Green Thumbs, Bright Minds

A guide to curriculum and educational programming for youth with your Freight Farm

Our Education Program Guide & Curriculum is your handbook to jumpstart engaging and impactful learning opportunities with a container farm.

The curriculum and lesson plan samples are yours to utilize immediately after receiving your farm. We provide a variety of lesson examples catered to different of ages, so you can choose the ones that best suit your needs.

The guide includes:

SETTING UP FOR SUCCESS BEFORE FARM ARRIVAL

- √ **Identifying your farm program priorities**
- √ **Hiring a lead farmer and structuring a high-capacity team**
- √ **Selecting the ideal location for your farm classroom**

TEACHING FOUNDATIONS & ACTIVITIES

- √ **Broad overview of your programming opportunities as a nonprofit**
- √ **How to engage different age groups and class sizes**
- √ **How to incorporate important maintenance procedures into teaching**
- √ **Detailed descriptions of how to farm with children —** including the core farm tasks of seeding, transplanting and harvesting — with a variety of age-adapted activities to select from!

Scan to access the full guide

Every educational organization that purchases a Freight Farm receives:

Free copy of the Education Program Guide & Curriculum

Lifetime support from our client support engineers and customer success representatives

FREIGHT FARMS

To access the complete Education Program Guide & Curriculum, visit **freightfarms.com/education-curriculum-guide**.

Activity & Lesson Plan Overview

The Education Program Guide & Curriculum provides a comprehensive range of lesson plans and activities that are tailored to different age groups and class sizes.

From early childhood to high school, the lesson plans are designed to meet the specific learning objectives and developmental needs of each age group. The guide also provides a variety of activities that cater to different interests and skill levels, ensuring that there is something for everyone.

ACTIVITY TYPE	AGE RANGE	GROUP SIZE	LEARNING CONCEPTS
Farm Field Trip & Tour	All	Small	Hydroponics & CEA
Seeding	All	Small	Core Farming & Plant Science
Transplanting	Grades 9+	Large	Core Farming & Plant Science
Harvesting	Grades 6+	Large	Core Farming & Plant Science
5 Senses Exploration	Grades 3–5	Small	Social Emotional Learning
Food Miles Exercise	Grades 3–5	Large	Food System & Sustainability
Salad Prep	Grades 3–8	Large	Healthy Eating
Crop Trials & Yield Data	Grades 9–12	Small	Plant Science & Data Analysis
Mixing Solutions & Calibrating Sensors	Grades 9–12	Large	Chemistry & Software
Evaluating Farmhand® Software & Graphs	Grades 9–12	Large	Math & Data Analysis

Small groups = 8 students or fewer. Large = typical school class size of 20+

Sample Lesson Plan

Activity Lesson Plan: Seeding

IDEAL FOR

- **Ages 5+**
- **Small Group (8 or fewer)**

MATERIALS YOU'LL NEED

- **Seedling trays and grow plugs**
- **One seed cup per student**
- **Hand sanitizer or gloves**
- **Tweezers**
- **Benches for young childen** *(If applicable)*

LEARNING OUTCOMES

For Grades K–8

1. Plug and seed full trays
2. Label and insert trays into Nursery trough and cover with humidity domes

For Grades 9+

1. Prep workspace
2. Plug and seed full tray
3. Label and insert tray into slot in Nursery trough and cover with humidity dome
4. Clean up workspace, along with weekly "clean as you go" maintenance
5. Enter seeding data into Crops section of farmhand with appropriate notes

ACTIVITY OVERVIEW

Introduction | 5 mins

Prep the workspace and set up all supplies. This can be done in advance by the lead farmer to maximize session time, which is particularly beneficial when working with young students or under time constraints.

Show seeding videos or articles from farmhand Academy, or demonstrate the activity in your own words.

Seeding | 20–30 mins

Wrap-Up & Takeaways | 10–15 mins

Label seedling trays with variety, planting date, and class number or student names.

Stow away all supplies, clean up, and sanitize workspace.

Pose advanced STEM connections and SEL discussions. These can also be assigned as homework or journal prompts.

KEY TALKING POINTS

Excite & Engage | Beginning Discussion

Who has planted seeds before? What kind and where? What did they look like?

Seeding is one of the most important tasks in our farm. ***If we don't plant them every week, we won't have anything to harvest eight weeks from now!***

Explain & Expand | Activity Discussion

If we're not planting seeds in soil, then what are we planting them in? How many do we plant? What is contained within a seed? What do they need to grow and thrive? What happens next?

Exit | Concluding Discussion

Check understanding and recap all the seeding steps with your students. Why do we do each? Compare seedling growth in a controlled environment to that of a traditional soil garden. What are the benefits of growing in our Freight Farm? What does our growing media look like and what does it do?

By Age Group | Advanced Discussions

Grades 3–5: We mostly use pelleted seeds in our farms; this is a man-made adaptation (coating seeds in a layer of clay) to make seeds easier to handle and have better control of the number of seeds planted each time. What are other natural adaptations that seeds may have to ensure their survival success? ***Examples: Burrs to stick on animal fur, fluffy parachutes to float in the wind, hollow shells to float in water, yummy fruits for animals and humans to digest and excrete.***

Grades 6–8: How much nutrients do seedlings need compared to a whole plant? More or less?

Grades 9–12: How does a coconut become a grow plug? Investigate the use of coconut husk and peat moss as raw materials for hydroponic growing medium. Compare their physical and chemical composition to that of soil. Research three other types of grow media. What are the advantages and disadvantages of each?

Social Emotional Learning (SEL)

Seeds represent potential. What is inside a seed? What do they need to grow into large adult plants? How are seeds similar to or different from us humans? ***Discussion: "They thought they could bury us, but they didn't know we were seeds." - Dinos Christianopoulos***