

# A WORLD OF EXPERIENCES

## 09-10 TEXAS 4-H CURRICULUM AND EDUCATIONAL RESOURCE CATALOG

AgriLIFE EXTENSION  
Texas A&M System



Educational programs of the Texas AgriLife Extension Service are open to all people without regard to race, color, sex, disability, religion, age, or national origin. The Texas A&M University System, U.S. Department of Agriculture, and the County Commissioners Courts of Texas Cooperating



## *Introduction*

We realize school teachers today are charged with the awesome responsibility of educating young people in this fast moving and ever changing world. Texas 4-H, the youth development component of Texas AgriLife Extension Service, and its 250 county offices are here to provide assistance through quality curriculum and educational resources. Texas 4-H offers a variety of enrichment curriculum programs which can be used to enhance subjects being taught in your class, group, or special interest program. The majority of materials have been aligned with the Texas Essential Knowledge and Skills (TEKS).

This curriculum and educational resource catalog has been developed as a reference for educators to use in coordinating core curriculum with enrichment activities. Our intent is to simply enhance the educational experiences of youth through these enrichment programs and provide youth with a awareness of 4-H. It is not our intent, nor is it within our capabilities, to provide assistance in every subject being taught, nor is it our intent to create additional work or projects for teachers.

Enrichment curriculum programs highlighted in this publication include only those programs that are supported on the state level with educational materials. Counties may offer additional curriculum enrichment programs developed locally or obtained locally from other state Extension programs or the National 4-H Curriculum library. Students involved are enrolled in 4-H as a curriculum enrichment project group.

Please take time to browse through this guide, and if you discover a program that you wish to use as part of your classroom activities, or would like more information contact your county Extension office.



# Table of Contents

What is 4-H? ..... 2  
 Facts about 4-H in Texas. .... 2  
 4-H Motto and Pledge. .... 2  
 The 4-H Clover. .... 3  
 Texas 4-H Enrichment Curriculum. .... 3  
 Enrichment Curriculum Requirements. .... 3  
 4-H Enrichment Curriculum Programs. .... 4  
 Contacting Your County Extension Office. .... 4  
 Texas 4-H State Office Contact. .... 4  
 Ordering Curriculum. .... 4

**CITIZENSHIP AND CIVIC EDUCATION. .... 5**  
 4-H County Government Guide  
 Patriotism Through Preparedness

**CONSUMER & FAMILY SCIENCES. .... 5**  
 Consumer Critter Crew  
 High School Financial Planning

**HEALTHY LIFESTYLES ..... 5**  
 Balance Your Day  
 SWAT: Students Winning Against Tobacco

**PERSONAL DEVELOPMENT & LEADERSHIP ..... 6**  
 Character Becomes You  
 Putting the Pieces Together  
 Recreation Handbook: Fasten Your Seat Belts - 4-H is Fun!  
 Take A Stand  
 Yea 4-H! An Afterschool Learning Adventure

**ENVIRONMENTAL EDUCATION & EARTH SCIENCE . . . 7**  
 Give Water A Hand  
 Predators in the Classroom  
 White-Tailed Deer  
 Investigating Water  
 Something's Fishy  
 Wildlife Success Stories and Endangered Species  
 Managing Largemouth Bass in Texas Ponds  
 Managing the White-Tailed Deer

**PLANTS AND ANIMALS. .... 8-9**  
 Agricultural Literacy Fairs  
 Food & Fiber  
 Southwest Dairy Farmers Mobile Dairy Classroom  
 H2O for Youth: Water Fairs  
 Food & Fiber for the 21st Century  
 Texas Farm Bureau Mobile Learning Barn  
 Biscuit Bingo  
 Texas Uncovered  
 The Important of Agrochemicals  
 Field of Genes: Biotechnology Teaching Module  
 Process the Fabric of Our Lives: Miniature Cotton Gin  
 The Rainfall Simulator

