
Three Classes, One Garden

Catherine Olinde
Jo Ann Hebert



About us:

We teach at the STEM Magnet Academy in Pointe Coupee, Louisiana. This is our twenty second year in education. Our grade levels range from sixth to eighth graders and our content areas range from math, science and ELA. Ag in the classroom has been incorporated in our curriculum for the past twelve years. Our students have lots of “ah ha” moments throughout the year.

Gardening and Math

After a quick search on the Curriculum Matrix I noticed that Math is not listed as a content area. There are math activities embedded within some of the other lessons, but I wanted to locate math lessons that “meshed” with my math standards.

Search Lesson Plans

Quick Search – Lesson Plans

Grade Level	Content Area Standards
<input type="checkbox"/> Early Elementary (Grades K-2)	<input type="checkbox"/> Science
<input type="checkbox"/> Upper Elementary (Grades 3-5)	<input type="checkbox"/> Social Studies - Economics
<input type="checkbox"/> Middle School (Grades 6-8)	<input type="checkbox"/> Social Studies - Geography
<input type="checkbox"/> High School (Grades 9-12)	<input type="checkbox"/> Social Studies - History
	<input type="checkbox"/> Health/Nutrition
	<input type="checkbox"/> Career & Technical Education

Search Now!

How agriculture was introduced into my math class?

As a sixth grade math teacher I have the same three classes each day for 90 minutes. I have them for traditional math class, as well as math enrichment class. For their math enrichment class I have incorporated Ag Day Friday, Show me the Math!

At the beginning of the school year students were posed with the question, "How will we sustainably feed 9 billion people by the year 2050?" They worked together and brainstormed ideas. (Information gained at last year's AITC Conference)

Agriculture was introduced to the students through the use of Peterson Brothers farming videos. After the introduction, students were asked to identify ways math could be seen in the video. We continued to brainstorm ideas throughout the school year.

Students were further able to learn about math used on farms by corresponding with local farmers via email.

Ag Mags were used in math class.



Using the garden in math

*Students created ratio word problems.

*Maps of the garden were created using grid paper. Lessons on perimeter, area, and coordinate grids were brought in.

*Garden beds were divided up and planted in fractional parts

*Types of vegetables planted were searched in store flyers and used in unit rate problems.

Taking measurements to create maps of garden

Standards: 6.NS.C.8=Solve real-world and mathematical problems by graphing points in all four quadrants of the coordinate plane.

6.G.A.1=Solve real-world and mathematical problems involving area, surface area, and volume.



Dividing and Planting

6.NS.A.1=Apply and extend previous understanding of multiplication and division to divide fractions by fractions.

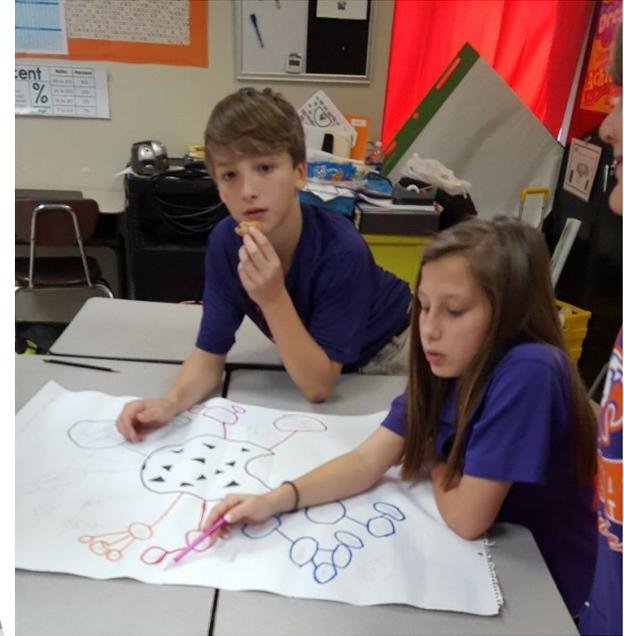
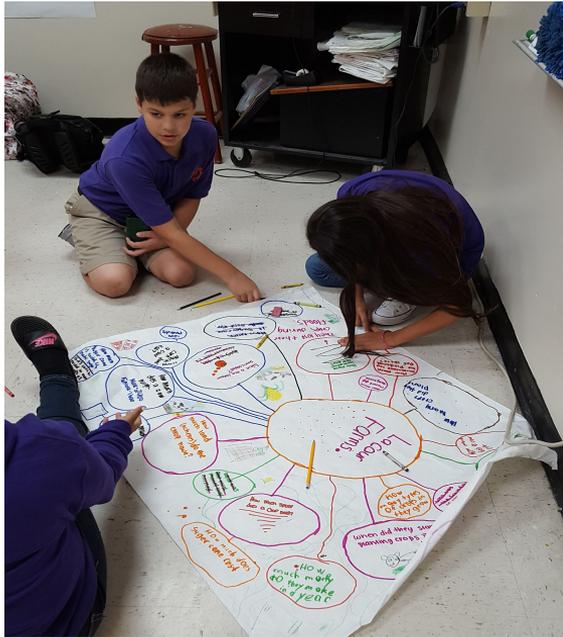


