Massachusetts Farm and Sea to School Conference

December 6, 2018

Farm to School Curriculum Integration

Salem Public Schools and Mass Audubon

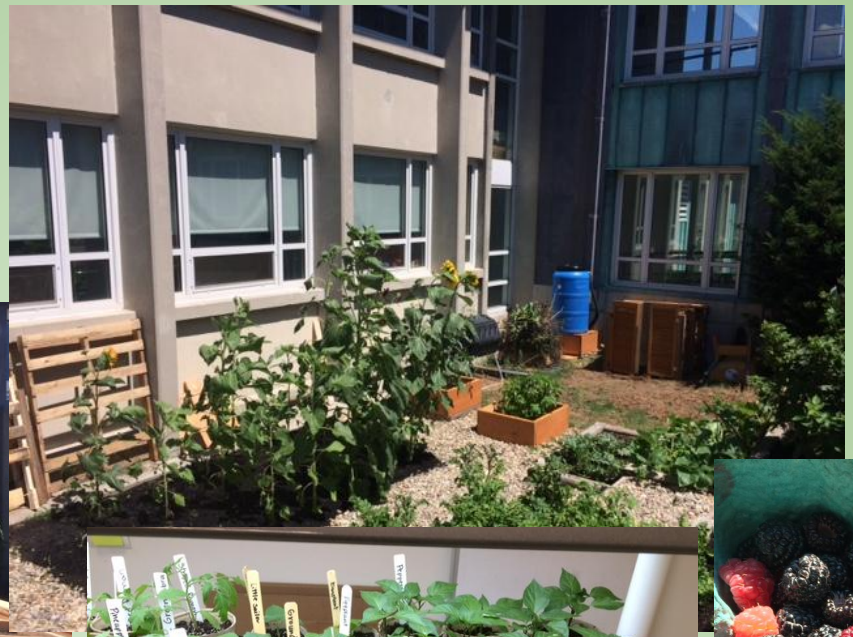
WITCHCRAFT HEIGHTS Elementary School

Agenda:

- Presentation - 15-20 minutes
- Question & Answer
- Networking/Work time

Getting started

The story of our garden...



Unit and Standards Alignment by Grade Level (K-2)

- **Kindergarten:** Students will know that there is a school garden, and will observe and talk about seasons in the garden. (Science Unit 4, Unit 7, Unit 8) **Standards addressed: Science- K.LS.1.1, ELA- K.SL.1, K.SL.4** Plant the sunflower garden (K.LS.1)
- **1st Grade:** How does weather affect the garden? Study how the length of day corresponds to the growing season, and the amount of sunlight and shade present in the garden. (Science Unit 5, Unit 8)
- **Standard addressed: 1.ESS.1.2)** Garden observations of plants. (Science Unit 6) **Standards addressed: 1.LS.1, 1.LS.3.1**
- **2nd Grade:** Create a butterfly/pollinator garden out front of the school as part of habitat study. (Science Unit 5) **Standards addressed: 2.LS.2.1, 2.LS.2.2, 2.LS.4.1**

Unit and Standards Alignment by Grade Level (3-4)

- **3rd Grade:** Students will use technology and engineering to plan, create a model/representation, and plant vegetable gardens using the area model for multiplication and the square foot gardening method. (Math Unit 4) **Standards addressed: 3.MD.6, 3.MD.7, 3.MD.7a, 3.MD.7b, 3.MD.7d** ELA extension: Students will read non-fiction texts about the plants they will be planting (Unit 4- research project? – **Standards: 3.RI.1, 3.RI.4, 3.RI.5, 3.RI.7, 3.RI.10**) Science Extension: Create a plant life cycle poster of chosen plants **Standards: 3.LS.1, 3.LS.2**
- **4th Grade:** Students will explore the flavor profile of foods from the Dominican Republic, and where these foods originated as a beginning exploration of Dominican culture and historical influences. (Social Studies Unit 3) **Standards addressed: D2.Geo.8.3-5, D2.Geo.4.3-5., D2.Geo.7.3-5, W.4.7, RI.4.7**

