

Farm to School

Education & Curriculum Integration

April 16, 2015

To *hear* the webinar, dial: 888-566-1192
Passcode: 5894178





Tegan Hagy

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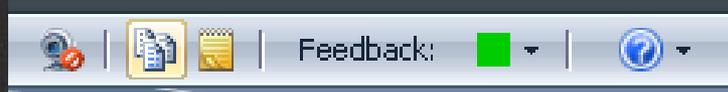
Christina Conell

*Program Analyst
USDA Food & Nutrition Service*
Christina.Conell@fns.usda.gov



Housekeeping

- To download handouts:



- To make a comment or ask a question:



- » Type your question or comment using the Q&A tab
 - » Ask your question or comment on the phone at the end of the webinar by pressing *1
- Please turn off your computer microphone, all audio will be through the phone.
 - The webinar will be recorded and available on the USDA Farm to School website: <http://www.fns.usda.gov/farmentoschool/webinars>

SNA Continuing Education Units



To Receive your SNA CEU certificate email Bob at:

Robert.gorman@fns.usda.gov



Farm to School Grants 2016

Be sure to check out our priority areas in summer and pre-k meals programs!



*Training Grant Letter of Intent due
April 30th!!!*

www.fns.usda.gov/farmentoschool/farm-school-grant-program



Reminder!

THE
FARM *to* SCHOOL
CENSUS



Poll:

Who's on the line?





Overview

- Introduction: What is farm to school education?
- Education tips and strategies:
 - » Maine educator: garden as a classroom, classroom as garden
 - » North Carolina non-profit: early childhood interventions, teacher training & community engagement
 - » Atlanta Public School teacher: classroom and cafeteria integration curricula
- Resources
- Questions and Peer Sharing

Local Food



Food Education



THE
FARM *to* SCHOOL
PROGRAM

Farm to School Education

Any lesson or tool that engages students in thinking about food, agriculture, and nutrition is farm to school education.





THE
FARM *to* **SCHOOL**
PROGRAM





THE
FARM to SCHOOL
PROGRAM

Our Presenters



Jon Thurston
Agricultural Coordinator
RSU 20 School District
Maine







Belfast COOP Store

All soils, bark & mulches 15% off
Produce the

COFFEE & TEA
SPICES & HERBS
SUPPORT

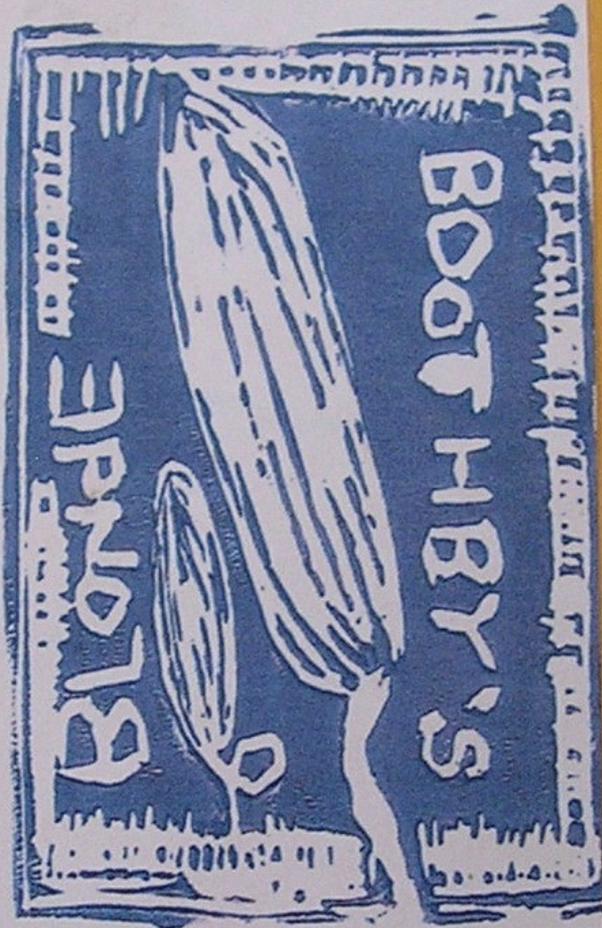
Cooperatively since 1976
COOP Store

WHOLE NATURAL FOODS
GOURMET FOOD
FRUIT & VEGETABLES
MEAT & SEAFOOD

FRESH BAKED GOODS
BAGELS • BREAD • PASTRIES
FINE WINE & BEER
50 VARIETIES CH

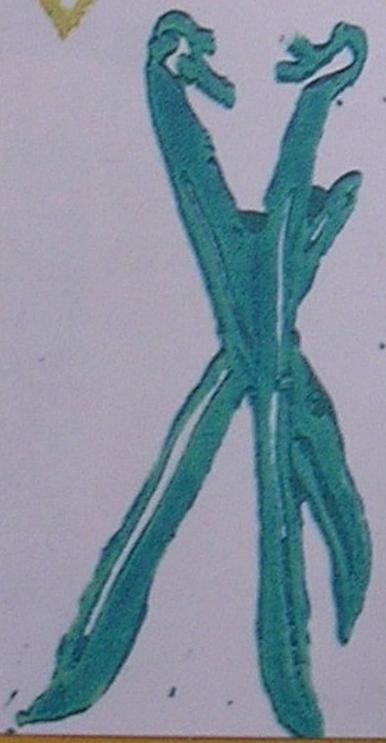
Grateful Harvest ORGANIC

Boothby's Blonde Cucumber
Beautiful, small, white cucumber
Excellent non-bitter flavor
THMS student saved seed



Rattlesnake Snap Pole Bean
Our very favorite snap bean!!!!
THMS Student Saved Seed

HEIRLOOM
BEANS





THMS
ORGANIC SEEDS

338-3320

\$1.25

Organic
\$8.96/lb

Organic
\$6.96/lb

Organic
\$5.96/lb

Organic
\$4.96/lb

Organic
\$3.96/lb

Organic
\$2.96/lb

Organic
\$1.96/lb

Organic
\$0.96/lb

Ball
Wide Mouth
Lids with Bands

Organic
\$1.99

Organic
\$1.99

Organic
\$1.99

Organic
\$1.99

Organic
\$1.99

Organic
\$1.99

Organic
\$4.96/lb



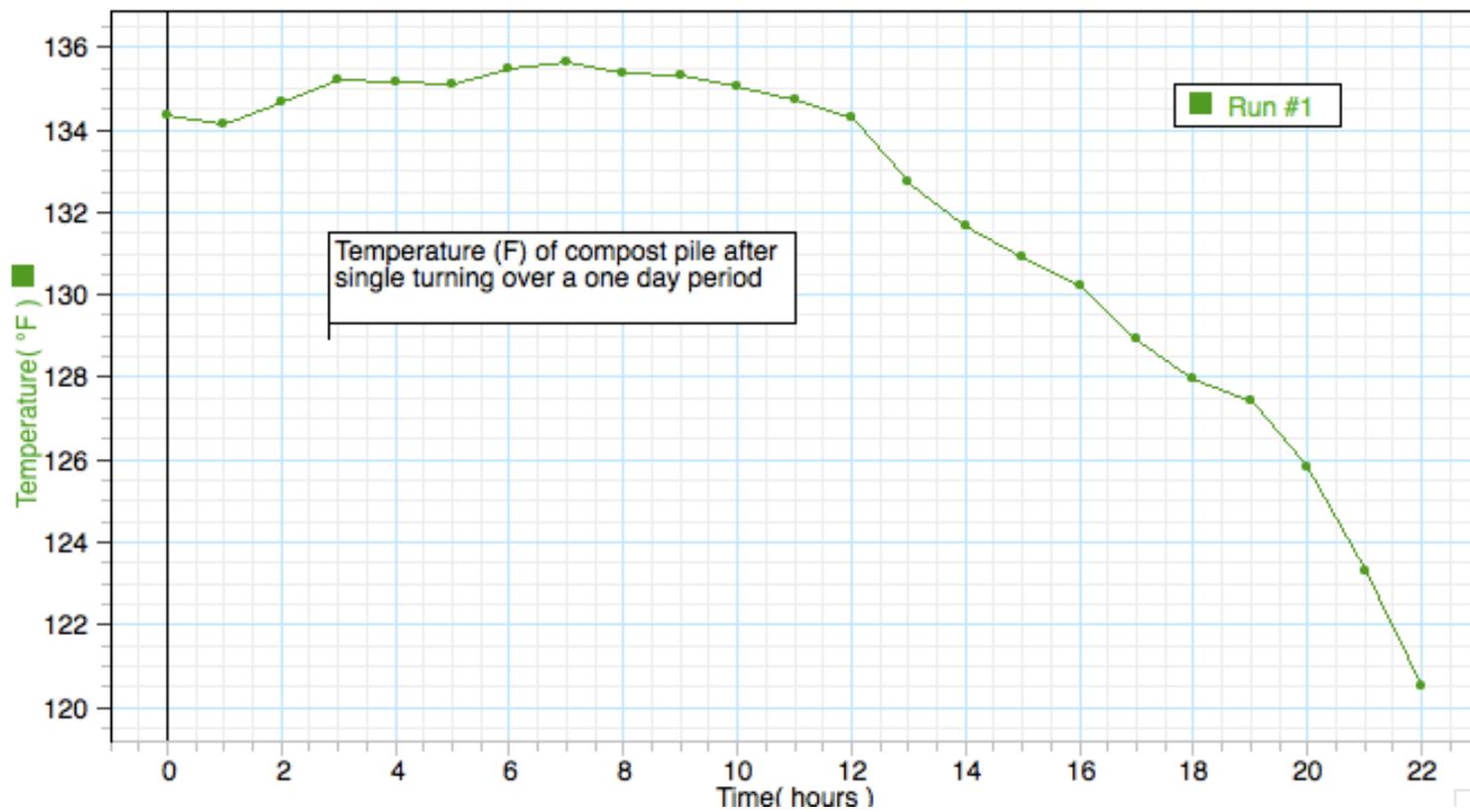


gut deer?
MADRID









PUMPKIN



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HUTH SEED CO., Inc.
SAN ANTONIO, TEXAS

