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Cultivating Curiosity:

Hands-On Agriculture Learning with Hydroponics



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Agenda



- Welcome & Introductions
- About Gardyn
- Meet Pam Chambers
- The Mission
- The Journey to Gardyn
- Inside the Program: Day to Day
- Inside the Program: Stories of Student Leadership
- “What If” Moments of Discovery
- Creating Big Picture Connections
- Building a Program that Grows with Your Students
- Q&A
- What will you grow?

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Housekeeping



Please feel free to post your questions and comments to the chat and use the react buttons! We love to see that excitement!



If you have any technical issues, let us know!

Members of Gardyn + Ag in the Classroom will be monitoring the chat.



We will send follow up information about the presentation to the emails used to register for the event, so keep on the lookout!

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Introducing our Speakers



Pam Chambers

Illinois Ag in the Classroom Coordinator



Brad Peters

Gardyn Chief Relations Officer



Renee Hodge

Gardyn Schools Solutions Lead

30 plants,
2 feet of
space



A Bit About Gardyn...

Gardyn is a ground-breaking, award-winning, vertical indoor gardening system used in hundreds of schools across the country and over 100,000 people's homes.

<u>How Gardyn Works:</u>

- Hydroponic growing – plants grow in water, no soil needed.
- LED lighting replaces sunlight indoors
- Automated watering and nutrient delivery.
- Sensors and AI monitor plant health.
- Designed for easy classroom use.
- Grow up 120 types of plants and 10 lbs of produce a month.

EDUCATORS PICK BEST OF STEM WINNER 2026

TECH & LEARNING AWARDS OF EXCELLENCE BEST OF 2025 WINNER

TIME AMERICA'S TOP GREEN TECH COMPANIES statista 2025

Gardyn Devices: Where Design Meets Function

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Gardyn devices integrate technology and function, by combining innovative design with AI technology.

Gardyn utillizes up and coming concepts and design to provide a successful and low maintenance experience!

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How Gardyn works and recycles water.



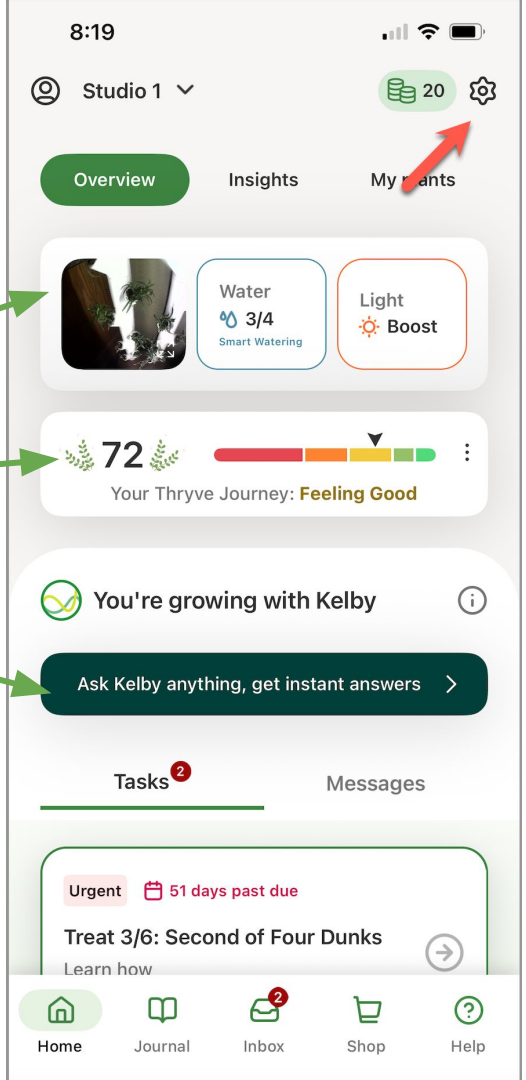
- Nutrient rich water is pumped up from the reservoir to the top of each column.
- It then flows down and fills each cup to capacity.
- Extra water and nutrients continue down the column to the remaining plants.
- The roots of the plants absorb the water and nutrients. A few hours later, the process repeats depending on the plants needs.



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Using the Gardyn App called Kelby

- Track watering and care needs
- Monitor plant health insights
- Follow alerts and reminders
- Use guidance before troubleshooting
- App = primary support tool





Expert plant help, instantly

Kelby Chat uses Gardyn's vast plant resource library to provide instant, personalized answers to any question, 24/7.



Why Educators Love Gardyn. 💚



Easy to Use, Easier to Maintain - Gardyn's fully AI-automated 30-plant indoor hydroponic plant system makes it easy to bring interactive learning to your school—no green thumb and no dirt required!

