



4-H
HANDS-ON CURRICULUM
CATALOG
2018-2019

K-STATE RESEARCH AND EXTENSION SEDGWICK COUNTY

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Dear Sedgwick County Educators,

4-H has helped local children learn and grow with research based, hands- on activities since 1914. 4-H lessons are designed to build students' academic and personal skills with real-world activities that meet Kansas Curricular Standards.

As we get ready to open registration for this year's school enrichment programs, we would like to inform you of a few changes. This year 4-H will be offering the Wheat Science Kits and the butterfly larvae (Life Cycle Miracle) containers. This will not include our Program Assistant teaching in the classrooms. All lesson plan information will be sent out with the order, as well as instructional videos specifically for Wheat Science.

These changes are being made for several reasons. First and foremost, USD 259 schools do not have ovens in their schools anymore in order to complete the bread baking. We also need to make sure that we are including more Kansas crops in a more inclusive lesson plan that can still be used with Kansas Day. Kansas is very diverse and we feel that Extension as a whole needs to do a better job of educating the public regarding all agriculture crops. This new hands-on lesson will be released for the 2019-2020 school year.

In addition, Master Gardeners are replacing their previous three lesson plans with curriculum that is more applicable to the current standards. These will include Plant Exploration (1st grade) and Exploring Pollination through Creativity (2nd grade). These lessons will become available for registration after November 1, 2018.

We are in the process of creating a new online registration system, with the goal to make it more user friendly. That will be released as soon as the bugs are worked out. However, you can certainly place orders by email at this time for Wheat Science and Life Cycle Miracle. Please email Program Assistant Cathy Jones at cpjones@ksu.edu.

In the future, 4-H School Enrichment will be moving towards a multi-session structure, as well as focusing on the biological/ag sciences of the STEM field. We are testing a STEM Club format this year and will be better able to apply it to a school setting in the future. We wish you the best for the 2018-2019 school year.

Sincerely,
Cathy Jones
Program Assistant
4-H Youth Development



4-H PROGRAMS



LIFE CYCLE MIRACLE

Painted Lady butterfly hatching project

Order Deadline: Monday, March 11, 2019

Butterfly Larvae Pick-Up Date: April 4, 2019

Grade: K-4

Watch Painted Lady caterpillars grow, form chrysalides and hatch into butterflies. Learn about the anatomy, life cycle and the role of a butterfly in its environment. Compare the similarities and differences between a butterfly and a moth. The butterfly life cycle takes three to four weeks to complete.

Teacher Provides:

- ▶ Pick up butterfly larvae at Sedgwick County Extension Office, 7001 W. 21st St on April 4, 2019.
- ▶ Continuous care and supervision of larvae, chrysalides and butterflies until released outside.
- ▶ Butterfly cage (plans available) and other supplies (butterfly food, etc.)

Program Includes:

- ▶ Lesson plans and resource information
- ▶ Butterfly larva cups (3 to 5 larvae) with larvae food are available for purchase @\$23.00
- ▶ Please have payment ready at pickup. Make checks payable to Sedgwick County Extension.
- ▶ Partial scholarships available to Title I schools.

WHEAT SCIENCE

All Wheat Science kit orders must be received by November 2, 2018. Wheat Science kits will be ready for pick-up after December 3, 2018

Grade: 2 to 5



Includes one instructional unit with several wheat-related activities, including bread baking. The classroom bread baking activity takes about 1 1/4 hours, rising and baking time require an addition 70 minutes.

Students explore the importance of Kansas wheat, principles of baking, yeast development, and good nutrition. Science and math experiments with wheat and yeast allow students to discover real-life applications for skills learned in the classroom.

