HARVEST of the MONTH

Seasonal snacks from garden to classroom

JUNE 2015 – Sugar Snap Peas

CSG uses our **Educational Roots (RootEd)** frame to design lessons for our gardens.
The four core areas of RootEd are intended to enhance academic learning and include: cultivating gardening skills, providing experiential learning opportunities, promoting health and fitness, and nurturing social & cultural development.

Trivia Question and Facts

- QUESTION: "This vegetable has edible shoots and pods. It can be eaten raw or cooked, shelled or unshelled, and when you bite into it, it's likely to snap."
- FACTS:
  - Sugar snap peas are in the Fabaceae family, whose members convert atmospheric nitrogen from the air into solid nitrogen in the ground, improving the soil's health.
  - To facilitate these bacterial associations, gardeners often use an "inoculant," which is a microbiologically active soil amendment, when sowing pea seeds.
  - Sugar snap peas form "tendrils," or modified stems, in order to climb up walls or trellises. These tendrils spiral around until they come into contact with a support structure.
  - In addition to the pea pods, the pea shoots are edible and packed with vitamins A, C, and folic acid.

Garden Activities

- **Pea Growth**
  - ① Look at the variety of ways in which plants grow. Have students find plants that: spread underneath the ground through their roots (mint, grass), climb upwards with tendrils or vines (peas, ivy), support themselves with a long woody stem (trees), etc.
  - ② Some plants do best when harvested often. Harvesting the older, more mature fruit or leaves encourages new growth by increasing access to sunlight and activating hormones that signal to the rest of the plant to continue growing. Plant and/or harvest sugar snap peas, lettuce, parsley, cilantro, and other crops to encourage the plants to continue growing.
- **Smart Seeds**
  - ③ Phototropism is the change in the growth of a plant in response to light. Plant beans on a windowsill and watch as they grow, reaching in the direction of the window towards the sunlight. Then, rotate them 180° and watch them reach in the other direction.
  - ④ Gravitropism is the change in the growth of a plant in response to gravity. Have students put a bean seed in a wet paper towel inside a small plastic bag, and hang each bag at different angles somewhere in the classroom. Observe the seeds as they germinate and notice that the roots always grow downwards and the stem always grows upwards.
- **Nitrogen Cycles**
  - ⑤ Sugar snap peas and other legumes form beneficial relationships with the bacteria in their soil. The plant feeds the bacteria in exchange for the bacteria turning nitrogen in the air into solid nitrogen in the soil (you can see the evidence of this exchange as small white circles attached to the roots of the plant). Have students dig, observe, and count the nitrogen nodules on the roots of white clover.
  - ⑥ Plant cover crops in the garden to maintain the nitrogen and water cycles there. Explain these two different cycles (cover crops build nitrogen (see lesson ⑤) and retain moisture in the soil), and why they're important for growing food.
  - ⑦ Have students build a compost pile to preserve nutrients and speed decomposition. Healthy compost uses 25 parts carbon (brown, woody, and dry material) for every 1 part nitrogen (green, leafy, and wet material). So for every 25 handfuls of straw students should use 1 handful of green plants.