



LESSON PLAN – TOPS OR BOTTOMS: A LESSON ON VEGETABLES

(Adapted from AITC Lesson titled "Creative Veggies")

TARGET AGE GROUP: Pre-K thru 2nd Grade

ESTIMATED TIME: 45 Minutes

PURPOSE:

The purpose of this lesson is to teach children that vegetables are grown on the farm or in a garden, vegetables are important to a healthy diet, and some vegetables grow above the ground and others grow below the ground.

BACKGROUND KNOWLEDGE (Source AITC Lesson titled "Creative Veggies")

This lesson focuses on the plant parts and characteristics of vegetables. Specifically, students will learn that plants have edible and non-edible parts. The edible parts may be on the top, bottom, or in the middle depending on the plant. Carrots, radishes, and beets are examples of vegetables with edible bottoms. Lettuce, broccoli, and celery are examples of vegetables with edible tops. Corn is an example of a vegetable with an edible middle.

VA SOLs

This activity can be used to complement classroom instruction related to the following VA SOLs:

First Grade: Science – Life Processes 1.4 The student will investigate and understand that plants have life needs and functional parts and can be classified according to certain characteristics. Key concepts include:

- a.) Needs (food, air, water, light, and a place to grow);
- b.) Parts (seeds, roots, stems, leaves, blossoms, fruits); and
- c.) Characteristics (edible/nonedible, flowering/nonflowering, evergreen/deciduous).

OBJECTIVES

- 1) Students will list at least 3 benefits of having vegetables in their diet.
- 2) Students will learn that vegetables are grown on a farm or in a garden (They are not produced in grocery store).
- 3) Students will identify the basic requirements needed to grow any type of vegetable. (Soil, Water, Sunlight, Carbon Dioxide)
- 4) Students will identify the different parts of a plant. (Seed, Root, Stem, Leaf, Flower)
- 5) Students will identify 3 vegetables that have edible bottoms.
- 6) Students will identify 3 vegetables that have edible tops.

MATERIALS

- Assorted Vegetables (Toy or Real) in Basket: Suggest Radish, Carrot, Potato, Onion, Corn, Celery, Lettuce, Broccoli, Cauliflower
- Book: Stevens, J. (1995). *Tops and Bottoms*. New York, NY: Scholastic Inc. ISBN: 0-590-97550-1

PART I: INTRODUCTION

- If this is the first activity of the day, introduce yourself and the agency/organization you represent. Briefly discuss what you do and how it correlates with this particular lesson. *Instructor Dialogue Example: Good Morning! My name is Jane. I am with the Russell County Farm Bureau. We are a club for people who like agriculture/farms. How many of you have been to a farm? What did you see on the farm?*
- Show the students a basket of vegetables. **Student Question: What is in the basket?** *Answer: Vegetables* Today, we are going to talk about vegetables.
- **Student Question: How many of you like to eat vegetables?** Now the instructor should share his/her favorite vegetable. *Example: I like to eat vegetables. My favorite vegetable is _____.* Ask a couple of student volunteers to share their favorite vegetable with the class.

- Vegetables are good for our health. **Student Question: What are some health benefits of eating vegetables?** *Answers: Reduce heart and cardiovascular disease, reduce risk of Type II Diabetes, Protect against various cancers, Help maintain healthy weight, Help decrease bone loss, Provide valuable nutrients like fiber, folate, potassium, Vitamin A, Vitamin C*
- **Student Question: Does anyone know how many servings of vegetables we should have each day?** *Answer: 3-5 servings per day*

PART II: GROWING VEGETABLES

- Vegetables are healthy for us to eat. **Student Question: Where do we get vegetables to eat? Are they grown in the grocery store?** *Answer: NO, vegetables are not grown in the grocery store. We grow vegetables on the farm or in our gardens. Farmers grow most of the vegetables we eat and sell them to the local grocery store, where we purchase them.*
- **ACTIVITY #1:** Before we can enjoy eating our 3-5 servings of vegetables each day, the farmer must first grow the vegetables. Now let us discuss what it takes to grow a vegetable?
 - At this time ask students to stand up.
 - Tell students that we are going to pretend that we are a tomato seed. We want to grow into a plant that produces bright red, juicy tomatoes so that we can be made into pizza sauce or spaghetti sauce. *(Make body into small ball on floor to represent a tomato seed.)*
 - **Student Question: What is a natural resource that the tomato seed needs in which to form a strong root system and retrieve minerals and other nutrients?** *SOIL* Student Action: Students should start to rise up by placing their hands on their knees.
 - **Student Question: What is another natural resource the tomato seed needs to survive, especially on hot days?** *WATER* Student Action: Students should rise a little more, placing hands on hips.
 - **Student Question: What is a third natural resource the tomato seed needs to grow. Hint: Humans exhale one part of this and inhale another part; Plants exhale something that humans need and inhale the part humans exhale; Both parts make up this natural resource.** *CARBON DIOXIDE & OXYGEN make-up AIR*
Student Action: Students now stand upright w/ arms at side.
 - **Student Question: What is a fourth resource that the tomato seed needs to grow, especially when its leaves or flowers have emerged?** *SUNLIGHT*
Student Action: Students are standing w/ arms raised and open wide.
 - Because we had soil, water, air, and sunlight we were able to grow into a healthy tomato plant that produces bright red, juicy tomatoes.