Teacher Provides:

- ▶ Oven
- ▶ One adult volunteer for every 4-8 children is recommended
- ▶ Activity supplies
- ▶ Copies of activity pages as needed

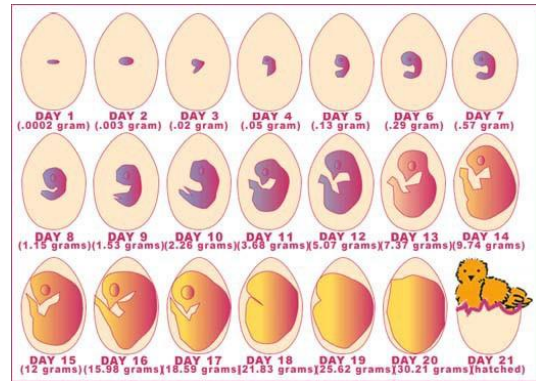
Program Includes:

- ▶ Emailed "Wheat Science" instructional unit
- ▶ Kits available for purchase with advance reservation by November 2 (\$6.00/kit)
- ▶ Kits must be picked up at Sedgwick County Extension Office. Each kit serves 4 students
- ▶ Modern Marvels "Bread" DVD available to borrow
- ▶ Bag of wheat kernels from the farm if desired
- ▶ Partial scholarships are available to Title 1 schools if bread kits are purchased

CHICK EMBRYOLOGY

Grade: 3-4

Egg hatching provides a rare opportunity to study the stages of embryonic growth during the 21 days of incubation. This lesson helps guide classrooms through the process of controlling several environmental variables during the incubation process, plus additional activities related to the care of fertile eggs and young chicks.



Teacher Provides:

- ▶ Incubator
- ▶ Fertile Eggs
- ▶ Supervision for 21 day incubation period
- ▶ Care and supplies for newly hatched chicks
- ▶ New home for chicks once they become too large to stay in the classroom

Program Provides:

- ▶ Hatching information and directions
- ▶ Directions for construction of incubator, candling stand and brooder house
- ▶ Egg and chick safety information

KANSAS - THE 34TH STATE

Grades K to 3

This resource notebook includes Kansas emblems, history, maps, tourism information, elected officials and two early elementary activity books to use for your Kansas Day celebration.



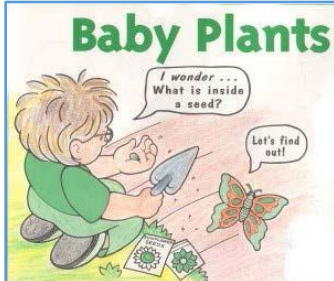
Teacher Provides:

- ▶ Handouts in quantity

Program Includes:

- ▶ Copy-ready student activity sheets
- ▶ Travel and tourism brochures
- ▶ Other background information about Kansas

MASTER GARDENER PROGRAMS



PLANT EXPLORATIONS

Please allow at least 4 weeks advance notice to schedule this class.

**Grade: 1 (limit 30 students)
45 minutes**

Students will review the parts of the plant and the role they play in the survival of the plant through a hands-on small group activity. They will connect the parts of the plant to food that we eat. The class will read the book, "A Fruit is a Suitcase for Seeds" to learn more about seeds and review plant life cycles. Then the small groups will dissect seeds and learn about how they become plants. Finally, each group will plant different colored bean seeds in pots to start an observational experiment to answer the question if the different seeds will grow into plants that look alike or different. This lesson is presented by Sedgwick County Master Gardener volunteers.

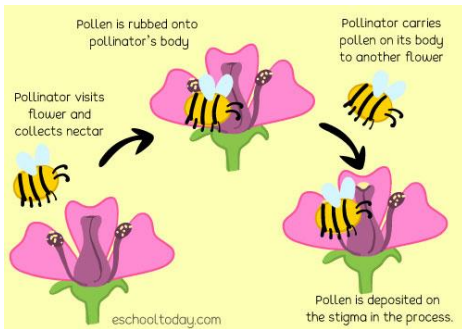
- **Standards:**
 - 1-LS1-2 - Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.
 - LS1.B - Adult plants can have young. Then engage in activities that help the offspring to survive.
 - LS1.A - Plants have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow.
 - 1-LS3-1- Make observations to construct an evidence-based account that young plants are like but not exactly like their parents. (same leaf shape, different sizes)
 - LS3.A - Plants are very much, but not exactly like their parents
 - LS3.B - Individuals of the same kind of plant are recognizable as similar but can also vary in many ways.
- **Other Standards:** Social Studies-Families and English/Language Arts Themes
 - Change- As we grow we change and things around us change

Teacher Provides:

- ▶ Enough paper lined tables to divide students into small groups

Master Gardeners Provide:

- ▶ Materials for learning activity



EXPLORING POLLINATION THROUGH CREATIVITY

Please allow at least 4 weeks advance notice to schedule this class.