Our Presenters



Jenna Mobley

Teacher

Atlanta Public Schools

Georgia

Models for Farm to School Programming

Jenna Shea Mobley

Springdale Elementary School, Community Farmers Markets, The Wylde Center, Stewart Center, Forever Family

Science Classroom

Garden Classroom

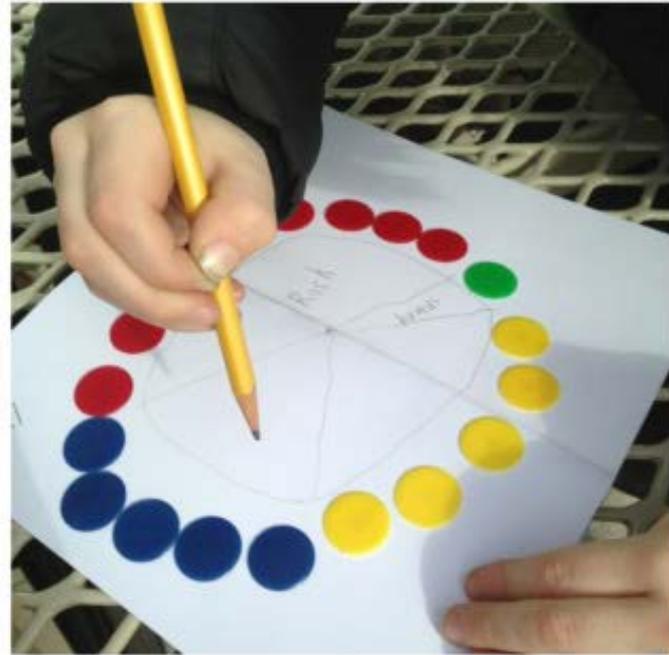
Math Classroom

Kitchen Classroom

Cafeteria Classroom



Farm to School in the Science Classroom



Planning for Farm to School in the Science Classroom

Atlanta Public Schools – Fall 2014

	8/4	8/11	8/18	8/25	9/1	9/8	9/15	9/22	9/29	10/6		10/13	10/20	10/27	11/3	11/10	11/17		12/1	12/8	12/15
K	Scientific Inquiry Skills		Living and Non-Living		Plants						Fall Break	Animals						Break	Matter		
1			Plants and Animals						Magnets						Magnets						
2			Life Cycles						Seasonal Changes						Properties of Matter						
3			Habitats						Interdependence of Man						Heat Energy						
4			Ecosystems						Sound and Light						Forces and Motion						
5			Cells and Microorganisms			Genetics			Classification						Chemical and Physical Changes						

An Overview of Science Standards

Earth Science

Astronomy (K, 2, 4, 6)

Rocks and Soils (K, 3, 5, 6)

Weather and Seasons (1, 4, 6)

Life Science

Features of Plants and Animals (K, 1, 3, 5, 7)

Life Cycles (K, 1, 2, 5, 7)

Habitats and Ecosystems (3, 4, 7)

Physical Science

Matter (K, 2, 5, 8)

Energy - Motion (K, 2, 4, 8)

Energy - Sound (1, 4, 8)

Energy - Light (1, 4, 8)

Magnets (1, 3, 5, 8)

Georgia Performance Standards (By Domain, K-12)

	Earth Science	Life Science	Physical Science
K	<ul style="list-style-type: none"> Day and night sky Rocks and soils 	<ul style="list-style-type: none"> Living and non-living Plants and animals Parents and offspring 	<ul style="list-style-type: none"> Physical attributes, 5 senses Composition of materials Motion
1	<ul style="list-style-type: none"> Weather patterns Seasons 	<ul style="list-style-type: none"> Characteristics of living things Basic needs of living things 	<ul style="list-style-type: none"> Sound Shadows Magnets
2	<ul style="list-style-type: none"> Motion and patterns of celestial bodies Changes of the earth's surface 	<ul style="list-style-type: none"> Life cycles 	<ul style="list-style-type: none"> Changing attributes of materials States of matter (solid, liquid, gas) Motion, pushes and pulls
3	<ul style="list-style-type: none"> Rocks and minerals of Georgia Soils and weathering Fossils 	<ul style="list-style-type: none"> Habitats Features of organisms in Georgia Pollution and conservation 	<ul style="list-style-type: none"> Heat energy Magnets
4	<ul style="list-style-type: none"> Stars and star patterns Solar system Weather - data and forecasting 	<ul style="list-style-type: none"> Ecosystems Food web / food chain Adaptation - survival / extinction 	<ul style="list-style-type: none"> Light and sound Force, mass, and motion (simple machines) Effects of gravity
5	<ul style="list-style-type: none"> Landforms of Georgia Effects of constructive and destructive forces Role of technology in control 	<ul style="list-style-type: none"> Classification of organisms Inheritance of traits Learned behaviors Cells and microorganisms 	<ul style="list-style-type: none"> Conservation of matter Physical changes Chemical changes Electricity and magnetism
6	<ul style="list-style-type: none"> Meteorology Oceanography Earth materials Earth in space Human impact on Earth Energy sources 		
7		<ul style="list-style-type: none"> Diversity of living things Dichotomous key Structure and function of cells Tissues, organs, and organ systems Purpose of human body organ systems Heredity and genes Ecosystems Cycling of matter and energy Biological evolution Natural selection and fossil record 	
8			<ul style="list-style-type: none"> Nature of matter Atomic theory / periodicity Conceptual acid / base - phase changes Law of conservation of matter Law of conservation of energy Conceptual laws of motion and forces Conceptual energy transformation Wave properties Electrical / magnetic forces

High school students choose from a variety of in-depth courses including: Astronomy, Biology, Botany, Chemistry, Earth Systems, Ecology, Entomology, Environmental Science, Epidemiology, Forensic Science, Geology, Human Anatomy and Physiology, Meteorology, Microbiology, Oceanography, Physical Science, Physics, Zoology.

Farm to School Applications in Earth Science Units

Weather and Seasons

- 1 - Weather patterns and seasons
- 4 - Weather data and forecasting

Astronomy

- K - Day and night sky
- 2 - Motion and patterns of celestial bodies
- 4 - Solar system, stars, and star patterns

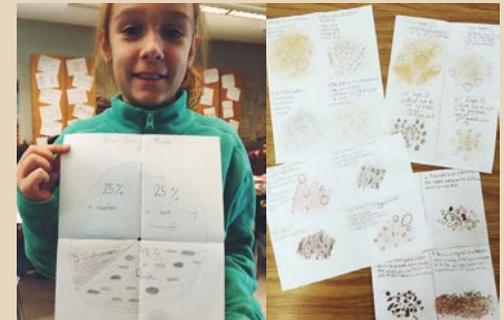


Silent Reflection Time Outside *(to bring awareness to the season and the changes)*

- What is happening with the weather? What is the temperature? What is the recent rain fall? (Track on a line graph)
- What is happening in the sky? Where is the sun/moon positioned? What do the clouds look like? (Model)
- What is happening with the trees? (Illustrate)
- What is happening in the garden? (Illustrate)
- What is happening with the people? What are people wearing? What are people doing? (Illustrate)
- What is happening with the animals? (Illustrate)

Rocks and Soils

- K - Rocks and soils
- 3 - Rocks and minerals, weathering, soils, fossils
- 5 - Constructive and destructive forces, landforms of Georgia



Farm to School Applications in Life Science Units



Features of Plants and Animals

- K - Living and non-living / plants and animals
- 1 - Characteristics of living things
 - Plant parts - root, stem, leaf, flowers
 - Animal characteristics - appearance, motion, growth, basic needs
- 3 - Adaptations of living things
- 5 - Classification of living things
 - Animals - vertebrate/invertebrate; fish, amphibian, reptile, bird, mammal
 - Plants - families, genus

Life Cycles

- K - Parents and offspring
- 1 - Plant and animal needs to grow and thrive
- 2 - Life cycles of mammal, bird, amphibian, insect, tree, fungi
- 5 - Inheritance of traits



Habitats and Ecosystems



Farm to School Applications in Physical Science Units

Matter

- K - Physical attributes and composition of matter
- 2 - Changing states of matter
- 5 - Physical and chemical changes

Energy - Motion

- K - Motion
- 2 - Pushes and pulls
- 4 - Force, mass and motion (simple machines)

Energy - Sound (1, 4, 8)

Energy - Light (1, 4, 8)

Magnets (1, 3, 5, 8)