Math in Agriculture: Math on Farms and Careers in a Cookie

6.MP.1=Make sense of problems and persevere in solving them.

6.MP.2=Reason abstractly and quantitatively.

6.MP.4=Model with mathematics.



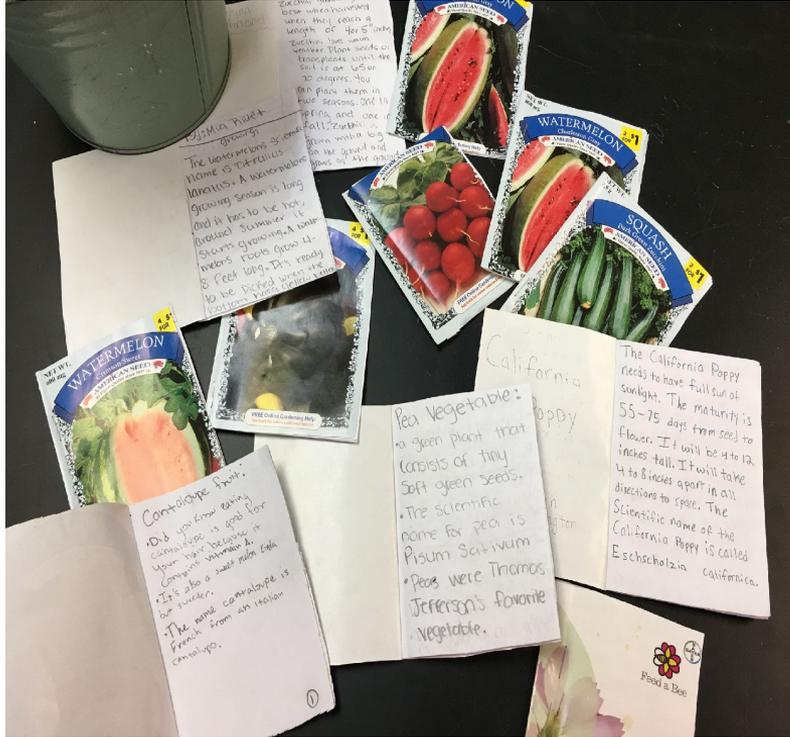
Gardening and Science

My seventh graders have the privilege of working with our outside garden. They are introduced to several types of vegetables that are grown in our area. We discuss which plants will be grown in fall and which will be grown in spring.

I have my students for ninety minutes every other day. Ninety minutes is a great amount of time for me as a science teacher. We use microscopes to look at seeds, roots, leaves, plant parts, germination, water samples and flowers. We are constantly cutting different samples from the garden to investigate using microscopes. As we begin our lesson, the students each picked a seed packet and made seed booklets. They did the research about their seeds and presented information in seed booklets.

Breakout boxes are used in science as a culminating activity in science to review agriculture content.

Seed Booklets created in science class.



Student investigate agriculture using Breakout boxes.

Plants planted in science to investigate root systems, flowers, and pollination.