Grade: 2 (limit 30 students)
60 minutes

Students will explore the world of flowers and pollination through creative skits. They will work in groups to research types of pollinators and flowers using provided media. Students will show understanding of the concepts by developing and performing a skit about pollination. Skits can be recorded or photographed for later use in the classroom. This lesson is presented by Sedgwick County Master Gardener volunteers.

Standards:

- 2-LS2-2 - Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.
 - LS2.A - Plants depend on animal for pollination or to move their seeds around.
 - ETS1.B - Designs can be conveyed through sketches, drawings or physical models.

Other Standards: Social Studies-Then and Now; English/Language Arts Themes

- Relationships- no two relationships are exactly the same
- Choices- Our choices impact animals, nature and the environment
- Writing
 - W.2.3 - Write narratives in which they recount a well-elaborated event or short sequence of events, include details to describe actions, thoughts, and feelings.
 - W.2.5 - With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaborations with peers.

Teacher Provides:

- ▶ Parent volunteers are encouraged
- ▶ Prior review of the definition of pollination
- ▶ Technology to show the video link for the class
- ▶ Tables arranged to divide the students into small groups

Master Gardeners Provide:

- ▶ Materials for learning activity

FAMILY & CONSUMER SCIENCE PROGRAMS



GRAY FOR A DAY

This class will be taught January- May, 2019. 4 weeks advance notice is required to schedule this class. Registration is available now, please see contact below.

Grade: 4-8
60 minutes

Gray for a Day utilizes an empathic model to educate participants on the age-related sensory and functional challenges that older adults might face. Participants will get to “gear up” to discover what it is like to live with age related conditions.

Lesson Objectives

- Understand how the senses and functional abilities can decline with age
- Experience age-related sensory and functional decline
- Understand the influence of sensory and functional decline on daily life
- Be encouraged to develop the skills necessary to effectively interact with and support
- someone who may be experiencing age-related sensory and functional challenges
- Understand how taking steps to improve or maintain your health now will contribute to
- sensory and functional well-being in the future

Contact: Teresa Hatfield
Family & Consumer Sciences Agent
Adult Development & Aging
316-660-0117
thatfield@ksu.edu

Off-Site Programs

Adventures in Agriculture Day with SEDGWICK COUNTY FARM BUREAU

This program **MUST** be reserved with Sedgwick County Farm Bureau, 316-773-9851.

(Limited Enrollment, Registrations Required)

Grade 4 ONLY, One 3 hour session

Agriculture—we couldn't live without it! Look, see, touch, and learn about the many ways we depend on farming every day. This event has farm animals, tractor, grains and other demonstrations.



Special Information:

Agriculture Magic Day with Sedgwick County Farm Bureau will be held on **September 18, 2018 at the Sedgwick County Extension Education Center**, 7001 W. 21st St. N Sessions will begin at 9:15 a.m.

RESERVATIONS ARE REQUIRED—please call Farm Bureau at 773-9851 to schedule your class time. A curriculum resource packet will be provided to participating teachers at the event. Teachers should arrange their own transportation to Sedgwick County Extension Education Center.

Many of the activities will be held outdoors, so your students should dress appropriately. The event will be held rain or shine. We recommend one adult for every eight children.

Teacher Provides:

- ▶ Transportation to Sedgwick County Extension Office, 7001 W 21st St N. Wichita
- ▶ Adult chaperones (1 adult for every 8 children is recommended)
- ▶ Advance reservations with Sedgwick County Farm Bureau, 316-773-9851

Program Provides:

- ▶ Resource information packet for teachers
- ▶ 10 activity stations
- ▶ A full morning of fun for students and chaperones