Farm to School in the Garden Classroom



Farm to School Lessons in the Garden Classroom



Farm to School in the Math Classroom



Planning for Farm to School in the Math Classroom

Atlanta Public Schools – Fall 2014

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K	Geometry			Counting and Cardinality							Fall Break	Numbers and Operations in Base Ten						Break	Operations and Algebraic Thinking		
1	Numbers and Operations in Base Ten											Operations and Algebraic Thinking							Operations and Algebraic Thinking		
2	Numbers and Operations in Base Ten						Operations and Algebraic Thinking					Operations and Algebraic Thinking			Measurement and Data				Measurement and Data		
3	Numbers and Operations in Base Ten						Operations and Algebraic Thinking					Operations and Algebraic Thinking							Operations and Algebraic Thinking		
4	Numbers and Operations in Base Ten						Fractions					Fractions							Fractions		
5	Operations and Algebraic Thinking											Numbers and Operations in Base Ten							Fractions		

An Overview of Math Standards

Counting and Cardinality (K)

Numbers and Operations in Base Ten (K-5)

The Number System (6-8)

Operations and Algebraic Thinking (K-5)

Expressions and Equations (6-8)

Numbers and Operations with Fractions (3-5)

Measurement and Data (K-5)

Geometry (K-8)

Ratios and Proportional Relationships (6-8)

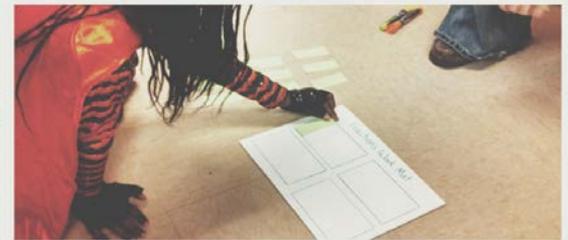
Statistics and Probability (6-8)

High school students delve deeper into statistics and probability, number and quantity, algebra, and functions.

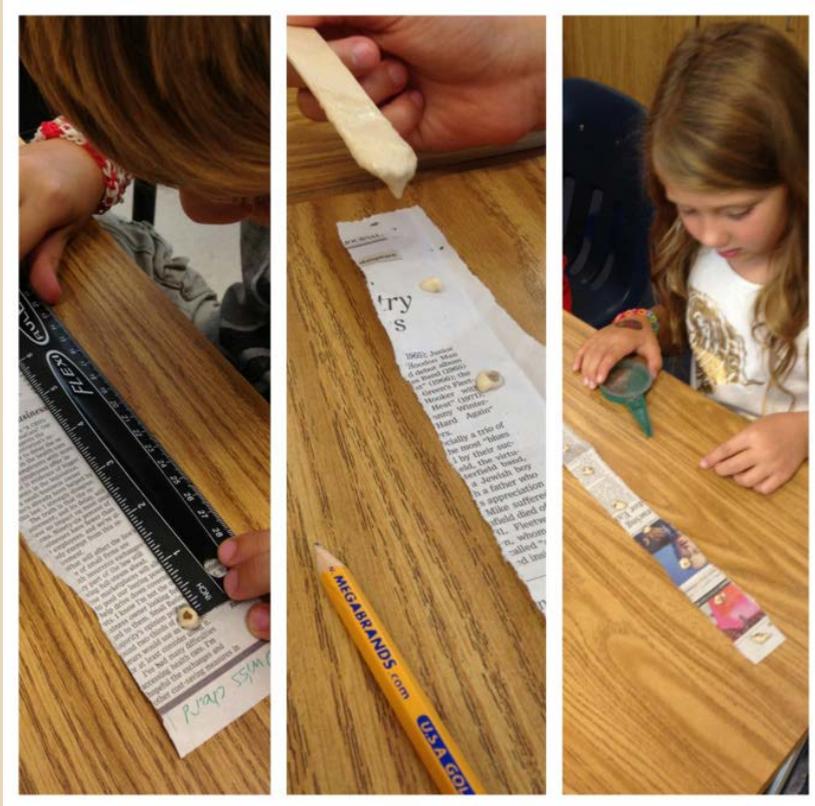
Farm to School Applications in Fractions Units



Pumpkin Smoothie
x3
 $\frac{1}{2}$ cup pumpkin ($\frac{1}{2}$)
 $1\frac{1}{2}$ banana ($\frac{1}{2}$)
 $2\frac{1}{4}$ cup yogurt ($\frac{3}{4}$)
3 tbsp honey (1)
3 cup crushed ice (1)



Farm to School Applications in Measurement Units



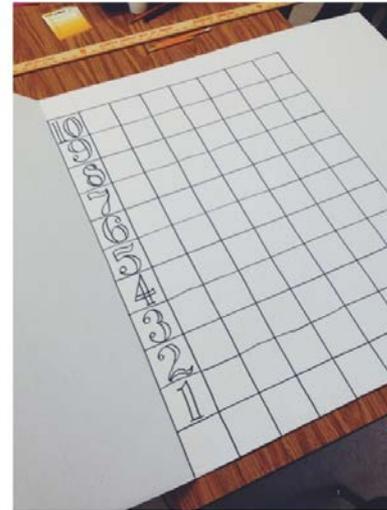
Farm to School Applications in Money Units



Farm to School Applications in Data and Graphing Units

Kth 32 students out of 135 = 23.7% of the grade
 1st 29 students out of 120 = 24.1% of the grade
 2nd 29 students out of 113 = 25.6% of the grade
 3rd 23 students out of 109 = 21.1% of the grade
 4th 29 students out of 104 = 27.8% of the grade
 5th 26 students out of 86 = 30.2% of the grade

 5th grade got the highest %, but lets give a clap to everybody who walked to school actually 168 students out of 670 walked! That's 25.1% of the school!



Switch Witch
Participation

Brown	THS THS II	42	
Brvant	THS II	155	
Gullidge	THS THS I		
Hobbs	THS THS	35%	
McClavin	THS		
Pluraj	II		
Emerson	THS THS I	42	
Madison	THS I	120	
Maximan	THS		
Purcell	THS THS	35%	20
White	THS THS I		
Beery	THS IIII	31	667
Fellows	THS III	113	
Marquis-Davis			
Peery	THS THS II	27%	30%
Senelcy	II		
Bodger	THS I	32	
Langrich	THS I	109	
Lockwood	THS IIII		
Neal	THS THS I	34%	
Windham	THS	25	
Butler	THS III	104	
Nathan	THS I		
Southcombe	THS I	24%	
Therman	THS I		
Hall	THS	38	
Mckie	THS	86	
Redel	THS	21%	
Binans	THS		

Total: 20
 667

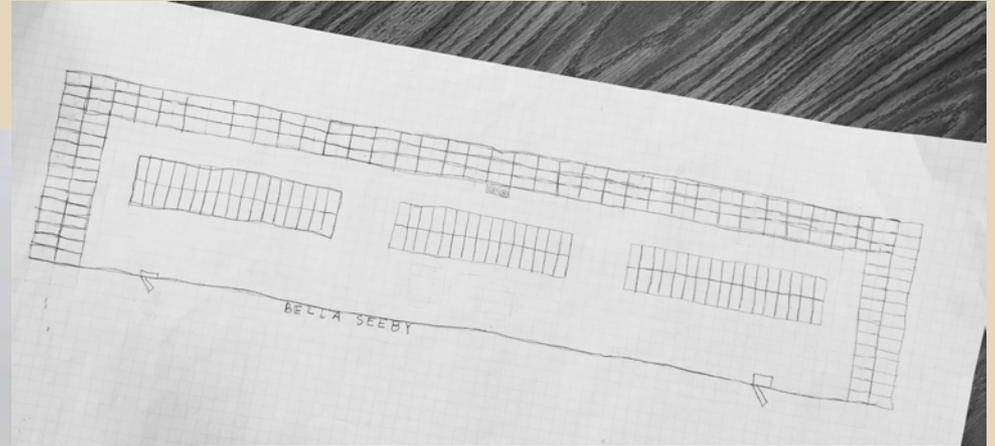
Switch Witch

70 lbs
 30 lbs
 30 lbs
 35 lbs
 15 lbs
 150 lbs of candy!

 = 175 pieces of candy
 We filled our container 63 times.
 175
 x 63
 = 11,025
 = 11,025 pieces of candy!

We learned that each candy has about 10 grams of sugar.
 11,025 candies x 10 g of sugar = 110,250 g of sugar

Farm to School Applications in Geometry Units



Farm to School in the Kitchen Classroom



Planning for Farm to School in the Kitchen Classroom



Harvest Calendars

Farmers Market Newsletters

WINTER MARKET EVERY SATURDAY

MACDONOUGH & TRINITY ST
DOWNTOWN DECATUR
10 AM - 1 PM

VEGGIES PASTRIES Meats CHEESES

HOT FOOD SPREADS BREADS & MORE

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What's In Season?

- Arugula
- Beets
- Bok Choy
- Cabbage
- Carrots
- Cheese
- Herbs
- Honey
- Jams
- Kale
- Lettuce
- Mustard Greens
- Meats
- Radishes
- Sweet potatoes
- Turnips
- Winter Squash

This Week's Vendors

- 4 Bellies Farm

This Week at the Market...

Hello 2015! We are extremely excited to offer one of the few winter markets in the city. Each Saturday morning from January to March you can count on local produce from several farms bringing meats and vegetables. We have also a wonderful array of prepared food to have at market or to take home, from some of your favorite vendors and new ones as well.

Keep an eye out for the upcoming newsletters and social media communications to learn more about the products available during the winter months.

We are open from 10am to 1pm next to Decatur High School, on the corner on N. McDonough and Trinity Streets. See you there!