Compact Design - Fits in just 2 sq ft of space and produces 10 lbs of healthy food a month. With the built in light bars, you don't need to worry about placing the device near a window.

Highly Engaging for Students - Students take stewardship of classroom Gardyns much like class pets, enjoying the hands-on learning, responsibility, and leadership in their studies.

Adaptable to Any Curriculum - Educators across the country are using Gardyn to teach everything from plant science to nutrition while also reinforcing STEM skills like data analysis and problem-solving


How can we help students
experience agriculture, not
just learn about it?

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Pam Chambers

Illinois Ag in the Classroom Coordinator

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The Goal: Make Agriculture Tangible for Students



Connect students with where food comes from and what it takes to grow it.



Create opportunities for observation, inquiry, and hands-on participation.



Introduce agriculture in settings where students may have limited access to growing spaces or direct agricultural experiences.



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The Journey to Gardyn

From introductory devices to a multi-school program

01. Exploring Indoor Gardening

02. A Timely Connection with Ag in the Classroom

03. Looking for A Solution

04. Connecting with Gardyn

05. Finding a Path to Funding



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Brad Peters

Gardyn Chief Relations Officer

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What Do Students Actually Do?







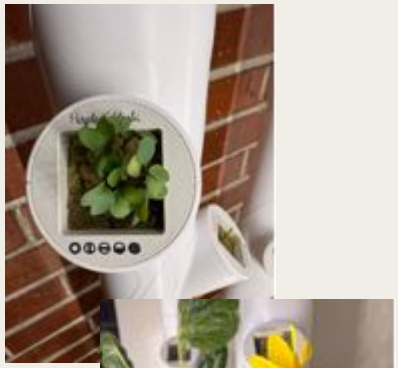
Participate in Building Ag Systems

01

Encourage students to help set up devices from day 1, analyze what makes Gardyn work and the differences between hydroponics and other garden types.

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What Do Students Actually Do?











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02 Adopt Plants & Observe Growth

Assign each student a plant to “adopt,” building ownership and responsibility from day one as they become experts in its growth. Have students track and record growth data over time.



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03 Explore Connections Across Farming

Connect students to cross curricular studies and how Farmers use Hydroponics to problem solve.

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What can we use the Gardyn and Plants to Learn?

- Agriculture connection
- Mindfulness
- Plant Visualization
- Art techniques
- Data collection
- Science and math concepts

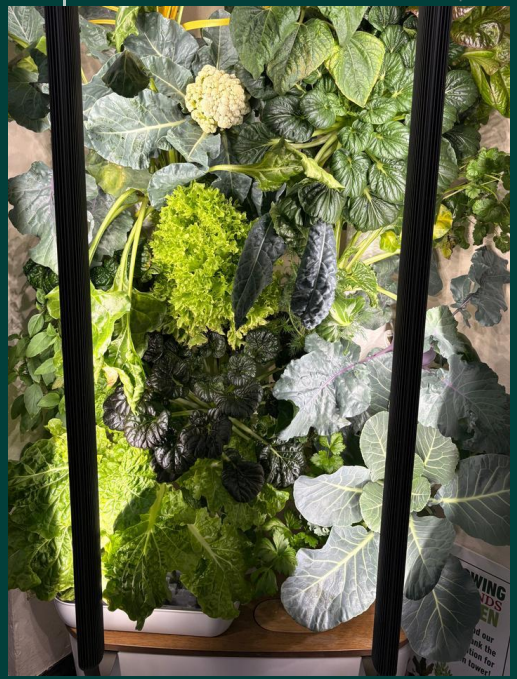
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Ways Farmers can use Hydroponics.

1. They can grow food when weather doesn't cooperate. 🥬🌶️🍅
2. The can produce during the winter. ❄️
3. They can make better use of water. 💦
4. They are learning how to use limited resources more efficiently. 👨🏽‍🎓
5. They can grow a lot of food in a small space. 🫑🫛
6. They can add to the farm income. 💰
7. They can grow specialty crops. 🌱
8. They can experiment with new agricultural technology. 👩🏼‍🔬👨🏼‍🔬

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Farmers are always concerned about....