**SCIENCE & TECHNOLOGY ..... 10-11**  
 Junior Master Gardener Curriculum  
 JMG Handbook  
 Level 2: Operation Thistle: Seeds of Despair  
 Level 2: Operation W.A.T.E.R.: Dr. Thistle Goes Underground  
 Junior Master Gardener Gold Ray Series  
 Health & Nutrition in the Garden  
 Wildlife Gardener  
 Literature in the Garden  
 Hatching Eggs in the Classroom  
 Veterinary Assistant Handbook  
 KIDzANTS



## What is 4-H?

4-H is a national organization which helps young people develop life-long knowledge and skills to become engaged citizens. Through 4-H, youth are also taught how to meet the diversities and challenges of today’s society by bringing together youth and adults to design programs that will teach skills for living. 4-H is truly a model of the “learning by doing” teaching concept. It reaches people in their own communities with delivery methods suitable to their needs. 4-H also helps to provide opportunities for families and communities to develop stronger bonds.

The 4-H program is a voluntary, non-formal, educational program offered to all youth regardless of race, color, national origin, residence, or handicap. The Texas 4-H and Youth Development Program is conducted by Texas AgriLife Extension Service, which is a part of the Texas A&M University System. County and district 4-H programs are directed by Extension staff who also provide training and support to volunteers who work with 4-H members. The Texas 4-H and Youth Development Program serves youth in all 254 counties in Texas.

Young people in 4-H learn about citizenship, leadership, foods and nutrition, healthy lifestyles, veterinary science, mechanics and technology, horticulture, agriculture, and other subjects. To teach young people about these subjects, the 4-H program uses the learn-by-doing method of instruction. The 4-H project that each member selects according to their interest and ability is the program’s cornerstone. Projects involve setting goals and evaluating progress. The skills and knowledge learned in 4-H project work help members become more engaged individuals and citizens.

Because of the educational concepts and methods developed by the early leaders of 4-H, the 4-H program has thrived for more than 101 years in Texas. 4-H continues to grow in Texas, expanding to serve those in the military, with emergency disasters, and where the support of youth are needed.

## Facts about 4-H in Texas (2008 enrollment figures)

Number of total youth enrolled	642,641
Number of youth in military clubs	3,825
Number of youth involved in enrichment programs	574,628
Number of 4-Her’s located in cities with a population of more than 50,000	319,316
Percentage of 4-H members from a minority group	60%

## 4-H Motto and Pledge

*In support of the 4-H Club Motto,*

“To Make the Best Better”

*I Pledge:*

My HEAD to clearer thinking,  
 My HEART to greater loyalty,  
 My HANDS to larger service, and  
 My HEALTH to better living,  
 For my club, my community, my country, and my world.



## *The 4-H Clover*

The first 4-H emblem was a three-leaf clover, introduced sometime between 1907 and 1908. The three “H’s” represented head, heart and hands. In 1911, at a meeting of club leaders in Washington, a fourth “H” representing health was added and the current 4-H four-leaf clover emblem was approved. It is protected by the U.S. Congress. More information on Clover logo usage is available.

The 4-H pledge was worded by Otis Hall, Kansas state 4-H leader. It was approved at the first National 4-H Club Camp in 1927 in Washington, D.C. The words “my world” were added to the pledge in 1973. Their addition is the only change ever made to the 4-H pledge.

HEAD stands for clearer thinking and decision-making. Knowledge that is useful throughout life.

HEART stands for greater loyalty, strong personal values, positive self concept, concern for others.

HANDS stands for larger service, workforce preparedness, useful skills, science and technology literacy.

HEALTH stands for better living, healthy lifestyles.

The official 4-H Emblem is a clover with four leaves and an “H” on each leaf. The clover’s stem must point to the right as you look at the image. The 4-H Emblem is not a plain four-leaf clover. The 4-H Emblem should appear in specific colors and in its entirety. The 4-H Name & Emblem belongs to the 4-H Youth Development Program, under the authority of USDA and anyone wishing to use it must obtain permission to use it ahead of time.