Winter Vendors

- 4 Bellies Farm
- Capra Gia
- Crepe masters
- Earth Biscuit Crackers - Starting Jan. 17th
- Formaggio
- Furrowed Earth Farm
- Heavenly Breads
- Hidden Springs Honey
- Jen's Pesto
- Jimella's Bakery
- La Calavera Bakery
- Low Low Knows Bones
- Mountain Earth Farms
- Moon Organics

Farm to School Lessons in the Kitchen Classroom



Farm to School in the Cafeteria Classroom



Planning for Farm to School in the Cafeteria Classroom

Springdale Park Restaurant

Lunch Schedule				
	Teacher	Table #	Table Color	Monitor(s)
	Third grade			
10:00-10:30	Badger	1 & 2	Red	Ms. C. Williams
	English	3 & 4	Orange	
	Lockwood	5 & 6	Yellow	
	Neal	7 & 8	Green	
	Windham	9 & 10	Blue	
10:25-10:55	Kindergarten			Ms. Clark
	Braun	11 & 12	Purple	
	Bryant	13 & 14	Pink	
	Gulledge	15 & 16	Brown	
	Hobbs	17 & 18	Black	
	Mateferia	19 & 20	White	
10:50-11:20	Second Grade			Ms. Bennett
	Berry	1 & 2	Red	
	Fellows	3 & 4	Orange	
	Marquis-Dunn	5 & 6	Yellow	
	Perry	7 & 8	Green	
	Smiley	9 & 10	Blue	
11:15-11:45	First grade			Ms. Peebles
	Emerson	11 & 12	Purple	
	Madlem	13 & 14	Pink	
	Mallman	15 & 16	Brown	
	Purcell	17 & 18	Black	
	White	19 & 20	White	
12:05-12:35	Fourth grade			Ms. Lergie
	Butler	11 & 12	White	
	Naman	9 & 10	Black	
	Southcombe	7 & 8	Brown	
	Thurman	5 & 6	Pink	
12:25-12:55	Fifth grade			
	Hall	19 & 20	Purple	Mon-Jackson
	Mckie	17 & 18	Blue	Tues-Waldman
	Redel	15 & 16	Green	Wed-Harrison
	Riggins	13 & 14	Yellow	Thur-Pirnstill
				Fri-Watkins/Matias



Atlanta Public Schools
Elementary Lunch
April, 2015



Monday	Tuesday	Wednesday	Thursday	Friday
		1	2	3
		Whole Grain Cheese Quesadilla (v) Chicken Fajita Salad Refried Beans Mexicali Corn (GF) Banana	Turkey Philly Fish Nuggets Spicy Black Bean Wrap (v) Baked French Fries (GF) Fresh Sautéed Zucchini (GF) Whole Wheat Roll Diced Pineapples	Southern Style Baked Chicken (GF) Tuna Salad (GF) Sandwich Italian Vegetable Wrap (v) Baked Sweet Potatoes (GF) (LG) Sautéed Kale (GF) Corn Bread Fresh Orange Wedges (LG)
6	7	8	9	10
Spring Break	Spring Break	Spring Break	Spring Break	Spring Break
13	14	15	16	17
Turkey Pepperoni Pizza Cheese Pizza (v) Crispy Chicken Wrap Turkey Melt Fresh Mixed Vegetables (GF) Fresh Apple Slices (LG)	Taco Bar Turkey Quesadilla Spicy Black Bean Wrap (v) Spanish Rice Mexicali Corn (GF) Banana	Fish Nuggets Grilled Cheese Sandwich (v) Diced Turkey Salad w/ Crackers Steamed Broccoli (GF) Roasted Red Potatoes (GF) Whole Wheat Roll Applesauce	Produce of the Month Baby Carrots Meatloaf Spinach Dip (GF) w/ Tortilla Chips (v) Chef Salad w/ Crackers Mashed Potatoes (GF) Sautéed Green Beans (GF) Diced Peaches Whole Wheat Roll	Herb Roasted Chicken (GF) BBQ Turkey Sandwich Garden Vegetable Wrap (v) Rice Pilaf Fresh Sautéed Zucchini (GF) Fresh Orange Wedges (LG) Whole Wheat Roll
20	21	22	23	24
Beef Chili Vegetable Chili (v) Chef Salad w/ Crackers Steamed Broccoli (GF) Corn Bread Fresh Apple Slices (LG)	Sweet & Sour Chicken Turkey Melt Garden Vegetable Salad (v) (GF) w/ Crackers Vegetable Fried Rice Ginger Carrots (GF) Whole Wheat Roll Mixed Fruit	BBQ Turkey Bun BBQ Chicken Macaroni and Cheese (v) Corn on the Cob (GF) Baked Beans Whole Wheat Roll Banana	Salisbury Steak Baked Potato Bar (v) Turkey Philly Tuna Salad (GF) Wrap Mashed Potatoes Sautéed Green Beans Whole Wheat Roll Applesauce	Fish Nuggets Grilled Cheese Sandwich (v) Baked French Fries (GF) Fresh Mixed Vegetables (GF) Whole Wheat Roll Fresh Orange Wedges (LG)
27	28	29	30	
Salisbury Steak Vegetable Pasta Bake (v) Cobb Salad (GF) w/ Crackers Mashed Potatoes Steamed Broccoli (GF) Fresh Apple Slices (LG) Garlic Flatbread	Regional Taste Tuesday "Exploring Germany" German Style Chicken Grilled Cheese Sandwich (v) Turkey Wrap (GF) Rice Pilaf (GF) Braised Red Cabbage Mixed Fruit Whole Wheat Roll	Nacho Bar Turkey Quesadilla Garden Vegetable Wrap (v) Stewed Black Beans (GF) Sautéed Corn (GF) Banana	Fish Nuggets Turkey Philly Italian Vegetable Wrap (v) Roasted Red Potatoes (GF) Steamed Carrots (GF) Diced Pineapples Whole Wheat Roll	
Variety of Milk Offered Daily LG = Locally Grown v = Vegetarian Entrée GF = Gluten Free Serving Healthy Meals for Student Success http://www.atlantapublicschoolsnutrition.us				

Farm to School Lessons in the Cafeteria Classroom



Our Presenters



Emily Jackson

Director

Growing Minds

North Carolina

ASAP's mission is to help local farms thrive, link farmers to markets and supporters, and build healthy communities through connections to local food.



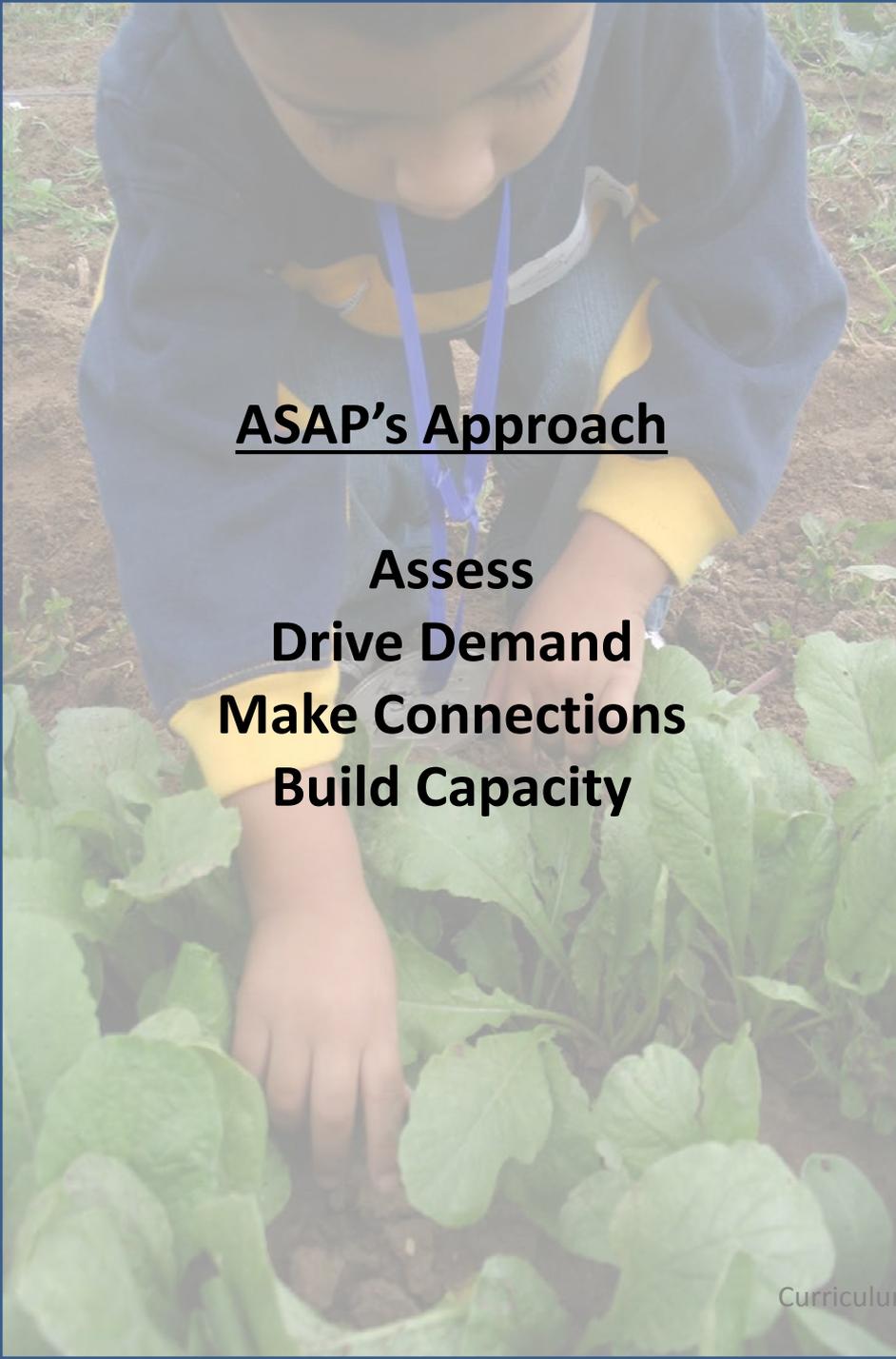
ASAP's Programs



Local Food Campaign: Business of Farming Conference; Local Food Guide; Cost shares; Market connections

