Seeds and Sprouts: Session 1 (2019)

Course Description:

Students will create an edible class garden that will connect their learning to our healthy eating. Students will have an opportunity to plan out what is needed to update a garden. They will be planting for the season to work toward a year round edible garden. Our teens will explore the importance of decomposers and composting. Students will use each class period to plant and learn how to care for the garden as well as concepts for life science will be webbed into the class. Focus topics are soil, compost, seeds, pollinators, pests, and careers in agriculture.

Course Expectations:

- Attend all classes unless ill. No make-ups will occur
- Arrive on time and prepared
- Be present minded and actively involved in the class material
- Ask meaningful questions and bring forth material relevant to the class
- Read all materials assigned
- Bring two pencils, pens, spiral with a folder
- Bring gardening gloves & label them with your name, if you don't want to wear ours.
- Please wear clothes and shoes that can get dirty

Rubric:

30% Attendance
30% Completion of Assignments
40% Participation

Week 1: Introduction to garden and tools. Discuss development and vision of garden discuss permaculture. Start composting. Set up routines for gardening. Water, weed, compost. Why study plants and have a garden? What gear do we need for gardening? What is it used for? Watch a video about starting your own garden. Go over plants that grow in our climate zone and when to plant them. Types of edible gardens and create a plan of where we are going to plant and what it can look like (ie. Planter bed, hanging planters, trellis, watering, etc.). Discuss safety and have students create safety/rules for the garden and what we are doing putting together a planter bed. Create a plan for small area, measure out area and calculate the amount of organic topsoil needed for our raised bed, if needed.

Week 2: Soil - testing and prepping for garden. Brief Compost lesson - why do we do it? how does it help our garden? What is it composed of? How does it work? Compost weekly kitchen scraps. Collect dry brown mulch. Water. Types of soils the plants need and how to test it. Create a plan for testing the soil and maintaining a chart and what we would need to add to bring the levels to the optimal levels for our garden. Discuss preparing our planter bed soil. Create a plan for our garden on the type of plants we are going to plant and how

far apart they need to be as well as the depth they need to be planted. Prep the beds with soil after testing soil experiment, plant seeds in containers and send home to care and monitor, plant seeds in the garden bed, and plant in hydroponic system to compare seeds growth after a week.

Week 3 or 4: Possible field trip to Agromen - Focus is on Soil and Compost for farming and vegetable gardens. In depth lesson on Compost. Close toe shoes only. Located right at the ocean so a sweatshirt or light jacket is recommended.
Please see link: https://agromin.com.

Week 3 or 4 : Seeds - seedlings - young plants - mature plants - plant cycle - How does it work? How come we have to plant so much and get so little? How does a seed work? Plant seeds, seedlings, and plants and track progress and calculate cost difference. Look at different seeds and ways plants reproduce (seeds, spores, bulbs, and cuttings will be explored). Planting, Composting, Watering and nurturing will take place.

Week 5: Vermicomposting - What is vermicomposting? How does it work? Create a mini- vermicomposter. Create a plan for vermicompost at our garden site and assign roles such as planners, bedding collectors, bedding preparers, feeders, worm keepers, journal recorder, etc. The importance of worms and other decomposers to the soil will be discussed. Experiments with worms: Do worms have favorite colors? Do worms like water? When two worms are placed in the same area, will they move together or stay apart? What is the average length of a worm? How long does a worm live? Does a worm move forwards or backwards or both? Can a worm feel? How do worms find food? Planting, Composting, Watering and nurturing will take place. Additional information about composting: https://www.toaks.org/departments/public-works/sustainability/landscaping/home-composting-and-grasscycling

Week 6: Careers in Agriculture: Presentation by SEEAG (Students for Eco-Education & Agriculture) will "educate and inspire students on a diverse range of STEAM-related career opportunities within the agriculture industry, including job description, degree requirements and pay ranges. It will also give students a background in local and U.S. agriculture while emphasizing the development of modern technological innovations." The out to the dirt and managing our garden.

Week 7: Pollinators - What are pollinators? Why plants need pollinators? Watch: Bee Documentary: The Vanishing Bees: https://www.youtube.com/watch?v=yb4SArPe5lY
Taste different kinds of honey. Pollinator experiment. Plant plants to help pollinators. Pests & Preditors: Ladybugs to the rescue. Possible Public Works Presentation.