

“What Plants Need” NPK Bracelet Activity

This fun bracelet activity is a great way to introduce the three essential plant nutrients: nitrogen (N), phosphate (P) and potassium (K). As students put the various beads together on the bracelet, they will have a better understanding of what plants need to grow. Also, use Nutrients for Life’s elementary activity book, *Fun with the Plant Nutrient Team*, to enrich the lesson. If using with the booklet, build the bracelet as students work their way through the book. Interestingly, plants do not technically *need* soil to grow, as seen with air plants and hydroponic setups, but simply the essential plant nutrients (N-P-K).

Grade Levels: 2 to 6

Length: 10 minutes; 25 minutes when used with *Fun with the Plant Nutrient Team*

Group size: This activity works well in both small group and large settings

Objective: Students will be able to recall what conditions plants needs to grow, such as plant macronutrients (in the soil), sunlight, water, and air.

Materials needed: (One per student)

Note: We purchased individual N, P, and K (9mm) alphabet beads at <http://www.namebeads.com>.

1. Green chenille sticks (pipe cleaners) or green ribbon
2. Green pony beads
3. Clear pony beads
4. Black or brown pony beads
5. Yellow pony beads
6. Light blue pony beads
7. N, P, K 9mm beads (optional)
8. Purple pony beads
9. White pony beads

Procedure: Place each bead on the chenille stick, while reviewing what each bead represents.

1. (Green chenille stick)—Plants: Farmers grow plants that require nutrients from the soil
2. (Black or brown bead)—Soil: Farmers help to protect the environment by testing their soils to learn if the soil contains the right amount of nutrients. If nutrients are missing, the farmer will add more by adding fertilizer. The 3 main nutrients needed for plant growth are N, P, and K.
3. (N bead - *optional*) — Nitrogen
4. (Green Bead)—Nitrogen helps the plants be green and healthy
5. (P bead - *optional*) — Phosphorus
6. (Purple bead)—Without Phosphorus, old plant leaves turn purple
7. (K bead - *optional*) — Potassium
8. (White bead) — Potassium is salt left over from evaporated oceans
9. (Clear bead) — As plants grow, they take up nutrients, as well as air from the soil
10. (Light blue bead) — Water
11. (Yellow bead) --- Sunlight