

Tracks:

Selected by Local County Extension Office

Agriscience:

4-H'ers will experience lessons that relate to Earth and Life sciences as stated in the new Georgia Performance Standards. Lessons feature a hands-on approach to the standard and connect the standard to research based information of the College of Agricultural and Environmental Sciences and College of Family and Consumer Sciences at the University of Georgia.

Nutrition and Healthy Lifestyles:

4-H'ers will gain awareness, knowledge and skills related to eating a healthy diet and getting physical activity. Emphasis will be placed on key items of importance for Georgia's youth, which include increasing fruit, vegetable and calcium consumption, as well as the importance of breakfast and regular physical activity.

Garden Earth Naturalist:

(County Selected for Grant)

4-H'ers will experience science through viewing the Earth as a garden! Garden Earth Naturalist helps children understand Earth's ecosystems, value the services provided by these ecosystems, and take positive actions through service learning projects to protect these ecosystems.

*A partnership of:

The State Botanical Garden of Georgia
Georgia Museum of Natural History
Georgia 4-H

Georgia Partnership in Science and Math (PRISM)



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Georgia 4-H

In School
Club Meetings



Learning for Life

Georgia 4-H a Partner of Georgia Schools:

Background:



Near the turn of the past century, Newton County Georgia School Superintendent G.C. Adams was interested in making learning useful and practical for his students. His ideas became 4-H. From its inception, 4-H was founded on the principle of taking research based information from the Land Grant University and making the science and practices both available and practical to students.

The process of teaching science by involving youth in experiential education has not changed. In 1904, students applied new techniques to increase their corn yield. In 2006, fifth grade 4-H students will participate in classes engaging them in understanding traits and genetics by using real world application with plant material. These lessons will compliment and enhance part of the Georgia Performance Standards criteria. Mr. Adams probably did not have an acronym in 1904 but we are confident his schools did have standards. Standards that 4-H enhanced.

4-H is led in every county by University of Georgia faculty members. 4-H is authorized and mandated to provide education as part of the University of Georgia and the United States Department of Agriculture.

Academic time and education based on the research of the land grant university is part of the 4-H program in all Georgia counties. While 4-H has many extracurricular programs, there is a significant amount of 4-H that is academic and classroom in its nature. Specifically, University of Georgia Cooperative Extension has constantly worked in concert with Georgia schools to insure that 4-H classes complement and enhance the curriculum in school settings. 4-H lessons and curriculum for elementary and middle school are designed to compliment, enhance and meet Georgia Performance Standards.

Agriscience Lessons:

Poison Pump

Description/Lesson Overview:

In this lesson, a “killer” has swept through the streets of London; hundreds are dead! Would you believe that an accomplice to this terrible crime is something you use everyday? Through a series of clues, students solve a mystery to discover that water can also produce negative effects for people. Students should analyze and interpret data (clues), leading them to understand that water is a shared resource and can spread diseases.

Standards:

- **S5CS1** Students will be aware of the importance of curiosity, honesty, openness and skepticism in science and will exhibit these traits in their own efforts to understand how the world works.
- **S5CS4** Students will use ideas of system, model, change and scale in exploring scientific and technological matters.

Georgia Barrier Islands

Description/Lesson Overview:

In this lesson, students will examine the dynamics of barrier islands and locate the barrier islands of Georgia. Causes of erosion will be discussed through examination of the current state of Jekyll Island. Exploration of Georgia's barrier islands with emphasis on Jekyll Island and the consequences of beach erosion.

Standards:

- **S5E1** Students will identify surface features of the Earth caused by constructive and destructive processes.

Vidalia Onions

Description/Lesson Overview:

In this lesson, students will discuss the importance of Georgia agriculture and highlight how Vidalia Onions are only grown in Georgia. The students will discover that Vidalia Onions are only grown in the loamy soil of Southeast Georgia.

Standards:

- **S5L2.** Students will recognize that offspring can resemble parents in inherited traits and learned behaviors.

Plant Classification

Description/Lesson Overview:

In this lesson, students will learn to classify plants based on plant category, leaf type, leaf arrangement, leaf shape, and root type. The lesson engages the learner through small group, hands-on classification of plant material.

Students will be engaged in a hands-on experience classifying plant material and generalizing to real life.

Standards:

- **S5L1** Students will classify organisms into groups and relate how they determined the groups with how and why scientist uses classification.

Microorganisms-Mean, Miserable, Menacing Microbes

Description/Lesson Overview:

In this lesson, students will be introduced to microorganisms through demonstrations of how germs (microorganisms) spread. Students will also discover the harmful effects of microorganisms if proper hand-washing techniques and food preparation are not followed. The student will make a real life connection with how microorganisms are spread. The students will be made aware of the harmful effects of microorganisms on our bodies.

Standards:

- **S5L4.** Students will relate how microorganisms benefit or harm larger organisms.

Mickey the Microbe

Description/Lesson Overview:

In this lesson, students will be exposed to foods that are products of good microorganisms. Students will also engage in a hands on experiment demonstrating the effects of beneficial microorganisms and how they contribute to certain foods in our diets.

Standards:

- **S5L4.** Students will relate how microorganisms benefit or harm larger organisms.

Mold-What is that Growing on my Bread?

Description/Lesson Overview:

In this lesson students will explore the different types of mold and where mold can be found. The student will identify mold and observe the effects of stages of mold.

Standards:

- **S5L4.** Students will relate how microorganisms benefit or harm larger organisms.

Inherited Traits

Description/Lesson Overview:

In this lesson, students will experience how traits are expressed in plants due to pollination. Students will understand trait expression using supportive evidence to show that traits are transferred from a parent organism and that those traits that an offspring receives from a parent may not always be visible.

Standards:

- **S5L2** Students will recognize that offspring can resemble parents in inherited traits and learned behaviors.

Minerals Rock

Description/Lesson Overview:

In this lesson, students will experience an explanation of rocks and brief relation to minerals, classify rock types, examples of the rock types that are found in Georgia, and have an overview of the rock cycle. Students will know how to identify different rocks and minerals in their everyday life.

Standards:

- **S5E1.** Students will identify surface features of the Earth caused by constructive and destructive processes.
- **S5L1.** Students will classify organisms into groups and relate how they determined the groups with how and why scientist use classification.