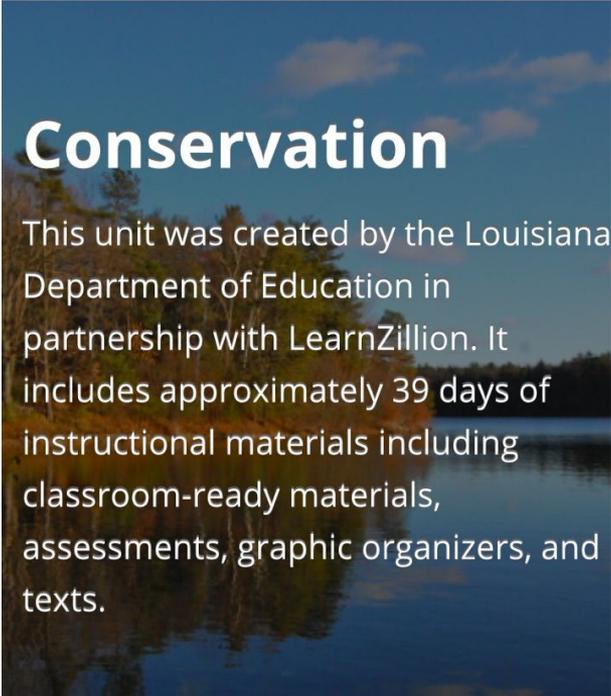


Gardening and ELA

I have been blessed with an eighth grade ELA class that I see on a daily basis for ninety minutes. Although they are ELA students, their class is held in the science lab. They have been very curious as to what the seventh graders are doing with plants, seeds, seedlings, roots and leaves. So, in order for me to satisfy their curiosity and also include ELA, we do writing activities while watching plant growth.

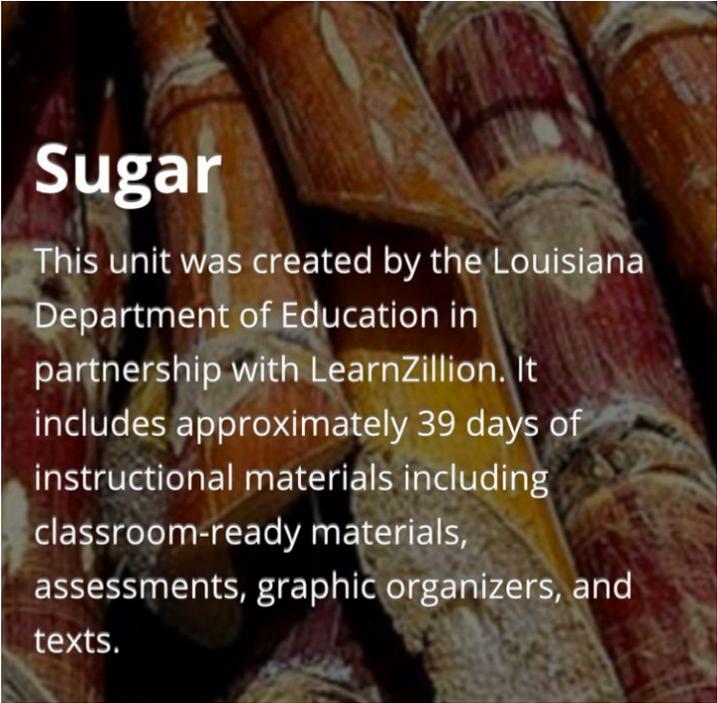
In addition to writing about plants, my eighth graders also made seed collages using seeds. They designed their pictures and then covered the picture using a variety of seeds. Seeds were identified and researched before using on their collages.

Louisiana's ELA curriculum using Guidebooks:



Conservation

This unit was created by the Louisiana Department of Education in partnership with LearnZillion. It includes approximately 39 days of instructional materials including classroom-ready materials, assessments, graphic organizers, and texts.



Sugar

This unit was created by the Louisiana Department of Education in partnership with LearnZillion. It includes approximately 39 days of instructional materials including classroom-ready materials, assessments, graphic organizers, and texts.

Art Grant written was to purchase materials to paint inspirational rocks to be placed in school garden.





Inspirational rocks were placed around the garden for all gardening students to enjoy.

Community Support

Local farmer votes to include our garden in grant.





Assistant Extension Agent, Chanelle Angeny, helped students divide up garden planters to plant potatoes and onions. She also gave them a brief history of the “Pointe Coupee Reds” which are onions grown in Pointe Coupee.

Mr. Mark Carriere, Associate County Agent, gave students information and demonstrated uses of small engines involved in gardening.



Local farmer, Catherine LaCour, gave students information on Sugarcane and demonstrated how to make sugar gumdrops



Ms. Fawn Courville, Chairman for the Pointe Coupee Ag in the Classroom Committee, gave students information on the Beef industry and showed them how to make their own bubble mixture using glycerin.

Thanks for your participation.