

Lesson Seven: The Colors of Nutrition (50 min)

Driving Question: How do the land and weather in our state help plants grow?
Can we grow healthy food using just water and nutrients?

Vocabulary:

nutrition, vitamins, fiber, protein, microgreens

Materials:

- Assembled Aquatree® Garden
- Plain white paper plate
- Glass
- Milk
- Crayons or markers

Resources:

- Seed to Salad Lab Books
- Color of Nutrition Produce Cards
- Yummy Plants Response

Background Knowledge:

Prior to this lesson: Have the students pour a small glass of milk.

Food is like fuel for our bodies. It gives us energy to play, learn, and grow. To build strong, healthy bodies, we need to eat a variety of foods. There are different food groups, like fruits, vegetables, grains, proteins, and dairy. Each food group has special nutrients that help our bodies in different ways. For example, vitamins help us see clearly, and calcium makes our bones strong. Eating lots of different foods, drinking plenty of water, and limiting sugary drinks and snacks are important for good health. It's also helpful to learn about portion sizes so we eat just the right amount of food.

Plant the Seed (warm-up):

1. Have students take out their **Seed to Salad Lab Books**. Give each student a few minutes to go to Aquatree Garden and the seeds planted in soil. At each station, the students should record their measurements and observations in their lab book.
2. While students are waiting for their turn to observe the **Aquatree® Garden**, they will complete the **Yummy Plants Response** to share what fruits and vegetables they like to eat.

Grow Time (lesson):

1. Before class begins, divide the board into color categories: Red, Orange/Yellow, Green, Blue/Purple, and White.
2. Show picture cards of various fruits and vegetables (or simply share the name). Have students take turns placing each picture (or fruit/vegetable name) in the correct color category.
3. Give each student a copy of the **Color of Nutrition Produce Cards**. The color categories help the students remember what the different nutritional factors are to each fruit and vegetable. Here's a list of colors and some key nutrients they represent:
 - a. Red: protein (strong muscles, build bones, and our brain health)
 - b. Green: vegetables - they contain vitamin K, A, C, E, and lycopene (eyes, bone health, immune system)
 - c. Yellow: fruit - vitamin K, C, B (prevent diabetes, heart disease, immune system)
 - d. Blue: carbohydrates - glucose and fiber (energy and gut health/digestion)
 - e. Brown: dairy - calcium and vitamin D (strong bones)
4. Play a quick game where you name a benefit and color, and students touch the body part it is beneficial for. *For example: the teacher will call out blue/fiber. The student will hold their stomach and call out digestion.*
5. Next, give each student a plain white paper plate. Using a ruler and pencil, the students will divide the plate into four equal sections by drawing two lines that cross in the middle.
6. Have them label each section: fruit, vegetable, protein, carbohydrate.
7. Remind the class you have a glass of milk to represent the dairy category of their meal.
8. The students will outline and label the four sections in the correct colors from the first activity: Red - protein: Green - vegetables Yellow: fruit: Blue - carbohydrates: Brown - dairy (the recycled milk carton placed next to their plate.)

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9. Tell the class it is recommended by doctors for everyone to have half their plate be filled with vegetables and fruits.
 10. Place the glass of milk next to the student's plate. Dairy is important for a balanced meal to build strong bones.
 11. Each student will draw, label, and color their favorite meal on their paper plate. They must have food from each group in the sections to create a balanced meal.

Food for Thought (reflection/assessment):

1. Ask several students to share their favorite meal plates with the class.
2. In the students' **Seed to Salad Lab Books**, they will answer the mastery question. *Take a good look at the microgreens. What kind of nutrients do you think they contain? Why are these nutrients good for you?*