Growing Minds: annual F2S conference; lesson plans; promotional materials; training; SE RLA for NFSN

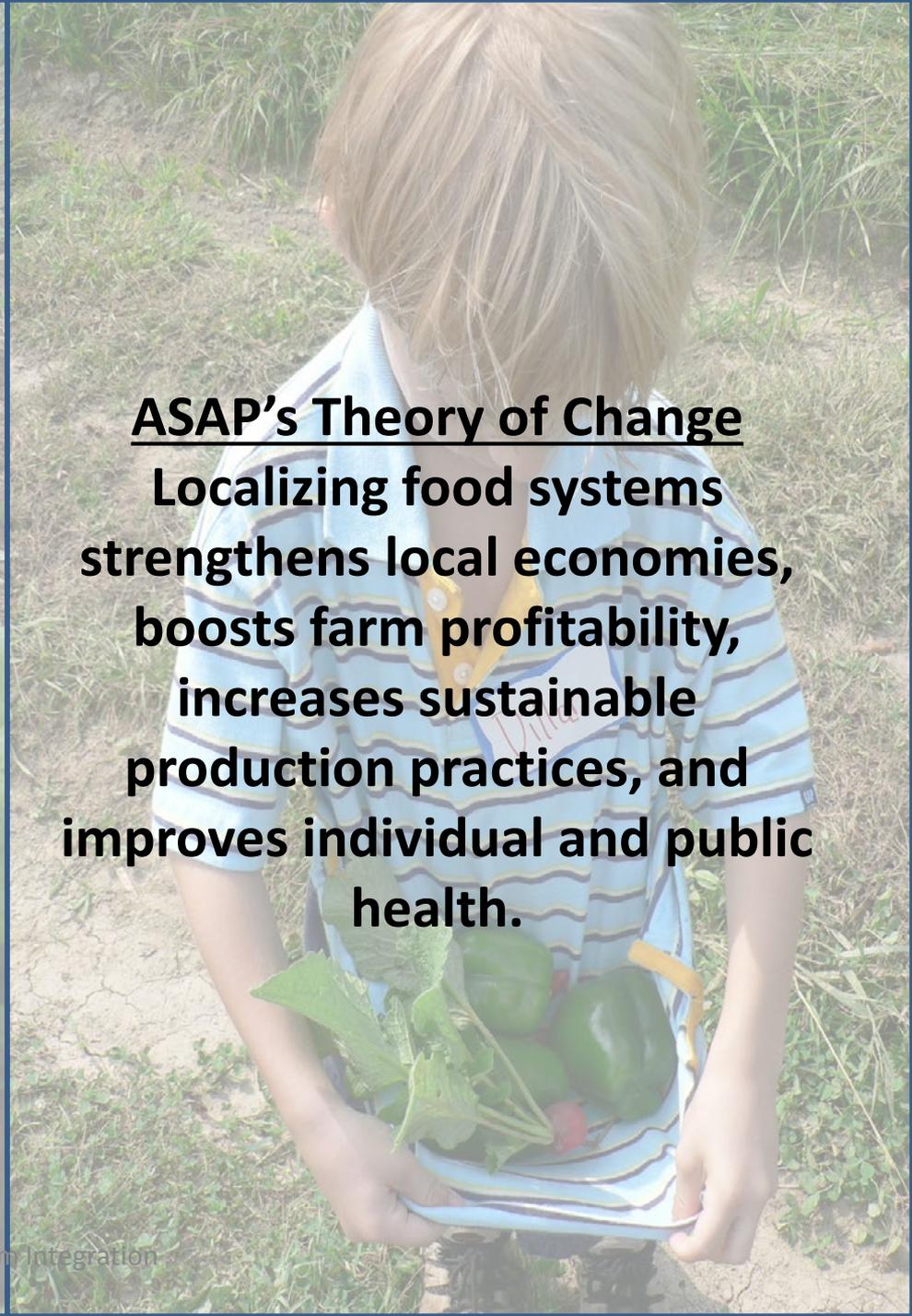
Local Food Research Center: conducts research and assessments; studies trends and food movement; evaluates



ASAP's Approach

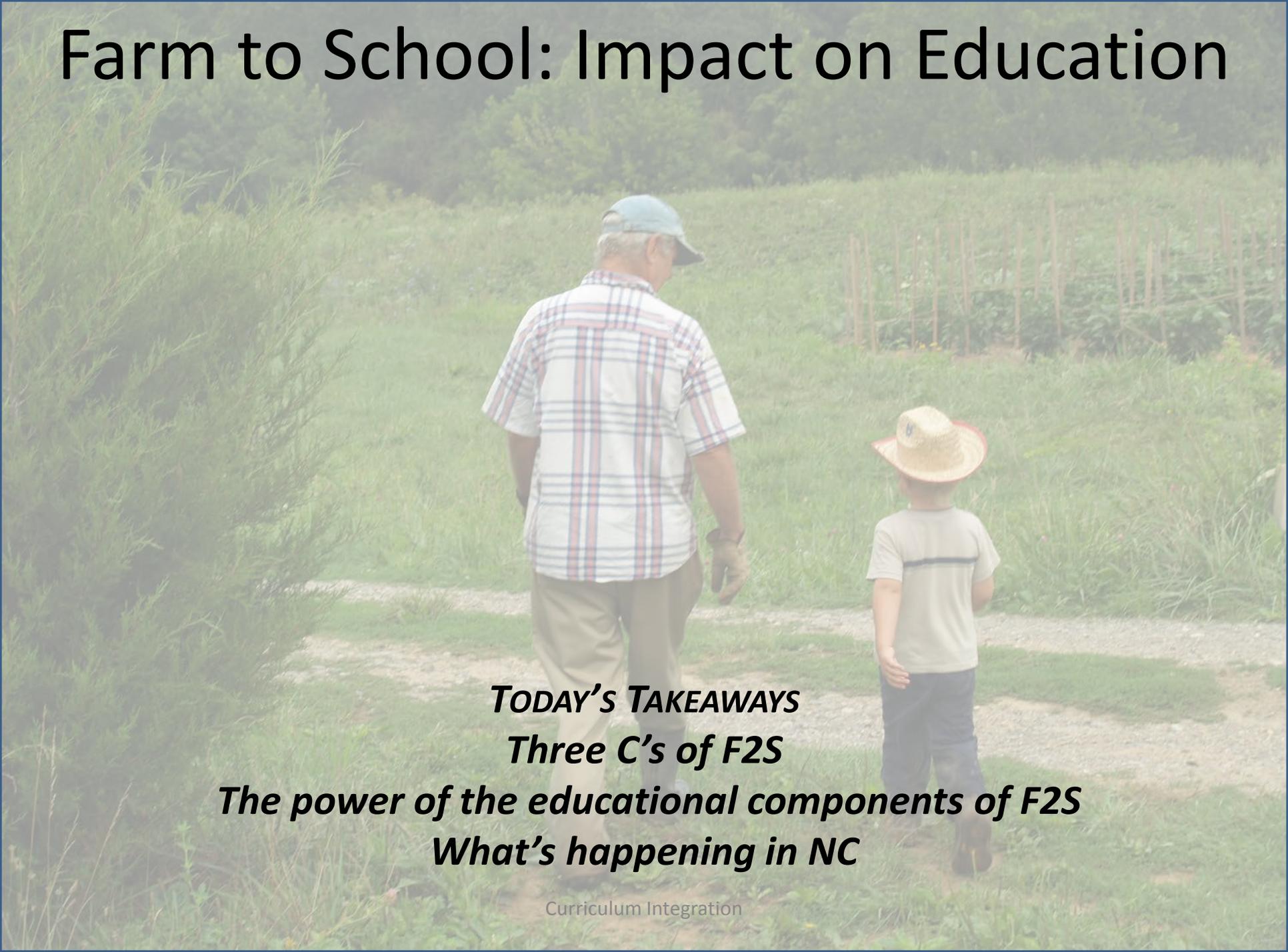
**Assess
Drive Demand
Make Connections
Build Capacity**

Curriculum Integration



ASAP's Theory of Change
**Localizing food systems
strengthens local economies,
boosts farm profitability,
increases sustainable
production practices, and
improves individual and public
health.**

Farm to School: Impact on Education

A photograph of an older man and a young child walking away from the camera on a dirt path through a lush green field. The man is wearing a blue cap, a plaid shirt, and khaki pants. The child is wearing a straw hat and a grey t-shirt. In the background, there are rows of plants, possibly a vegetable garden or farm, and a dense line of trees under a hazy sky.