Unit and Standards Alignment by Grade Level (Grade 5)

- **5th Grade:** Students will find the volume of the garden beds in order to find out how much soil it takes to fill the garden. (Math Unit 5) **Standards addressed: 5.MD.5a, 5.MD.5.b** (Science Unit 4) Movement of matter (composting) and comparing composter designs in the school garden **Standards addressed: 5.Ls.2.1, 5.LS.2.2, 5.ETS.3**
- **Sub-separate Special Education Classrooms:** Sensory integration through digging in soil/planting seeds, plant explorations, garden matching/ID, nature collections, art in the garden

- **Other ways to use the garden space:**
- **Mindfulness in the garden**
- **Silent reading**
- **Observation**
- **Morning meeting**
- **Garden scavenger hunt (plants, bugs, ABC's, textures, colors)**

Grade 3-4 FTS Alignment

Grade 3 Math Unit: Area Model Multiplication (In Progress)

Atlas Grade 3

Grade 3 Unit 4 Student Work

Grade 3 Unit 4 Lesson Plan

Kitchen Garden Planner

Grade 4 Social Studies Unit: Dominican Republic

Intro to Grade 4 Dominican Republic Unit

CEL World Flavor Profiles Lesson

Atlas Grade 4 Unit 3

Grade 5 FTS Alignment

Grade 5 Science Unit 4: Matter through Ecosystems: Compost Project Learning

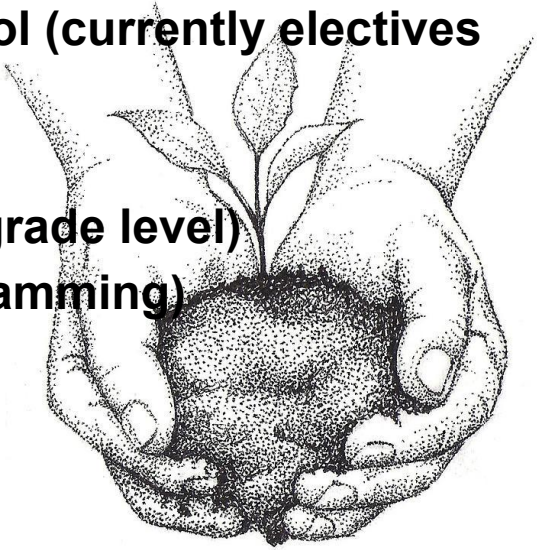
Grade 5 Science Atlas

Grade 5 Unit 4 Trajectory

Do the Rot Thing

Future Goals

- ★ **FULLY Integrate FTS lessons/units into curriculum (get District level Admin support)- more project/place based learning**
- ★ **Get funding for FTS position**
- ★ **Vertically align curriculum with middle/high school (currently electives MS/freight farm HS)**
- ★ **Build more community connections**
- ★ **FTS Month celebration (whole school or at each grade level)**
- ★ **School Farmers market/grants (funding for programming)**



Elementary School Garden Educator

The Garden Educator is a full-time specialist position that offers critical support to teachers and students to ensure that a school can maximize the educational potential of the garden. The Garden Educator leads hands-on, experiential, project-based, place-based STEM-focused garden lessons, nutrition education classes, and provides opportunities for engagement in cross-curricular learning experiences for students under the larger umbrella of Farm to School curriculum. The garden educator works closely with classroom teachers, and provides professional development related to incorporating the garden into lessons and units as needed. The Garden Educator acts as a resource for teachers as they plan their own cross-curricular lessons in the outdoor classroom, and models skills that teachers need to feel comfortable using the garden to teach science standards.

Questions?

