HARVEST of the MONTH

Seasonal snacks from garden to classroom

APRIL 2015 – Asparagus

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 Asparagus Facts

- QUESTION: "This vegetable grows in the wild in patches, and its scales act like leaves. Do you know what this long, green, spear-shaped vegetable is?"
- FACTS:
  - The name "asparagus" comes from the Greek word *asparagos* (and originally the Persian word *asparag*), meaning "sprout" or "shoot."
  - In the wild, where the spears aren't being harvested by humans, asparagus grows into a tall fern-like plant with red berries.
  - The spear is actually the stem of the plant and it is green because it photosynthesizes.
  - Asparagus contains a special nutrient called "inulin," which feeds the good bacteria in your stomach, helping your digestive system.

Garden Activities

- **Edible Stems:**
  - ① Have students dig up wild onions to eat. Their tops stick up tall above the rest of the grass, and they smell like garlicky-onions. Have students use trowels to dig instead of pulling since their bulbs are deep in the ground. Show students that the white part we eat is actually the leaves and stem of the plant, not the root (they can eat theirs or collect a couple to bring home). The stem and leaves are white because they don't photosynthesize. Similarly, white asparagus shoots are grown by covering the stems with soil so they don't photosynthesize and turn green.
  - ② Plant potatoes in the garden, keeping a few to leave out in the classroom in a window with light for students to observe as they turn green and sprout shoots from their "eyes." Potatoes are not roots, but modified stems called "tubers" that will photosynthesize (like tomato stems) if left in the sun.
  - ③ The parts of a plant that carry out photosynthesis can be identified by their green color. Have students look at different plants in the garden and schoolyard to identify the parts of each that are photosynthesizing. Choose plants that look different (i.e. tree, herb, grass, flowers, vegetables, etc.).
- **Perennial Plants**
  - ④ Asparagus grows in patches because of its rhizomatous roots. Discuss/draw what rhizomatous roots look like underground and have students pull up the longest connected grass root they can without it breaking. Have them count the number of above ground stems and leaves it connects.
  - ⑤ Dissect flowers from the garden to identify the male and female anatomy (stamen, pistil, pollen, stigma, ovary, etc.) of each. Demonstrating first with showy store-bought flowers (lilies, azaleas, etc.) may help. Discuss that some plants have flowers with only male or only female parts, while others have both. Asparagus is unique because its plants can be male, female, or bisexual.
- **Crazy Cotyledons**
  - ⑥ Have students hunt for examples of monocots and dicots in the garden. Compare monocots, such as asparagus, which have one seed leaf (or cotyledon), parallel leaf veins, a fibrous root system, and flower parts in 3's to dicots, which have two seed leaves, branching leaf veins, a taproot system, and flower parts in 4's or 5's.
  - ⑦ Plant microgreens after discussing monocots and dicots in lesson ⑥, and have students watch the cotyledons emerge and then harvest them to eat.