TODAY'S TAKEAWAYS

Three C's of F2S

The power of the educational components of F2S

What's happening in NC

Curriculum Integration



What are the educational components of Farm to School?



Classroom Cooking



Farm Field Trips



School Gardens



Curriculum Integration

growing-minds.org

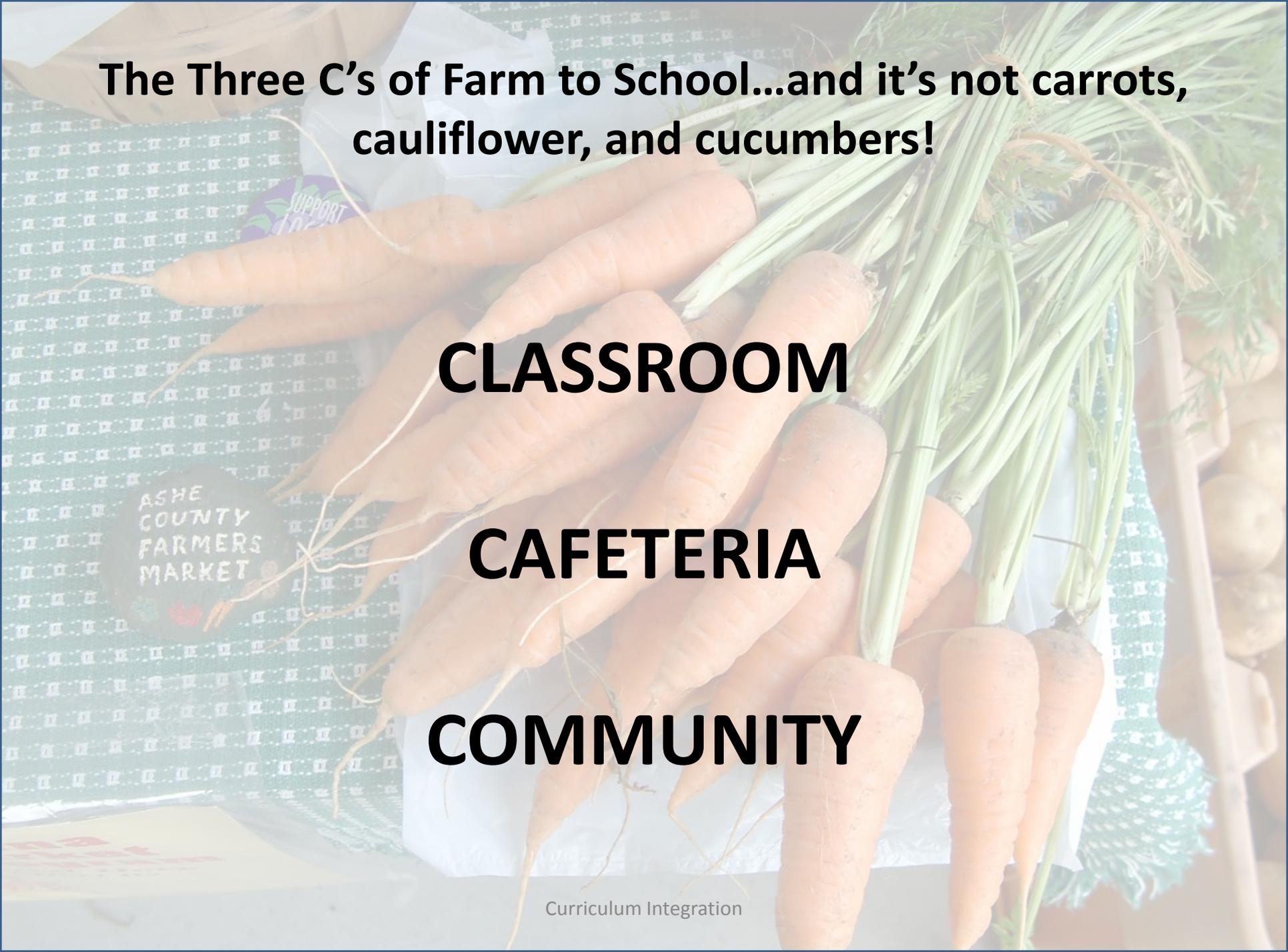
RATIONALE FOR FARM TO SCHOOL

- Addresses obesity prevention and increases physical activity**
- Addresses different learning styles**
- Builds sense of community within a classroom/school**
- Can improve behaviors**
- Establishes environmental ethic**
- Promotes hands-on, interdisciplinary learning**
- Motivates children to learn**
- Can be integrated across the curriculum easily**
- Teaches a good life skill/leisure time activity**
- Great way to engage parent/community**
- Can easily be adapted to teacher's comfort level**

Gardening lessons
continue all year long!

Here's one teacher's vision of
almost any subject. Developed by teacher Vicki Greenhouse for her
second and third grade students in
Lincoln, Vermont.





**The Three C's of Farm to School...and it's not carrots,
cauliflower, and cucumbers!**

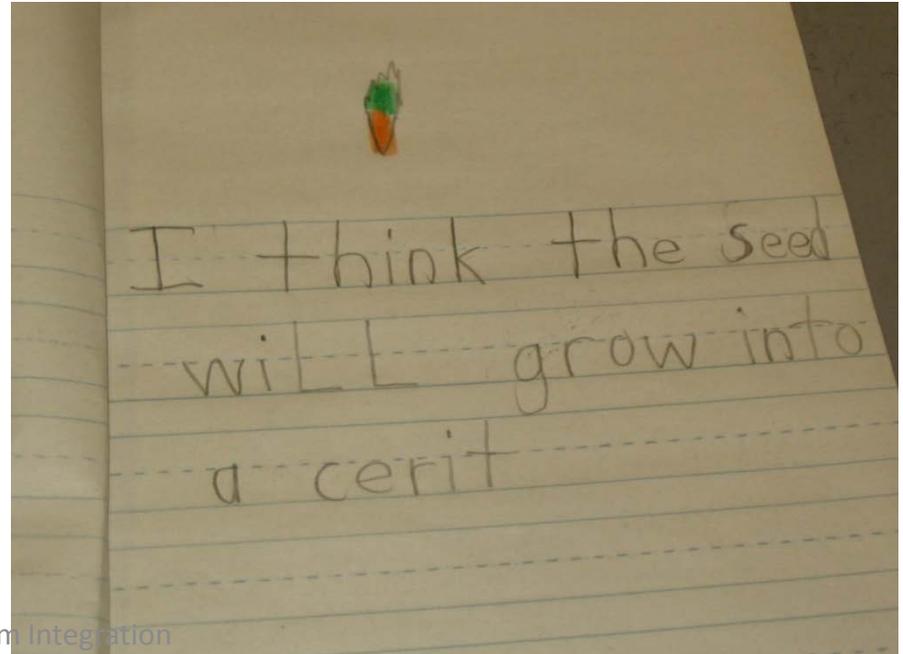
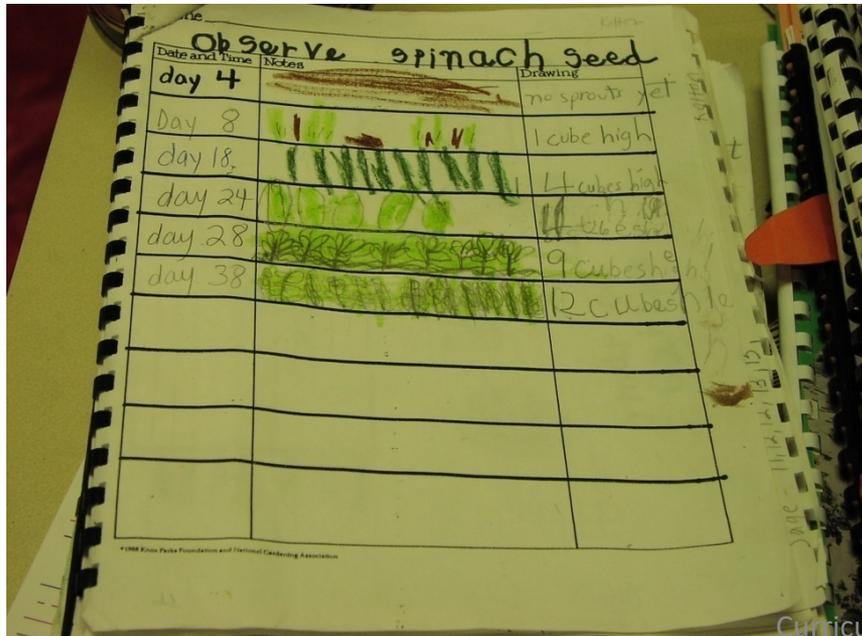
CLASSROOM