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Integrating Garden Education into the K-12 Curriculum

Practical Tips for Educators

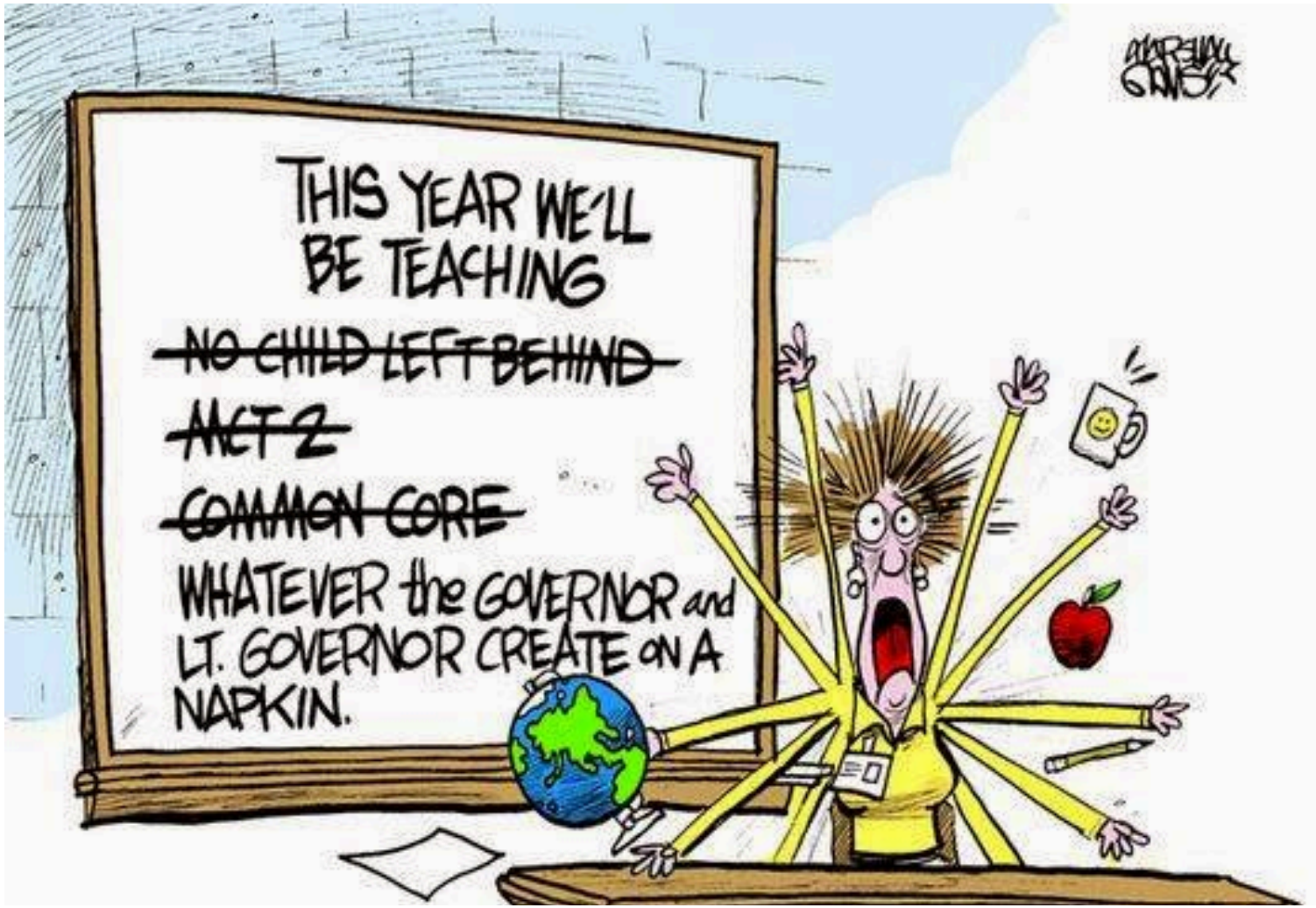
Who is here and what is important to you?

- Your Name
- School or organization and your role
- What are you hoping to get out of today's workshop?

