



Basic Vegetable Gardening

Lesson 12: Crop Rotation and Vegetable Families

Lesson Summary: Boys and girls will learn how to rotate crops.

Boys and girls will learn:

- why it is good to rotate crops
- different vegetable families
- how to rotate crops

Time: 40 minutes

What you need:

- A drawing of the garden
- Crop rotation poster
- Paper – 1 piece for each group of 3 students
- Chalkboard or large paper for leader

Lesson Steps

1. (2 minutes) – Introduction

Review what the boys and girls learned at the last meeting.

2. (10 minutes) – Talk about crop rotation

2.1 Tell what crop rotation is. Crop rotation means to plant in one place a vegetable from a different plant family than the one that was just harvested. We do not plant a vegetable from the same plant family in the same place one season after another season.

2.2 Tell why we rotate crops. There are two main reasons to rotate crops.

1. Soil nutrition – It is important to rotate crops because different crops use different kinds of nutrients from the soil. If we plant the same kinds of vegetables in the same place, the vegetables keep taking the same nutrients from the soil. Some vegetables put nutrients into the soil. The soil will be more fertile if we rotate crops. Different crops take from and put into the soil different nutrients.
2. Pest Control – Some pests live in the soil. Different pests like different plants. Pests will be less of a problem if you rotate crops because pests will not be able to attack the same plant season after season.

2.3 Crop rotation tips:

- Do not plant leafy vegetables or fruit vegetables in the same place two seasons in a row. Vegetables in these two families are the most likely to have insect pests and get a disease.



- Keep good records so everyone knows what was planted in the garden each season. Without records it will be difficult to rotate crops from season to season.

2.4 Tell how to rotate crops. Use the poster.

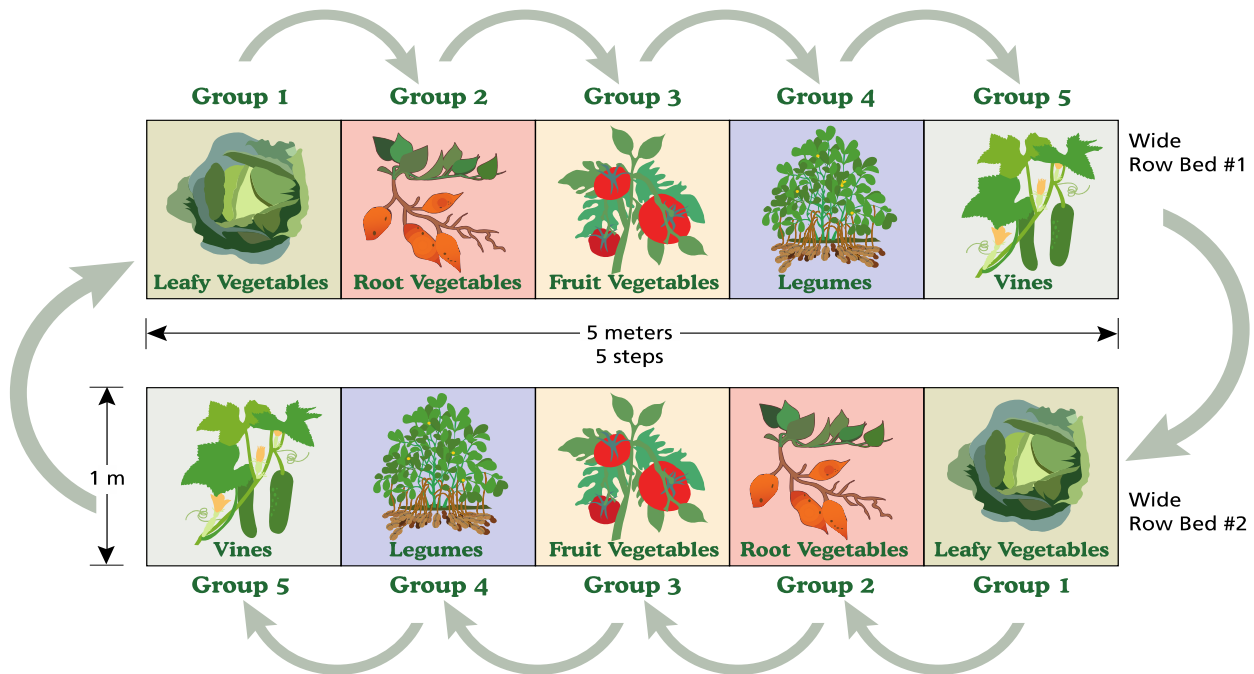
Example of good crop rotation in the same garden spot:

Season 1: plant tomatoes and peppers

Season 2: plant peanuts

Season 3: plant vines or leafy vegetables

This drawing shows how to rotate plants. Note the 5 groups of plant families. *(Some gardeners call "Fruit Vegetables" "Tomato Vegetables" even though there are more than tomatoes in this family. Use a label common in your culture.)*



See the chart at the end of this lesson about plant families.

3. (20 minutes) Make a drawing of next season’s garden

Have boys and girls form groups of 3 or 4.

Give each group a piece of paper and a pencil.

3.1 Have boys and girls to make a drawing of next season’s garden. They must rotate the crops from how they are planted this season.

Boys and girls can look at the drawing of the garden for this season.



3.2 Have boys and girls show their drawings to the whole group. There will be many different designs. Help the boys and girls decide if each group rotated crops the right way.

3.3 Ask each group:

- Are the leafy vegetables and fruit/tomato vegetables in different places for next season?
- Are the legumes in a new spot?

Before planting the garden next season, the boys and girls can decide where each plant should be planted. This lesson activity is a good start.



3.4 Have boys and girls copy down one or two of their drawings into their notebooks.

4. (5 minutes) - Review

Ask these questions:

- Why is it important to learn about the vegetable families?
- Why is crop rotation so important?
Answer: For nutrients in the soil and for pest control.
- Do you think other farmers think about rotating crops? Why or why not?

5. (1 minute) - Close

Keep all notes in your notebook.



Plant Families for Crop Rotation

Plant family	Examples	Other Information
Leafy Vegetables	cabbage cauliflower broccoli amaranth lettuce Swiss chard	<ul style="list-style-type: none"> • These plants take a lot of nutrients from the soil. • Give these plants a lot of animal dung and compost fertilizer to help them grow their best.
Root Vegetables	carrot beet sweet potato onion	<ul style="list-style-type: none"> • If you use too much nitrogen fertilizer, the crops may produce many leaves but fewer roots and tubers. Be sure to plant these vegetables in different places from season to season to prevent disease.
Fruit Vegetables	tomato potato green and red peppers eggplant	<ul style="list-style-type: none"> • These crops are grouped together because they should not be grown right after the other. • All plants in this group can have similar pests in the soil.
Legumes	bush bean pole bean groundnut (peanut) pea	<ul style="list-style-type: none"> • Legumes do not need as much fertilizer. • Like peas and peanuts, legumes improve the soil by fixing nitrogen. • Legumes are very helpful for crop rotation, because plants in other plant families often need more nitrogen for plant growth.
Vines	cucumber pumpkin squash melon watermelon	<ul style="list-style-type: none"> • These vine crops are all part of the Cucurbits family. • Vine crops get fewer diseases from the soil.

