



**Title:** Coloring the Life Cycle of Fruits and Vegetables

**Grade:** PreK

**Subjects:** Science, Creativity

**Time:** 15 minutes

**Standards:** Students will...

Science Standard 5: Understand the structure and function of cells and organisms.

- Benchmark # 2: Know that living things go through a process of growth and change

Science Standard 12: Understand the nature of scientific inquiry.

- Benchmark # 1: Use their senses to make observations about living things.
- Benchmark # 2: Record information collected about the physical world (e.g., in drawings, simple data charts).

**Objectives:** Students will be able to:

- Classify plants according to observable features (color).
- Identify and describe the similarities and differences among plants as relates to their physical structure, growth, and change.

**Materials:**

- Included coloring sheet provided below
- Coloring utensils

**Overview:** When you grow a garden, you have the chance to see things grow and change from seed to something you can eat. It's amazing to see how a tiny seed takes just a few weeks to turn into a bright red strawberry you put in a pie or the carrots you eat at dinner. Seeds carry a special genetic code to tell the seed how it changes and grows. Each food has its own color system: an early color, which means it isn't quite ready to be eaten (not ripe); a later color means, which means it's just right (ripe); and a very late color, which means it's too old. But be careful: one food's early color may be another food's ripe color. That's why it's important to learn the different stages of a food's life cycle.

**Kids Speak:** To see a small seed turn into a red ripe strawberry in just a few weeks is amazing. Every seed has a special genetic code that it grows by, and every plant has a color code to measure the ripeness of its fruit. Tomatoes, for example, are green before they are ripe, a bright red when they are ripe to eat and a darker red when they are too ripe. But be careful, one fruits early color could be another fruits ripe color.

**Eco-Fact:** A single seed from an orange can grow multiple orange trees.

**Procedure:**

- Students will receive a sheet (either printed or created by the teacher prior to the lesson) that will have a row of bananas, a row of strawberries, a row of tomatoes and a row of pumpkins printed on it.
- Students will color the objects according to the life cycle of not ripe, ripe, too ripe. - Banana: These should be colored: green-yellow-brown. - Strawberries: These should be colored: yellow-red-dark red/purple. - Tomatoes: These should be colored: green/yellow-orange/red-dark red. - Pumpkins: These should be colored: green-orange-reddish orange.

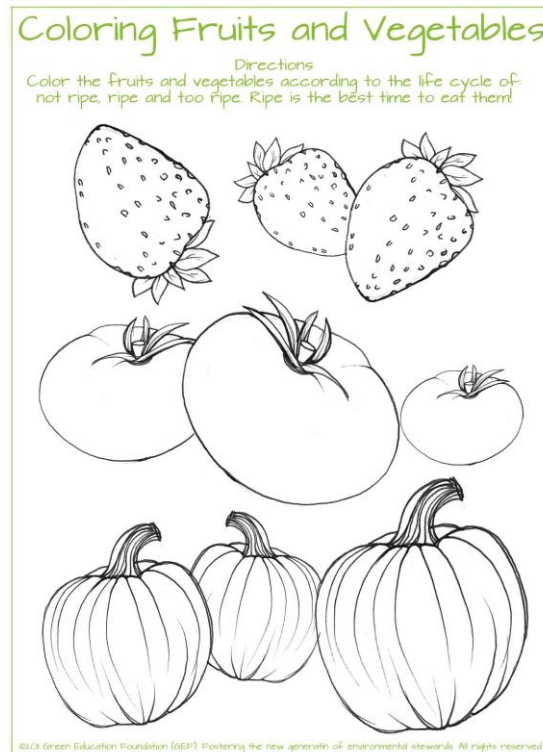
**Adaptations:** Older children can receive a worksheet with pictures of the different fruits/vegetables and be asked to identify the proper life cycle stage on a line beneath the picture.

**Extensions:**

- Create worksheets based on the items already growing in the class garden.

- Discuss the historical connection. People in ancient times had to learn the color-coding systems to figure out if food was safe to eat.
- Taste test: If approved to have food in the classroom, have students volunteer to taste very small bites of safe fruits and vegetables at the different stages. **DO NOT USE MOLDY** foods. In this exercise, the teacher can discuss the difference between over-ripe and moldy/unsafe to eat.
- Hold a discussion on why the early stages of fruits and vegetables have similar colors (like green).
- For tips on dietary guidelines and healthy eating habits visit the USDA Food Pyramid.

Click on PDF below to print out the activity sheet!



\*All lessons listed on the GEF website have been aligned with the McREL Compendium of Standards and Benchmarks for K-12 Education. GEF curriculum has been developed in accordance with the McREL standards in order to reflect nationwide guidelines for learning, teaching, and assessment, and to provide continuity in the integrity of GEF curricular content from state to state. The decision to utilize McREL's standards was based upon their rigorous and extensive research, as well as their review of standards documents from a variety of professional subject matter organizations in fourteen content areas. Their result is a comprehensive database that represents what many educational institutions and departments believe to be the best standards research accomplished to date. To access the McREL standards database, or for additional information regarding the supporting documentation used in its development, please visit <http://www.mcrel.org>.