PART III: PARTS OF THE VEGETABLE, EDIBLE PARTS, NON-EDIBLE PARTS

- Once a vegetable "grows up", it is ready to harvest. **Student Question: What does harvest mean?** *Answer: Harvest means to gather/collect the vegetables from the field/garden.*
- Once the vegetables are harvested, they are ready to prepare to eat. There are edible parts and non-edible parts. **Student Question: What does the word "edible" mean?** *Answer: You can eat the part.* **Student Question: What does the word "non-edible" mean?** *Non-edible would mean you could not eat the part.*
- **ACTIVITY #2:** Now we are going to read a book aloud titled "Tops and Bottoms". This book is about growing vegetables. There are two main characters: the bear and the hare. **Student Question: What is a hare?** *Answer: Rabbit*
 - As I read the book aloud, I would like for you to act out parts of the story. The bear sleeps a lot during the story, so when you hear me read about the bear sleeping I would like to you lie down. Show me how you would lie down, if you were the bear sleeping. (Or have students lay their heads on their desks.)
 - The hares visit the bear. They hop to get around. When the hares are traveling to visit the bear or working in the garden, I would like you to hop. Show me how you can hop.
 - May wish to add other actions as the instructor deems appropriate.

- READ the book "Tops and Bottoms" aloud.
- Depending on time, while reading, ask the following questions:
 1. How are the crops planted? *In rows (Page 8)*
 2. Who got the edible parts during the first harvest, Hare or Bear? *Hare (Pages 10-13)*
 3. Which vegetables have edible bottoms? *Carrots, Radishes, Beets (Pages 10-13)*
 4. Who got the edible parts during the second harvest, Hare or Bear? *Hare (Pages 18-21)*
 5. Which vegetables have edible tops? *Lettuce, Broccoli, Celery (Pages 18-21)*
 6. Who got the edible parts during the third harvest, Hare or Bear? *Hare (Pages 26-29)*
 7. Which vegetable has edible middles? *Corn (Pages 26-29)*
- **ACTIVITY #3:** After finishing the book, bring out the assorted basket of vegetables. Pull out one vegetable at a time. Ask students the following questions: What color is the vegetable? Is the vegetable a top, middle, or bottom? Do you like to eat this vegetable?

PART V: CONCLUSION: Ask some review questions

1. What part of a carrot is edible?
2. What part of lettuce is edible?

Additional Activities:

- **Vegetable People:** (Refer to AITC "Creative Veggies" Lesson Plan found at www.agintheclass.org for directions and templates.)
 - Hand out materials necessary for making the vegetable people: glue, scissors, construction paper, and vegetable templates.
 - Ask the students to cut out their vegetables and glue them on their blank sheet of paper in the shape of a person. Use the following guidelines: Create the "feet" from a root; Create the "head" from an edible top.
 - After the vegetables are glued on, tell the students to draw in any parts they need, such as eyes, nose, mouth, etc.
 - After the person is completed, tell the students to label the vegetables they used on their paper.
 - Tell students to name their vegetable person.
 - Ask some students to share their vegetable people.
 - While sharing, tell the students to include the vegetables they used and, if they know, to point out the edible parts.
- **Extension Activity:** Ask students to choose a plant, find a picture of this plant, categorize it according to its characteristics (edible/non-edible, flowering/non-flowering, evergreen/deciduous), and present the information to the class.



Tops or

Bottoms?

Food	Plant Part (Root, Leaf, Stem, Seed)	Position
Carrot		
Onion		
Radish		
Potato		
Rhubarb		
Celery		
Rice		
Corn		
Lettuce		
Spinach		
Broccoli		
Cauliflower		