WATER

NUTRIENTS

COMPUTERS

LIGHT

DATA

ENVIRONMENT

AUTOMATION



Compare Irrigation Systems



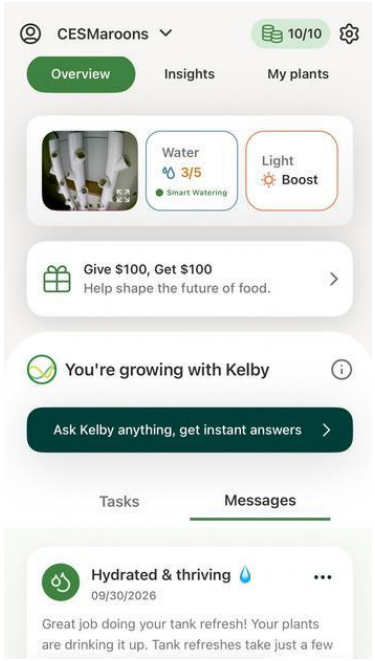
Center Pivot vs Drip Irrigation

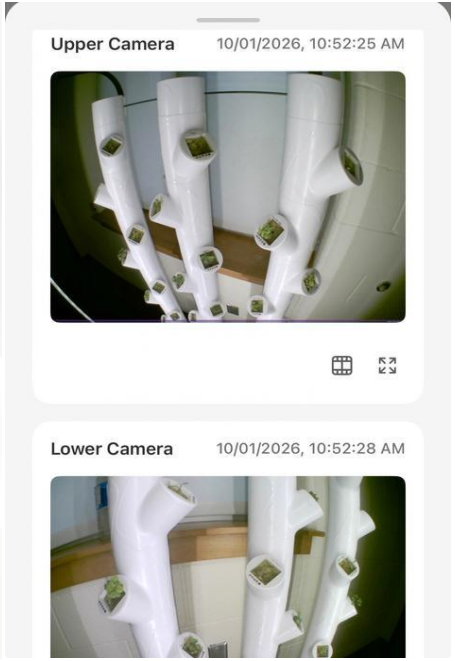
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Technology













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From Seed to Schoolwide Harvest

A shared growing experience across K–12.

- Students across rural county schools followed plant growth at different grade levels.
- The school brought everyone together for its first harvest.
- Students watched the greens being harvested and prepared for lunch.
- Some tried vegetables they had never tasted before and expressed attachment to the plants they had watched grow.

Students saw the full journey from growing to eating and experienced the excitement of harvesting their plants.



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Young Leaders Become Garden Builders and Teachers

A fifth-grade leadership team takes ownership.

- Students asked how much the garden would produce, whether the food was healthy, and how plants could grow without soil.
- They helped build the school's sixth Gardyn, learning about its components and the importance of plant placement and light intensity.
- They documented their work and prepared to teach other students during Stewardship Day.

Students moved from asking questions to building, explaining, and sharing what they learned.



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When Learning Leads to Community Impact

Growing food inspires empathy and purpose.

- Students initially proposed selling their harvest at a farmers market.
- After exploring what they could realistically produce, they chose to donate the vegetables to people experiencing hunger.
- Their decision connected growing, food access, responsibility, and service to others.

The learning extended beyond plant science into student agency, empathy, and community care.


The “What If?” Moments That
Drive Discovery

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Turn student questions into investigations.

- Why can plants grow without soil?
- How much light do different plants need?
- What happens if we put a plant in the wrong light intensity?
- How do seed pods and growing media support early plant growth?

Connect these questions to hypotheses, comparisons, controlled experiments, and systems thinking.

- STEM
- AI Literacy
- Wellness
- Career Readiness
- Sustainability
- Collaboration
- Engagement



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From the Classroom Garden to the Larger Food System

Help students connect the small system to the big picture.

- Compare indoor hydroponics with greenhouses and outdoor crop production.
- Explore vertical growing, sustainability, and the technology used in modern farming.
- Use students' interest in the garden's app and growth tracking to introduce other agricultural technologies, such as satellite-guided combines.
- Reinforce the role of farmers and the knowledge, labor, and technology behind food production.

The Gardyn is a vehicle for agricultural awareness, not a replacement for traditional farming.

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Build a Program That Grows With Students

Secure engagement across your school community to create a unified, sustainable ecosystem of support.

Build Student Leaders

01

Invite older students, such as FFA, to mentor young ones with Gardyn systems. Encourage meaningful Gardyn roles for care and maintenance milestones.

Create Cross-Curricular Connections

02

Connect fresh classroom harvests directly to science, literacy, nutrition, and project-based learning.

Build Interdepartmental Champions

03

Build partnerships with school leaders, teachers, families, grant providers, and community organizations.

Family Outreach

04

Extend classroom success to the home by involving parents in harvests, culinary events, and community farmers markets.

Wellness Teams

05

Leverage indoor vertical gardens to promote nutritional education, green-space mindfulness, and healthy student choices.



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Cultivating Curiosity in the Next Generation of Agricultural Thinkers

1. Student understanding grows when you center experiential learning.
2. Understanding can grow into leadership, empathy, and innovation in agriculture.
3. Educators don't need to start with a large program to create meaningful agricultural learning experiences - all it takes is a seed to start.

What could your students grow?