## *Texas 4-H Enrichment Curriculum*

Using the latest youth development research and research specialists, the Texas AgriLife Extension Service offers a variety of enrichment curriculum that allows educators to address a variety of educational needs. From life sciences to healthy lifestyles, 4-H enrichment curriculum can provide opportunities for youth to have ‘hands-on’ experiences in a positive and safe learning environment.

Schools and teachers wishing to use a Texas 4-H Program curriculum are invited to visit with their local county Extension Office about the resources available in order to make the learning experience a quality and measurable one for both the educator and students.

## *Enrichment Curriculum Requirements*

Curriculum provided by the Texas 4-H and Youth Development Program are written using the following basics:

- Enrichment experiences are a minimum of five sequential learning experiences each at least 30 minutes in length with a total of at least two hours of educational experiences.
- Introduction of the 4-H name and logo (4-H clover) to the participants.
- Supported and coordinated by your local Extension professional
- All classrooms/groups using Texas 4-H curriculum will report participation back to local county Extension Office using a 4-H group enrollment form.



## *4-H Enrichment Curriculum Programs*

### Responsibilities of Teachers

1. Initiate the request for materials and/or assistance with the county Extension office.
2. Serve as instructor and/or recruit a resource person to serve as instructor for the program.
3. Participate in any in-service training associated with the program.
4. Complete and return participation enrollment forms to the county Extension office.
5. Complete evaluation of the program if applicable.
6. Provide time for additional information on 4-H to be presented to your students.
7. Inform parents of their child's participation in this program.

### Responsibilities of County Extension Agents

1. Provide in-service training and recognition for teachers participating in the program.
2. Provide teachers with curriculum access information, and group enrollment information associated with the program.
3. Provide and/or recruit additional persons to assist with program implementation as needed.
4. Provide a 4-H completion certificate for each child involved in the program.
5. Provide evaluation forms for the program if applicable.
6. Provide information to each child on the county 4-H program and how to join a local club.

## *Contacting Your County Extension Office*

If you are interested in any of the enrichment curriculum listed in this catalog please contact your local county Extension Office. They can be found in the phone book under "County Government" or you can locate them through the Texas AgriLife Extension Service website at <http://agrilifeextension.tamu.edu/>.

## *Texas 4-H and Youth Development Program Headquarters*

Texas 4-H and Youth Development Program  
Texas AgriLife Extension Service  
7607 Eastmark Drive, Suite 101  
College Station, TX 77840  
On the web at: [texas4-h.org](http://texas4-h.org)

## *Ordering Curriculum*

Each curriculum and resource has been identified as to how it should be ordered in the catalog. Many of the curriculum are ordered through the Texas AgriLife Extension Bookstore at <http://agrilifebookstore.org/>, or can be downloaded from the internet. The learning modules will need to be secured through your local county Extension Office. We ask that you please work with your county Extension Office staff on all curriculum so they can provide you with the best support possible in making the experience a great one for the educator and the students.



## Citizenship and Civic Education

### 4-H County Government Guide

Grades: 7th and 12th

4-H County Government Guide enables students to attain a broad knowledge of the origin, purpose and structure of county government in Texas. Additional topics include law enforcement, the judicial system, county finances, the election process, and specific facts about individual counties in Texas. *NOTE: This curriculum is currently under revision. The new curriculum is projected to be available January 2010.*

TEKS: Government  
Cost: \$10.00 (PAE320)  
Available from AgriLife Bookstore

### Patriotism Through Preparedness

Grade: 4th

This curriculum was created to teach and encourage students and their families to prepare for a disaster. The curriculum includes a 52 page curriculum booklet; 50 masters of take-home activities and parent letters; 25 student stickers; and a copy of the 16 page booklet, "Preparing for the Unexpected."

