



Grow, Learn, Thrive: Hydroponics for Curious Cultivators

Designed for learners in Grades 6-8

Course Description:

This intermediate hydroponics course for grades 6-8 spans 15 lessons, delving into essential plant-related concepts. Students explore topics like plant growth, germination, photosynthesis, hydroponics basics, and more. Practical activities include planting seeds in a classroom hydroponics garden, culminating in designing innovative plant systems to address real-world challenges.

Equipment, 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)

LESSONS	LEARNING TARGET EXAMPLES
1: What? No Soil? Hydroponics 101	Why hydroponics?—Its role in growing plants.
2: Let's Get Scientific! Plant Growth	Parts of plants and their roles as well as photosynthesis deep dive
3: Let's Do It: The Hydroponics System	Needs of a hydroponics system, parts + purposes, preparation and planting.
4: Let's Be Picky: Hydroponics Crop	Planting seeds in our hydroponics system & germinating seeds
5: Taking Care: Monitoring Plants	Monitoring & maintaining the Hydroponics system
6: Don't Be A Pest: Insects	Pesky, pesty bugs. identify, benefits & solutions
7: The Circle Of Life: Plant Cycle	Seed dispersion, fertilisation & plant reproduction
8: Water Is Life: The Role of Water	Water and our climate—Changing cycles
9: Be A Scientists: Test Variables	Brainstorm a list of additional variables that could affect plant growth
10: Farm To Table: Issues & Harvesting	Solutions to food and hunger problems in your community and/or globally
11: Are There More? Exploration	Taking it further: Technology, AI, and hydroponics
12: Out Of This World	Design an intergalactic space station with a food system
13: What's The Buzz?	How aeroponics and aquaponics work
14: Helping the Environment	Helping the environment: Culminating Project: Design, Create, and Share
15: The Future of Hydroponics	The promise of hydroponics moving forward locally and globally