NextWaveSTEM

Budding Botanists: Hydroponics for Young Gardeners

Designed for learners in Grades K-2

Course Description:

Through hands-on activities, students will explore many aspects of plants, their needs, & various growing conditions. Over 15 lessons, early elementary students will record their observations & data from their own plant's progress so students can discover the unique traits of plants and their growth while beginning to delve into the exciting science of hydroponics.

Curriculum, and Training Available:

- 15 Lesson hours
- Curriculum and supporting materials
- Ongoing product and curriculum support
- Professional development
- Facilitation by a trained STEM instructor (optional)

Lesson	Learning Target Examples
1. Parts of a Plant	Identify plants, their structures, and the jobs those structures do.
2. Investigate Seeds	Explore the parts of seeds by making hands-on observations.
3. Around We Go	Understand the steps of the plant life cycle.
4. Let's Grow!	Examine germination and how the process of growth from seed to plant.
5. Give 'Em What They Need	Design experiments to understand what conditions plants need to grow.
6. Give 'Em What They Need, Part 2	Discover what plants need through scientific observations and data collection.
7. Take Root	Explore the role that roots play in plant growth and structure.
8. Water, Water Everywhere	Investigate the role of water in different plants' growth, and examine how hydroponic gardening is done throughout the world.
9. What's For Dinner?	Explore the plants we eat and the different plant structures they come from.
10. Hello, Bug!	Discover pollination and create your own plant pollinator.
11. Off and Away	Explore different methods of seed dispersal and build a wind traveler seed.
12. Hungry, Hungry Plants	Understand the process of photosynthesis and create a visual model.
13. Go Green	Conduct an experiment to extract and display chlorophyll from leaves.
14. Adapt!	Identify adaptations different plants have and how they help plants survive.
15. Biodiversity	Explore eight biomes and their plant biodiversity through research and writing.

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