time

45 minutes and/or options for homework assignments

## Objectives

Students will be able to:

1. identify specific ingredients of prepared food products, and explain where and how these products are grown.
2. demonstrate an understanding of foods they eat.

## Materials

1. Provide a collection of food labels and/or have students bring some to class.
2. Activity Sheet A

## Background

The food that is available in a supermarket comes from all over the world. Historically, food was produced and distributed locally. Now, food products in supermarkets could have been grown thousands of miles from where they are purchased and consumed.

Often when looking at a packaged food product, it is hard to determine where the ingredients came from. You have to be a food detective to determine the source of your food. There are several clues that may help you in your search.

Start with the food label. The label provides information on the ingredients of the food and should provide the name and location of the product manufacturer or distributor. If the food was produced in another country, for example Italy, the label may say “Product of Italy.” This holds true for most countries. If the ingredients came from other countries and the food product was manufactured in the United States, the label may not tell the source of each ingredient. Fruits and

vegetables are generally seasonal. Although some produce items are available all year, they may be more expensive and of lower quality when out-of-season. By changing the source of the fruit or vegetable, the season for the item at the supermarket can be extended. For example, Chile provides fresh grapes during the off-season in the United States. Chile is in the Southern Hemisphere and has seasons opposite ours: when it is winter here, it is summer there. Controlled environments are also used to extend the season of some fruits and vegetables. Apples, for example, can be stored in low oxygen, high carbon dioxide environment and remain crisp and edible for the whole year. Also, some vegetables such as tomatoes, lettuce, and cucumbers are grown in greenhouses during the winter.

<b>Examples of Fruits and Vegetables available in each Season in the United States</b>			
<b>Winter</b>	<b>Spring</b>	<b>Summer</b>	<b>Fall</b>
<b>Avocados</b> <b>Brussels sprouts</b> <b>Cabbage</b> <b>Cauliflower</b> <b>Grapefruit</b> <b>Potatoes</b> <b>Parsnips</b> <b>Oranges</b>	<b>Artichokes</b> <b>Asparagus</b> <b>Broccoli</b> <b>Lettuce</b> <b>Mushrooms</b> <b>Papayas</b> <b>Peas</b> <b>Pineapples</b> <b>Radishes</b> <b>Strawberries</b> <b>Sweet Potatoes</b>	<b>Beans</b> <b>Apricots</b> <b>Beets</b> <b>Blueberries</b> <b>Lemons</b> <b>Limes</b> <b>Corn</b> <b>Cherries</b> <b>Peaches</b> <b>Peppers</b> <b>Plums</b> <b>Summer squash</b> <b>Tomatoes</b> <b>Zucchini squash</b>	<b>Apples</b> <b>Grapes</b> <b>Melons</b> <b>Pears</b> <b>Pumpkins</b> <b>Squash</b>

In the produce department where food generally does not have labels, you can ask the produce manager about the source of particular items. With prepared foods, it is often hard to determine the sources of all the ingredients. For example, chocolate is in many products and it is produced from the seedpods of cacao trees grown in many tropical environments.

It is interesting to see how food is produced and what is involved in getting food from the point of production to the table.

## Activity

1. Break up class into small groups of 2 - 3.
2. Distribute labels and Activity Sheet A to each group.
3. Review the background information and proceed with first exercise on the activity sheet as a group discussion.
4. Have students investigate this activity further or move on to the additional extension activities on page S-2.
5. Have students share their findings with their classmates.

Have students take a prepared food product and find out what the food is made from, the source of the ingredients, and how those ingredients were grown. Look on the label for clues that may help them discover where in the world the food came from. Fill in the Food Detective Ingredient Chart with the clues they find. They can use sources from the library or the Internet to help find information about how and where food is grown.

For example: According to the label, Joe's Spaghetti Meat Sauce is made from tomatoes, beef, onions, peppers, garlic, herbs and spices. The tomatoes were grown on tomato plants. Tomato plants are grown in fields and need warm weather to make fruit and for the fruit ripen. The label shows that this sauce was manufactured in California. It is likely that the tomatoes for the sauce were grown in California.

FOOD DETECTIVE INGREDIENT CHART		
NAME OF FOOD: <i>Joe's Spaghetti Meat Sauce</i>		
INGREDIENTS (list each ingredient below)	INGREDIENT SOURCE ( <u>What</u> the ingredient comes from and <u>how</u> it is grown or produced)	INGREDIENT PLACE ( <u>Where</u> the ingredient might have been grown or produced)
<i>Tomato</i>	<i>Tomato plants grown in fields in warm weather</i>	<i>California (from the label)</i>
<i>Beef</i>	<i>Beef comes from cattle. Cattle eat grass and grain.</i>	<i>Unsure of source</i>
<i>Garlic</i>	<i>Garlic is grown as bulbs</i>	<i>California (from the label)</i>

## Extensions

1. Have students take one of the ingredients on the Food Detective Ingredient Chart, do some research and write a short story about the ingredient. Their story should include how the ingredient is grown, where it is typically grown, how it is handled and transported, other food products that contain the

ingredient, other uses for the ingredient and any interesting facts about the ingredient. (Example: corn is used as a food for people and animals. It is also used in powder, to make biodegradable plastics, as a lubricant, a sweetener, a thickener, a fuel, and cooking oil among other uses.)

2. Have students pick one ingredient on their Food Detective Ingredient Chart and make a collage, using words and pictures, of foods containing that ingredient. Again, they may need to do some snooping around to get more information.
3. Have students find a food that is produced in another country or in another part of the United States from where they live. Find out more about the place where the food comes from. When they have found all the clues, share the information with their classmates and families.

*Adapted from "Look Inside Your Supermarket: ShopRite Supermarket Tours," prepared by Janet E. Hawkes Consulting*





*Now that you have found clues to the mystery of where some food comes from, try some of the activities below and research them a bit further.*

1. Take one of the ingredients on the Food Detective Ingredient Chart and find out more about it. Do some research and write a short story about the ingredient. Your story should include how the ingredient is grown, where it is typically grown, how it is handled and transported, other food products that contain the ingredient, other uses for the ingredient and any interesting facts about the ingredient. (Example: corn is used as a food for people and animals. It is also used in powder, to make biodegradable plastic, as a lubricant, a sweetener, a thickener, a fuel, and cooking oil among other uses.)
2. Pick one ingredient on your Food Detective Ingredient Chart and make a collage, using words and pictures, of foods containing that ingredient. Again, you may need to do some snooping around to get more information.
3. Find a food that is produced in another country or in another part of the United States from where you live. Find out more about the place where the food comes from. When you have found all the clues, share the information with your classmates and family. Now you are a real food detective.