TEKS: Health, Language Arts, Physical Education, Social Studies  
Cost: \$7.00 (1-24 copies) (B-7179)  
\$5.00 (25+ copies)  
Available from AgriLife Bookstore



## Consumer & Family Sciences



### Consumer Critter Crew

Grades: 3rd through 5th

Six colorful critters help teach "rookie consumers" the skills they will need throughout their lives to make the best use of their resources. The hands on lesson plans teach about need and wants; how the market place works; how we spend; share and save our money, about consumer rights and responsibilities; deciding what they want from a product and how to make environmentally wise decisions when they buy. The packet includes a training video on how to use the curriculum.

TEKS: Art, Home Economics, Social Studies, Theater  
Cost: \$35.00 (L5150)  
Available from AgriLife Bookstore

### High School Financial Planning

Grades: 7th and 12th

High School Financial Planning is a six-part series in which students learn personal financial management concepts through practical application exercises that relate these concepts to their everyday lives. Specific topics include earning income, credit and the time value of money, budgets, savings, and projecting finances into the future. This curriculum is approved by the Texas Education Agency for the required course of study that every high school student is required to take.

TEKS: Business Education, Economics, Home Economics Education  
Cost: Free  
Available through [hsfpp.nefe.org](http://hsfpp.nefe.org)

## Healthy Lifestyles

### Balance Your Day

Grades: 3rd

Balance Your Day is a program which focuses on nutrition and physical activity. There are a total of 20 lessons, one lesson each day for 4 weeks. Instructors may choose to do one lesson each week for 20 weeks instead of every day or another structure that fits their schedule. Each lesson includes journaling time for the student as well as experiential activities to teach concepts such as MyPyramid, serving sizes, healthy menus, dining out, setting physical activity goals, alternative activities to reduce screen time (time in front of a TV or computer), and more.

TEKS: Art, Health, Language Arts, Math, Music, Physical Education, Reading, Theatre

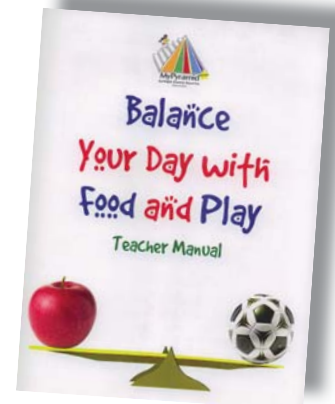
Available only to county Extension Agents who must participate in training to receive curriculum from Family Development Resource Management Unit. For more information, contact the FDRM Office at: 979.845.3877

### SWAT: Students Winning Against Tobacco

Grade: 5th through 9th

Students Winning Against Tobacco (S.W.A.T.) is a project funded by the Texas Cancer Council to increase community actions directed at reducing tobacco use among teens. The program includes a leadership manual which provides information on getting a S.W.A.T. project started, suggested SWAT team activities, communication tips on getting the S.W.A.T. message out, and other tobacco resources. This program is not a curriculum, but a strategy to start a S.W.A.T. group of youth and adults who will conduct educational programs and create awareness about tobacco use. This project would fit well with a health class or Health Occupations Students of America (HOSA) club.

TEKS: Language Arts, Mathematics, Reading, Science  
Available from [fcs.tamu.edu/health/swat/](http://fcs.tamu.edu/health/swat/)





## Personal Development and Leadership

### Character Becomes You

Grades: K through 12th

This educational activity book supplements the Texans Building Character programs in Texas. The book is a compilation of ideas from Extension agents and specialists to support educators in teaching character to youth. It includes activities, exercises, stories, teaching plans and newsletter ideas. Activities focus on the six pillars of character: Trustworthiness, Fairness, Respect, Responsibility, Caring, Citizenship.

Cost: \$25.00 (B-6128)

Available from AgriLife Bookstore

### Putting the Pieces Together

Grades: 3rd through 12th

Putting The Pieces Together is a leadership curriculum for youth and is organized around the 4 H's of the 4-H program: Head, Heart, Hands, and Health. Each chapter has 4 levels of activities. These lessons are designed to take the learner from program participant (level 1 activities) to program leader (level 4 activities) teaching lessons to younger youths.

