

# Where Are Fruits and Veggies From?

3-5

SS.2.2

## Objectives

**Students will be able to:**

- Identify fruits and vegetables
- Name the steps of the farming process.
- Identify the three basic components needed to grow food.

## Standards Met

- **1h.** Consider the interactions among nutrition science, ecosystems, agriculture, and social systems that affect health, including local, national, and global perspectives.
- **3.2.2.** Discuss the ways in which physical geography, including climate, influenced how the local Indian nations adapted to their natural environment (e.g., how they obtained *food*, clothing, tools).

## Overview of Fruits and Vegetables

**Did you know?** Fruits and veggies are a great source of vitamins and minerals!

### Healthy People 2020 Goals:

- Increase the variety and contribution of vegetables to the diets of the population aged 2 years and older
- Increase the contribution of total vegetables to the diets of the population aged 2 years and older

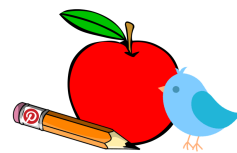
Fruits and vegetables provide us with vitamins, minerals, fiber and other powerful nutrients that help us stay full for longer and avoid overeating. Fruits and vegetables are also rich in antioxidants, which are substances that may help reduce the risk of developing chronic diseases such as diabetes, heart disease and cancer.

Exactly how many fruits and vegetables should we have in a day? Just remember the “5-A-Day” rule. Eat five servings of fruits and vegetables a day – the color way! Eating a variety of colorful fruits and vegetables will help us stay healthy and energetic.

It is important to encourage young students to increase their intake of fruits and veggies and help them understand the long-term benefits of doing so.

**For more information on fruits and veggies, go to:**

[www.mentorprojectfiu.com](http://www.mentorprojectfiu.com)



M.E.N.T.O.R. Project

USDA United States Department of Agriculture National Institute of Food and Agriculture

FIU

This material is based upon work that is supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, under award number 2015-08005-22041

# Make The Connection

## Materials

- Worksheet: Where Are Fruits and Veggies From? for Grades 3-5
- Supplemental Material: Production of Fruits and Production of Vegetables

Using the worksheet titled **“Where Are Fruits and Veggies From?” for Grades 3-5**, help students learn about the farming process and how food reaches their table.

Start by engaging your students in a discussion about fruits. Ask students what their favorite fruits are and why. You can also ask them how often they eat fruits and vegetables. After the class discussion, talk to your students about the benefits of consuming fruits and vegetables. You can talk about how fruits and veggies contain powerful nutrients such as vitamins and minerals that help us grow stronger and healthier while preventing diseases. Fruits and veggies are also high in fiber, which helps us stay full for longer and keeps our bodies running smoothly.

1

2

After the discussion, briefly explain the farming process to the students. Start by telling them that in order for the fruits and vegetables to grow they need soil, water and sunlight. The first step of farming is preparing the soil to plant the seeds. The second step is to plant the seed. The third step is to water the soil where the seed is planted. Then the plant will start to grow. After some time (it depends on what was planted), you will be able to harvest the product. Next, the product will be stored and later on packaged. The last step is delivering the product to the supermarkets so they can be bought.

Please refer to the supplemental material for more information about the farming process of fruits and vegetables.

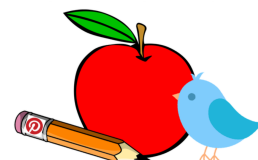
**For general information on fruits and veggies, please visit:**

[www.mentorprojectfiu.com](http://www.mentorprojectfiu.com)

Lastly, do an overview of the **“Where are Fruits and Veggies From?” worksheet for Grades 3-5**.

Explain the activity and clarify any questions the students may have.

3



M.E.N.T.O.R. Project



United States  
Department of  
Agriculture

National Institute  
of Food and  
Agriculture

**FIU**

This material is based upon work that is supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, under award number 2015-69001-23241

## Supplemental Material

### For the Teacher: Production of Fruits

#### General Production Steps

##### Planting

The first step to growing any plant based food is planting the seed in the soil. Low-growing crops such as strawberry and pineapple are usually managed in beds containing several rows, or in less formal matted rows.

##### Pruning

Pruning is the removal of parts of a plant to increase growth and fruitfulness. It is an important fruit-growing practice primarily on the first few years. The principal reasons for maintenance pruning are: (1) to permit efficient spraying and harvesting operations, (2) to maintain satisfactory light exposure for most of the leaves, and (3) to create a satisfactory balance between flowering and leaf surface.

##### Pollination

Pollination is the process when pollen is transferred from the anthers to the stigmas in the plants. This is done by insects or by movement in air. Thanks to pollination flowers become fruits.

##### Thinning

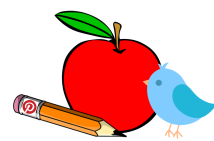
Thinning is the removal of flowers or young fruits to let the remaining fruits grow rapidly and to prevent a large crop. Thinning could be done by hand or by machines.

##### Harvesting

The proper time to harvest varies between each fruit, and it also depends on how much time it is going to spend in storage. Most fruits are harvested close to the time they are eaten.

##### Packaging

This last step is only necessary for commercial purposes. Once the fruits have been planted, pruned, pollinated, thinned, harvested, and stored, they can finally be packaged, marketed, and sold to consumers.



