

Title: Great Growing Greeting

Objective: Review the five components of plant survival

Time: 3 minutes

Materials Needed: None

Greeting

Suggested Season: Any

Suggested Grade Level: 3-5

Indoors or Outdoors: Either

Theme: Plants

Topic: Crucial Survival Components

Directions:

1. Explain to students that there are five main components that a plant needs to survive: water, light, optimum temperature, nutrients, and space. Students are going to show an action representing one of the five components.
Water - Pretend they are drinking a glass of water.
Light - Raise their arms above their head to show a sun.
Optimum temperature – Fold their arms in front of body and rub hands on arms.
Nutrients – Rub their stomach to show they have a full belly.
Space – Wave elbows around at their side indicating there is *elbow room*.
2. Each student should choose one component that they are going to represent. At the count of three, the students will do the action that relates to their component.
3. Students need to find at least two other students in the classroom that are demonstrating a different survival component. Students greet one another with a handshake and “Good Morning, _____.”
4. Once everyone has greeted at least two different people, students should sit back down in the circle.

Discussion Questions:

1. What component do you think is most important in helping a plant survive?
2. How can we help plants that might not be getting all five survival components to grow?

Standards Addressed:

Science: 2.4.2.1.1.

Language Arts: K.I.B.; K.I.C.; K.II.B; K.III.A.; 1.III.A.; 1.III.B.1.; 2.III.A.; 3.I.B.1.; 3.III.A.1.; 3.III.A.2.; 3.III.A.3.; 4.I.B.1.; 5.I.B.; 5.III.A.1.; 5.III.A.2.; 5.III.A.2.; 5.III.A.3.; 5.III.A.4.

Math:

Social Studies:

Background Information:

- Plants need five main things to survive: water, air, nutrients, light, and optimum temperature.
- **Water:** Liquid that moves the food from the root to the stem. Without it, plants would dry up and die. It is one of the most essential factors needed for the plant growth. Most plants need optimum quantity of water to grow. Each plant has its own water requirement. Some plants grow well in dry atmospheric conditions, while some need a consistent supply of moisture.
- **Air:** Plants require carbon dioxide for manufacturing sugar through the process of photosynthesis. Oxygen is required for plant respiration and utilization of photosynthesis byproducts.
- **Nutrients:** Minerals that are in the soil get dissolved in the water and are absorbed through the plant roots.
- **Light:** Light is a main source of energy for plants. Plants make their food through the process of photosynthesis, in which atmospheric carbon dioxide is converted into simple sugars, using the energy in sunlight. Light can be natural or artificial.
- **Temperature:** Temperature of the soil, as well as surrounding atmosphere, greatly influences the plant growth. A range of optimum temperature varies from species to species. The most favorable atmospheric temperature for most plant species is between 65-85 degrees. Optimum temperature is necessary for several plant processes such as germination, respiration, photosynthesis and flowering.
- If any of the components are missing, a person can help by bringing the plants to a sunny location, covering the plants to help with the temperature, adding space by weeding and thinning out the plants and by adding natural fertilizer for nutrients.

Additional Resources:

- *From Seed to Plant* by Allan Fowler
- *How Plants Grow* by Angela Royston

Correlates with:

Activity – Grow Plant, Grow

News and Announcements – Design an Ideal Plant Environment