



Green Machine Lab

Virtual and Onsite Experience

Goal: Increase in knowledge of how healthy ecosystems support sustainable plant production.

Objective: Examine the interaction of living and non-living components within a plant production area, through experimentation and observation.

Rotation Timing

Introduction – 10 minutes

Station (1,2,3) – 15 minutes each

Conclusion – 5 minutes

*Please note all times are approximate

The program design of the **Green Machine Lab** will introduce students to scientific principles, natural systems, and environmental occurrences, specifically those affecting food production. The students will be engaged with hands-on, inquiry-based activities that will address key concepts, such as helpful vs. harmful organisms, soil science, and the water cycle. Our instructors will facilitate each station's content through the 5 E's framework. The stations are connected to Next Generation Science Standards for Kindergarten through 3rd Grade.

Activity Station Overview

Integrated Pest Management

Students will learn that insects can have a beneficial, detrimental, or neutral impact on ecosystems. They will examine the relationships between certain species and see how this can be an alternative to chemical pesticides.

Soil Science

By examining and sorting a sample of compost, student understand that soil can be comprised of varying elements. Mineral content, detritus, and living organisms will affect the overall productivity of a soil sample. This can determine which types are suitable for sustainable plant growth.

Water Cycle

Students will understand how this natural process moves water through urban, wild, and agricultural areas. They will learn the importance of this element in relation to healthy plants.