M.E.N.T.O.R. Project

USDA United States Department of Agriculture National Institute of Food and Agriculture

FIU

This material is based upon work that is supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, under award number 2015-68009-22491

## Supplemental Material

### For the Teacher: Production of Vegetables

#### General Production Steps

##### Planting

The first step to growing any plant based food is planting the seed in the soil. Different soil types suit different crops, but in general in temperate climates, sandy soils dry out fast but warm up quickly in the spring and are suitable for early crops, while heavy clays retain moisture better and are more suitable for late season crops.

##### Cultivating

Cultivation refers to stirring the soil between rows of vegetable plants. Whatever system is used for growing crops, cultivation follows a similar pattern: preparation of the soil by loosening it, removing weeds, adding fertilizers, sowing seeds or planting young plants, control pests, provide sufficient water.

##### Harvesting

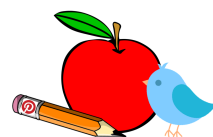
Harvesting is the period of gathering the crops. When a vegetable is harvested, it is cut off from its source of water and nourishment. The period required for vegetables to be harvested varies, but it could take from 25 to 180 days. Harvesting can be done by hand or by machines.

##### Storing

During storage, vegetables undergo different changes such as water loss, conversion of starches to sugars, conversion of sugars to starches, flavor changes, color changes, toughening, vitamin gain or loss, sprouting, rooting, softening, and decay. A large proportion of vegetables and perishable foods are lost after harvest during the storage period. These losses may be as high as thirty to fifty percent in developing countries where adequate cold storage facilities are not available. The main causes of loss include spoilage caused by moisture, molds, and micro-organisms.

##### Packaging

The product is placed in bags made of transparent film, trays or cartons overwrapped with transparent film, or mesh or paper bags.



M.E.N.T.O.R. Project

USDA United States Department of Agriculture National Institute of Food and Agriculture

FIU

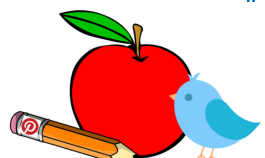
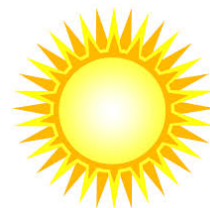
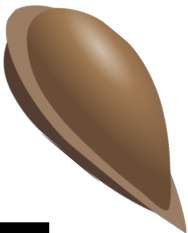
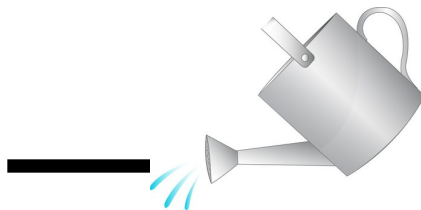
This material is based upon work that is supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, under award number 2015-69001-2041.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

# Where Are Fruits and Veggies From?

3-5

1) Number the following drawings from 1-9 to help the fruit reach your table. Remember the farming process and all the steps needed to produce fruits and veggies.



M.E.N.T.O.R. Project

USDA United States Department of Agriculture National Institute of Food and Agriculture

FIU

This material is based upon work that is supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, under award number 2015-68001-23241

# Where Are Fruits and Veggies From?

This material is based upon work that is supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, under award number 2015-69001-2324.



Name: \_\_\_\_\_ Date: \_\_\_\_\_

# Where Are Fruits and Veggies From?

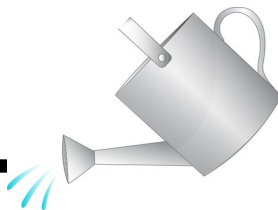
3-5

## ANSWER KEY

1) Number the following drawings from 1-9 to help the fruit reach your table. Remember the farming process and all the steps needed to produce fruits and veggies.



2

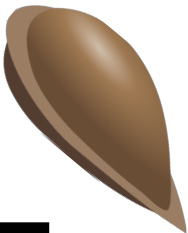


3



5

1



8



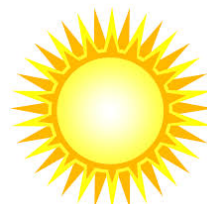
7



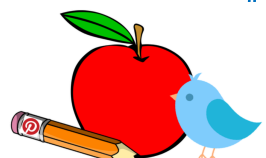
6



9



4



M.E.N.T.O.R. Project

USDA United States Department of Agriculture National Institute of Food and Agriculture

FIU

This material is based upon work that is supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, under award number 2015-68001-23241

Name: \_\_\_\_\_ Date: \_\_\_\_\_

# Where Are Fruits and Veggies From?

3-5

## ANSWER KEY

2) Select a fruit or vegetable and research its production process. Describe all the steps of the farming process of your selected fruit or vegetable.

Fruit or Vegetable: Orange.

### Farming Process:

- **Planting:** Orange trees are planted, it may take 3-4 years to bear fruit normally.

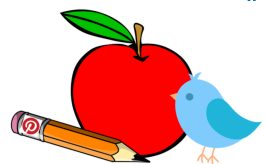
They are most likely to grow in tropical climates, between 60-84 F.

- **Pollination:** it can be done naturally by the air or bees. If not pollination can be done manually. The aim is to transfer the pollen from the stem to the pistils.

- **Thinning:** When the tree is one year old the top of the tree will be cut off.

- **Harvesting:** In Florida most oranges bloom between March and April. In Florida most of the oranges are harvested by hand. The pickers grab the oranges and dump the fruit into plastic tubs. When the tubs are full the oranges are dumped in a truck which would take the oranges to the plant.

- **Packing:** the oranges are divided into groups for further processing (juices, jams, etc.) or packed to be sold in supermarkets.



M.E.N.T.O.R. Project



United States  
Department of  
Agriculture



This material is based upon work that is supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, under award number 2015-68001-23241