Garden Education:
We know it works

- *Health and behavioral benefits of hands on, outdoor work is well documented*
- *When integrated with curricular goals, garden work can lead to increased academic comprehension and retention*
- *Garden-based education has most significant benefits for students who struggle*
- *Frames NGSS science practices*

Reasons and Roadblocks



Garnering Support

1. *Start with the teacher. Ask questions, then listen, listen, listen.*
2. *Ditto with administrators: what are THEIR priorities?*
3. *Involve parents with letters, food, greetings at drop off and pick up, assemblies, digital backpack updates.*
4. *Garner positive publicity for your school and teachers*

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Management tips:

- Create a routine and schedule at the beginning of the year
- Build slowly and deliberaoutside skills tely
- Plan for the seasons
- Give something to hold (e.g. clipboard, collecting container)
- Give specific prompts to focus the group

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Curriculum tips:

- Replace, don't add
- Give prompts that link to further exploration and discussion inside
- Document and share
- Use an essential question to focus your study
- Many existing resources out there that link to the standards

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Curriculum resources:

SELECT GRADE PRE-K K 1 2 3 4 5 6 7 8 9-12

SORT BY SEASONS UNITS STANDARDS BOOK LIST

SCIENCE MATH SOCIAL STUDIES ENGLISH

1st Grade: Farms and Farming

IN FIRST GRADE,

students engage in a year-long exploration of farms and farming on Martha's Vineyard.

In collaboration with the MV Museum, students step back in time through stories, artifacts and photographs sharing the lives of island farmers from centuries earlier. They return to the present by visiting island farms and recognizing the vibrant farming community the island still holds.

CONNECTIONS TO IGS LEARNING GOALS:

Appreciate the farming profession
Know that everyone can grow food
Understand the connection between healthy soil, healthy plants and healthy people

ESSENTIAL QUESTIONS:

Where does food come from?
Why do we have farms?
What do farmers do?
What is a farm?

1-ESS1-2 : Analyze provided data to identify relationships among seasonal patterns of change, including sunrise and sunset time changes, seasonal temperature and rainfall or snowfall patterns, and seasonal changes to the environment.

- Jobs of a Farmer; Worksheet
- Garden Observations
- Introduction to Seasons and Light
- Seasons and Light Planting Experiment
- Moon Gardening Unit

1-LS1-1 : Use evidence to explain that: a. different animals use their body parts and senses in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find and take in food, water and air; and b. plants have roots, stems, leaves, flowers, and fruits that are used to take in nutrients, water and air, produce food (sugar), and make new plants.

- Little Sprout
- Farm Jobs: Machines and Animals
- Seasons and Light Planting Experiment
- Farm Animals
- Farm Vocabulary
- Farm Food Web