Heart of ILLINOIS COMMUNITY FOUNDATION

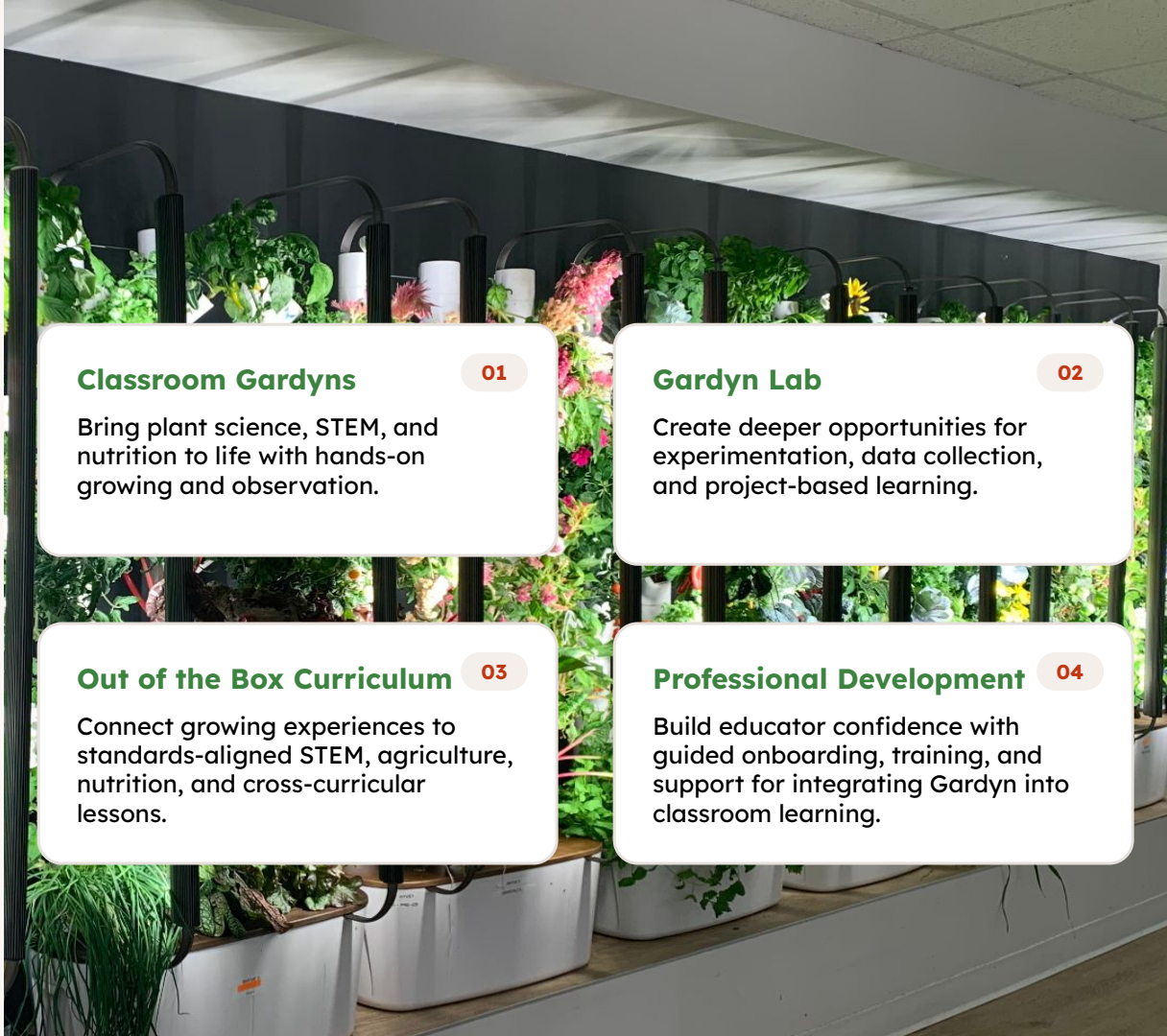
Constellation


Q&A / Discussion

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What could your Gardyn Program look like?

Build a hands-on agriculture learning experience that fits your students, space, and goals.



Classroom Gardyns
01

Bring plant science, STEM, and nutrition to life with hands-on growing and observation.

Gardyn Lab
02

Create deeper opportunities for experimentation, data collection, and project-based learning.

Out of the Box Curriculum
03

Connect growing experiences to standards-aligned STEM, agriculture, nutrition, and cross-curricular lessons.

Professional Development
04

Build educator confidence with guided onboarding, training, and support for integrating Gardyn into classroom learning.



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Connect with Gardyn

Schedule a meeting with the Gardyn team to learn how to start this in your area

Email Us: schools@mygardyn.com

Our website: https://mygardyn.com/school-gardens/

Interested in learning more?
Fill out our form here, and one of our Education partners will connect with you!