CAFETERIA

COMMUNITY

Lesson plans, searchable data base of children's literature, TWIGs, recipes, videos

www.growing-minds.org



CLASSROOM



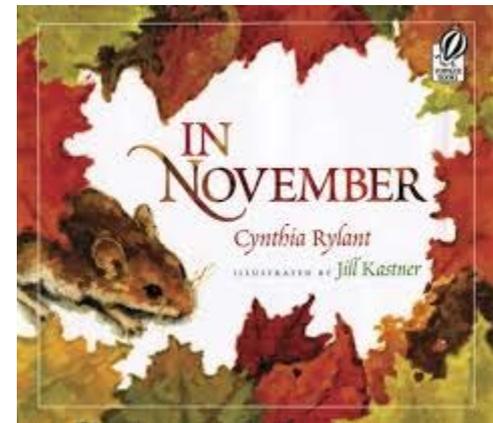
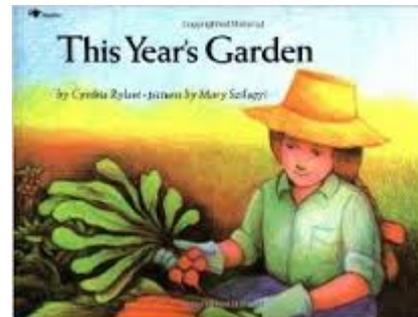
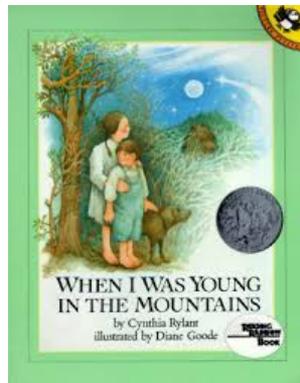
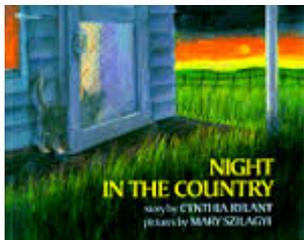
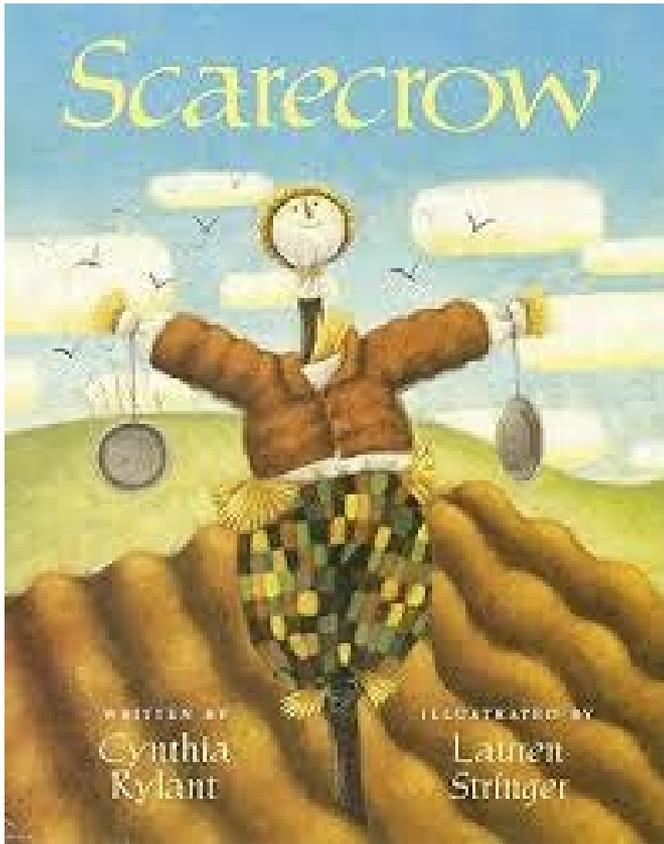
Farmer in the Classroom



SCARECROW

Great for writer's workshop (excessive use of "and", circular text (coming back to birds), repeating line "he doesn't mind")

Set the stage for the school garden – being peaceful, slow, deliberate



THIS WEEK IN THE GARDEN



What's Growing?



For delicious juicy strawberries in May, keep an eye on your strawberry plants in April. Take your students to the garden and...

APPALACHIAN SUSTAINABLE AGRICULTURE PROJECT

Second Week of April

Get Local @ School Product of the Month - Greens

Activities

Use the Growing Minds website for more ways to connect Farm to School with curriculum.

• Make fingerprint bugle Pine watercolor prints by placing a bead of water on each color. Then stick your thumb in a watercolor pan and make a thumbprint on...

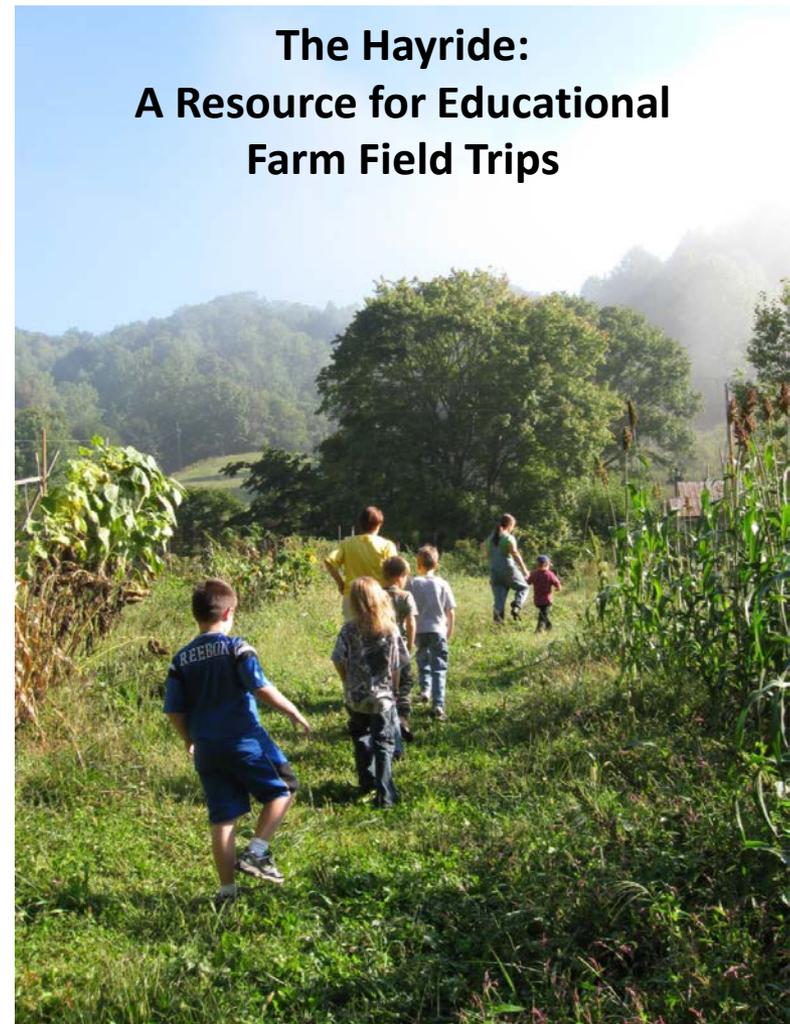
Farm to School Book of the Week

Brilliant Bees by Linda Green



• *Brilliant Bees* introduces readers to the amazing world of honeybees.

This Week In the Garden (TWIGs) for EVERY week of the school year...preschool TWIGs too! Include info about what's growing in the garden, highlights a piece of children's literature, includes a recipe, journal topics, and suggested activities! There's more...it's also available in publisher format and can be used as a school or classroom newsletter!



The Hayride: A Resource for Educational Farm Field Trips

Guide to farms in the Appalachian
Grown area!

Make your own SEED TAPE

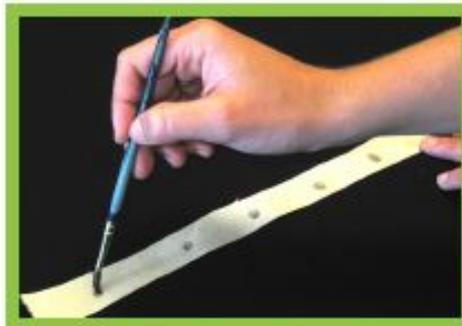
to plant in your home garden!

Curriculum Connections

2.MD.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.

2.MD.2 Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.

What you will need: biodegradable paper strips, comstarch paste, seeds, ruler, pencil, q-tips or paintbrush, tweezers or fingers



Step 5

If needed, cover your seeds with a little more comstarch paste to make sure the seeds stick!

Step 6

Allow your seed tape to dry, place it in a paper bag and it is ready to take home and plant!

Step 1 Choose your seed!

Step 2

Use your pencil and ruler to mark correct spacing for each seed type. See your seed packet or container for specific spacing for your seed type.



Step 3

Use a paintbrush or q-tip to spread small dots of comstarch paste on each of your pencil marks.

