

# A STEM in the Park

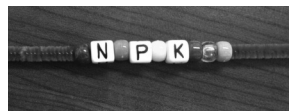
## Take Home Activity

# STEM

in the **PARK**™

Science, Technology, Engineering, and Mathematics

## N-P-K Bracelet



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* free elementary activity book, *Fun with the Plant Nutrient Team*, to enrich the lesson. If using 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 do simply need 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* activity book.

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

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

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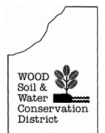
**Materials needed:** (One per student)

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

**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 three main nutrients needed for the plant to grow 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. (Yellow bead)—Phosphorus helps the plant catch the sun's energy.
7. (K bead - optional)—Potassium
8. (Purple bead)—Potassium has many jobs, including helping the plants flower.
9. (Clear bead)—As plants grow, they take up these nutrients, as well as air from the soil.
10. (Light blue bead)— Water



***This activity is brought to you by WOOD Soil & Water Conservation District and created by Nutrients for Life Foundation***

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