[Online Curriculum Toolkit](#)
from Island Grown Schools

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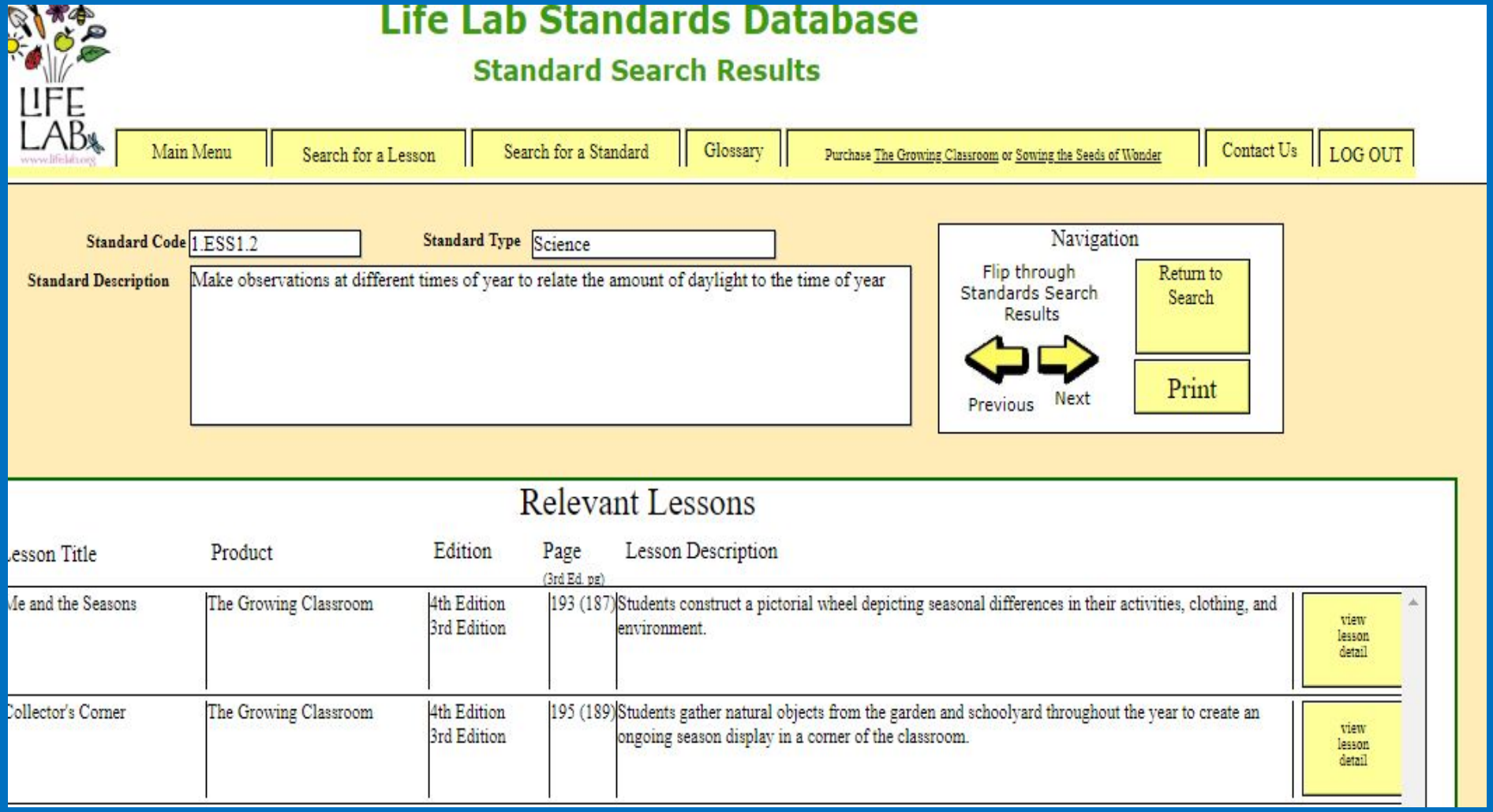
Curriculum resources:



Life Lab Standards Database

Standard Search Results

Main Menu | Search for a Lesson | Search for a Standard | Glossary | Purchase The Growing Classroom or Sowing the Seeds of Wonder | Contact Us | LOG OUT

Standard Code 1.ESS1.2 **Standard Type** Science

Standard Description Make observations at different times of year to relate the amount of daylight to the time of year

Navigation

Flip through Standards Search Results

Previous Next

Return to Search

Print

Relevant Lessons

Lesson Title	Product	Edition	Page (3rd Ed. pg)	Lesson Description	
Me and the Seasons	The Growing Classroom	4th Edition 3rd Edition	193 (187)	Students construct a pictorial wheel depicting seasonal differences in their activities, clothing, and environment.	view lesson detail
Collector's Corner	The Growing Classroom	4th Edition 3rd Edition	195 (189)	Students gather natural objects from the garden and schoolyard throughout the year to create an ongoing season display in a corner of the classroom.	view lesson detail

Online Standards Database
from Life Lab

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Making time:

- Create “lightening strike” tasks.
- Set up long term investigations; make data collection a quick job
- Use walk & talks
- Use silence to expand time
- Rely on routine and schedule
- Combine literacy or social studies and science
- Invite service providers out with you.

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Finding resources:

- Dirt, insects, weeds and trees are plentiful and cheap.
- For garden supplies, seek out small grants through NSTA, Whole Kids, or Annie's
- Build knowledge through short, accessible videos or PD at NSTA, MAS or Life Lab
- Familiarize yourself with the NGSS standards
- Online tools such as Children and Nature Network, NAAEE, Life Lab, ASAP Growing Minds, and Island Grown Schools

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