Step 4

Place 1-2 seeds on each dot of paste using your fingers or tweezers.





get Local school	
Monday, October 11 Breakfast Egg & Cheese Strudel Or Cereal or Toast Fruit or 100% Juice 1% or Fat Free Milk Lunch Apple & Cheese Salad Or Stuffed Baked Potato Raisin Corn Beans Apple Cisp Mexican Cheese 1% or Fat Free Milk	Tuesday, October 12 Breakfast French Toast Strips Or Cereal or Toast Fruit or 100% Juice 1% or Fat Free Milk Lunch Chili Dog Or Turkey & Cheese Sub Raisin Baked Beans w/sauce Fruit Cereal Fresh Seasoned Fruit 1% or Fat Free Milk
Monday, October 18 Breakfast Strawberry Smoothie Or Cereal or Toast Fruit or 100% Juice 1% or Fat Free Milk Lunch Chicken Noodle Soup Or Ham & Cheese Sub Macaroni Green Beans Seasoned Fresh Fruit Mexican Cheese 1% or Fat Free Milk	Tuesday, October 19 Breakfast French Toast Or Cereal or Toast Fruit or 100% Juice 1% or Fat Free Milk Lunch Breakfast for Lunch
Monday, October 25 Breakfast Breakfast Muffin Or Cereal or Toast Fruit or 100% Juice 1% or Fat Free Milk Lunch Cheesburger Or Turkey & Cheese Sub Raisin Macaroni & Cheese Seasoned Fresh Fruit Shred Peas Applesauce 1% or Fat Free Milk	Tuesday, October 26 Breakfast French Toast Strips Or Cereal or Toast Fruit or 100% Juice 1% or Fat Free Milk Lunch Chili Dog Or Turkey & Cheese Sub Raisin Macaroni & Cheese Seasoned Fresh Fruit Shred Peas 1% or Fat Free Milk
Monday, October 11 Breakfast Egg & Cheese Strudel Or Cereal or Toast Fruit or 100% Juice 1% or Fat Free Milk Lunch Chicken Noodle Soup Or Ham & Cheese Sub Raisin Corn Beans Apple Cisp Mexican Cheese 1% or Fat Free Milk	Tuesday, October 12 Breakfast French Toast Strips Or Cereal or Toast Fruit or 100% Juice 1% or Fat Free Milk Lunch Early Release Bag Lunch
Monday, October 18 Breakfast Strawberry Smoothie Or Cereal or Toast Fruit or 100% Juice 1% or Fat Free Milk Lunch Chicken Noodle Soup Or Ham & Cheese Sub Macaroni Green Beans Seasoned Fresh Fruit Mexican Cheese 1% or Fat Free Milk	Tuesday, October 19 Breakfast French Toast Or Cereal or Toast Fruit or 100% Juice 1% or Fat Free Milk Lunch Breakfast for Lunch
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Local Apple Cabbage Slaw

- In a large bowl combine: 4 cups of chopped local cabbage, 2 cups shredded chopped local apple, 1 large carrot, grated.
- In a small bowl combine: 1/2 cup mayonnaise, 1 Tbsp honey or brown sugar, 1 Tbsp juice, or 1/2 tsp balsamic.
- Pour dressing over salad and mix well. Enjoy!

get Local school	APRILACHIAN GROWING LOCAL FOOD fresh
Tomatoes	August
Cucumbers	September
Cabbage	October
Potatoes	November
Apples	December January February March
Spinach/Lettuce/Greens	April
Strawberries	May
Summer Squash	June
Berries	July

CAFETERIA

- Taste tests
- “Give Thanks for Farmers” Day
- Cooking demos



Curriculum Integration

COMMUNITY

Waightstill Avery
Avery Farms
Plumtree, NC



To meet more local farmers visit www.AppalachianGrown.org



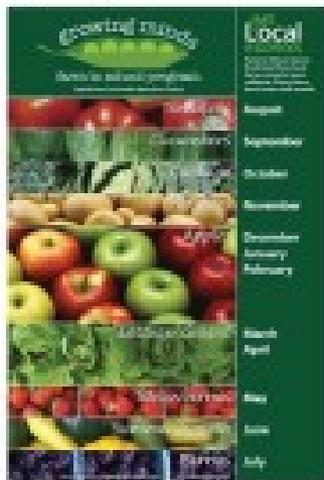
3x5 recipe cards



bookmark



12 month poster



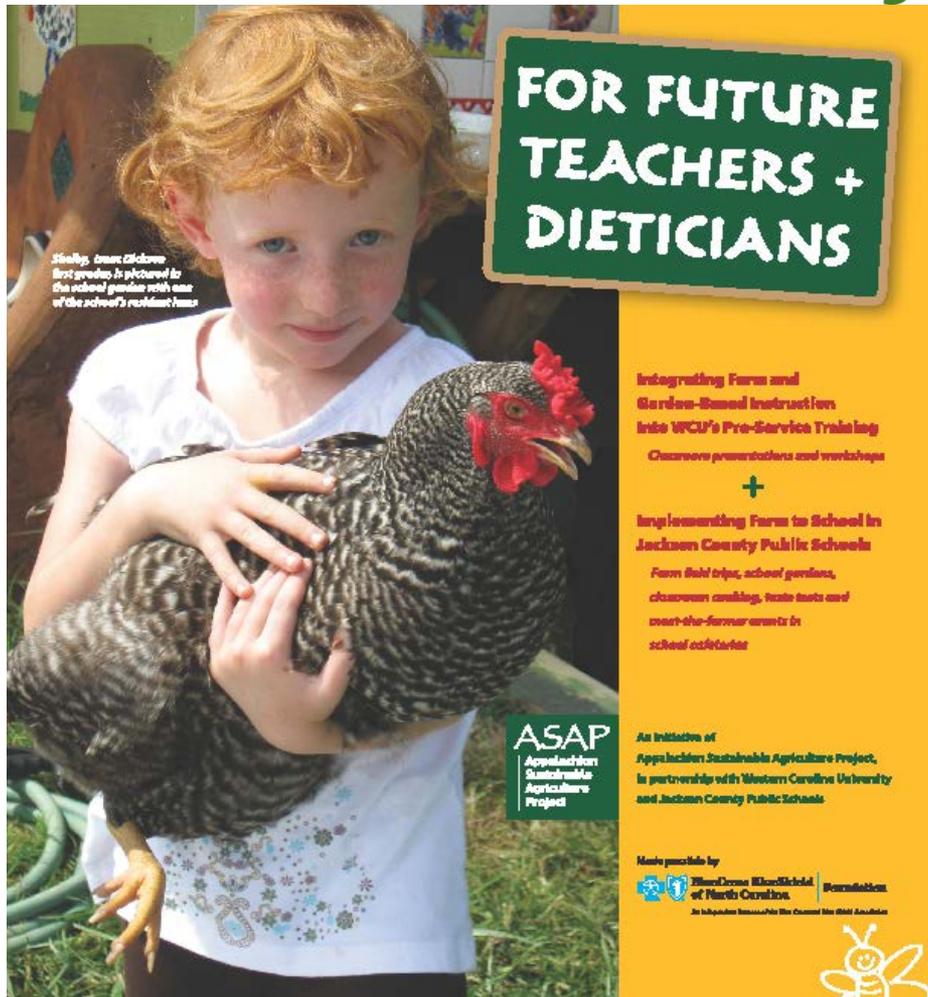
I tried local... stickers



Putting all the C's together...
Everything based on a featured product of the month:

- Lesson plans (Classroom)
- Recipe cards and stickers (Community)
- Get Local @ School posters (and monthly procurement) (Cafeteria)

growing minds @ university



Shelby, Anne's chicken first grader is pictured in the school garden with one of the school's resident bees

FOR FUTURE TEACHERS + DIETICIANS

Integrating Farm and Garden-Based Instruction into WCU's Pre-Service Training
Classroom presentations and workshops

+

Implementing Farm to School in Jackson County Public Schools
Farm field trips, school gardens, classroom cooking, taste tests and event-the-farm events in school cafeterias

ASAP
Appalachian Sustainable Agriculture Project

An Initiative of
Appalachian Sustainable Agriculture Project,
in partnership with Western Carolina University
and Jackson County Public Schools

Made possible by
 **Western Carolina University**
of North Carolina
 **North Carolina Department of Agriculture**
An Independent Branch of the United States Department of Agriculture



Working with universities and community colleges to integrate local food and farm to school into undergraduate and graduate education and health science course of study.

Future teachers and health professionals embedding local food into their professional work.



BEST PRACTICES

- Start small and with what you like (i.e. gardens vs. cooking)
- Don't forget the local connection, that's the kicker
- Start with one subject area (literacy is the easiest)
- Use existing lessons
- Connect with someone who shares this interest or has done it before
- Understand that your goal may be to improve health (or support local food) but the business of school is education

“What have you learned from the garden?”

- We learn many things in the garden like how to plant things and what tastes sweet, sour, good and sometimes delicious.
- We have learned to take care of the garden by planting, doing fun activities and seeing unseeable things.
- The garden helps me learn outside of school. It lets me be able to smell different smells. I like to taste things in our garden.
- It makes me feel like I’m in the beginning of the USA by planting foods to eat. It helps me make good food choices when I’m shopping with my parents.
- The garden makes us curious.



farm to school
an asap program

THANK YOU!
Emily Jackson
emily@asapconnections.org

Curriculum Integration

Resources

- TEAM Nutrition Resource Library www.fns.usda.gov/tn/resource-library
 - » Great Garden Detective This eleven-lesson curriculum for 3rd and 4th grades includes bulletin board materials, veggie dice, fruit and vegetable flash cards, and ten issues of Garden Detective News for parents/caregivers.
 - » Dig In! Ten inquiry-based lessons that engage 5th and 6th graders in growing, harvesting, tasting, and learning about fruits and vegetables.
- Ag in the Classroom Curriculum Matrix www.agclassroom.org/teacher/matrix
An extensive list of agriculture-related lesson plans and other resources organized by grade level.
- Green Mountain Farm to School: A Farm Field Trip Guide
www.greenmountainfarmtoschool.org/wp/wp-content/uploads/GMFTS-Farm-Field-Trip-Guide-20121.pdf
A set of lesson plans for visits to various types of farms; includes tips for farmers and teachers, and sample forms.

More Resources

Education & Curriculum- #9



fns.usda.gov/farmentoschool/census#/toolkit

Upcoming Webinar on April 30th: Program Sustainability



Thank You! Questions?

To Receive your SNA CEU
certificate email

Robert.gorman@fns.usda.gov