TEKS: Art, Language Arts, Physical Education

Cost: \$25.00 (or download PDF for free)

Available from AgriLife Bookstore



### Recreation Handbook: Fasten Your Seat Belts - 4-H is Fun!

The 4-H Recreation Handbook provides exciting, hands-on learning activities for children. Schools, parks and recreation programs, 4-H clubs, scouting groups, and other organizations can use the handbook to provide safe and fun ways for children to learn. It also can be used to enrich classroom lessons. The handbook's workbook format includes lists of supplies needed, time requirements, and activity sheets. (192 pp.)

TEKS: Physical Education,

Cost: \$25.00 (CD only) (HLE 1-1.000)

Available from AgriLife Bookstore

### Take A Stand

Grades: 3rd through 12th

Take A Stand is a program designed to teach youth about the issue of bullying and how to use conflict management techniques to stop bullying. The program has 5 lessons that are divided into two parts for a total of 10 sessions (9-12 grade level has 9 sessions). Each session takes approximately 45 minutes to teach. The concepts covered in Take A Stand are centered around these five topics: bullying, communication, etiquette, teamwork, and cultural awareness. By addressing these topics, youth will be better prepared to deal with conflict. Take A Stand targets three age groups -- 3-5, 6-8 and 9-12 -- that is age appropriate for each audience. The resource includes printed curriculum and a resource CD which has camera ready color and black and white handouts, parent letters in English and Spanish, end of unit games, a giant puzzle and more!

3-5 TEKS: English Language Arts & Reading, Theatre, Art, Music, Physical Education, Social Studies, Mathematics

6-8 TEKS: English Language Arts & Reading, Theatre, Art, Music, Physical Education, Social Studies, Technology Education

9-12 TEKS: English Language Arts & Reading, Social Studies, Technology Education

Cost: Released Oct 2009 with curriculum

4-H TAS. 3-5 (3rd thru 5th grade)

4-H TAS. 6-8 (6th thru 8th grade)

4-H TAS. 9-12 (9th thru 12th grade)

Available from AgriLife Bookstore

### Yea 4-H! An Afterschool Learning Adventure

Grades: K through 2nd

Yea 4-H! is designed for after-school settings, 4-H Clover Kids groups, curriculum enrichment, and more. The CD includes the curriculum with five lessons in each of 23 subject areas. There are also newsletters for parents (in English and Spanish), community service ideas, evaluation instruments, and background information for staff development.

TEKS: Art, Language Arts, Physical Education

Cost: \$50.00 (4-Hy.K-2)

Available from AgriLife Bookstore

### Yea 4-H! An Afterschool Learning Adventure

Grade: 3rd through 5th

Yea 4-H! is designed for after-school settings, 4-H Clover Kids groups, curriculum enrichment, and more. The CD includes the curriculum with five lessons in each of 23 subject areas. There are also newsletters for parents (in English and Spanish), community service ideas, evaluation instruments, and background information for staff development.

TEKS: Physical Education, Social Studies

Cost: \$50.00 (4-Hy.3-5)

Available from AgriLife Bookstore

### Yea 4-H! An Afterschool Learning Adventure

Grades: 6th through 8th

This level of the Yea 4-H! curriculum provides six units, each focusing on a specific subject matter area: Leadership, Ag Literacy, Nutrition & Fitness, Entomology, Entrepreneurship, and Fashion Design. Each unit ties in career exploration and has an interactive powerpoint end of unit game to use in reviewing key concepts taught. Each unit also has a retrospective post evaluation as well as ideas for community service. The curriculum was designed for afterschool audiences, but can also be used for 4-H clubs, project clubs, curriculum enrichment and more..

TEKS: *Take The Lead (Leadership Unit)* English, Fine Arts, Language Arts, Mathematics, Social Studies

*Designer's Choice (Fashion Design Unit)* Career Orientation, Fine Arts, Home Economics Education

*SWAT (Nutrition & Fitness Unit)* Career Orientation, Health Education, Language Arts, Mathematics, Physical Education

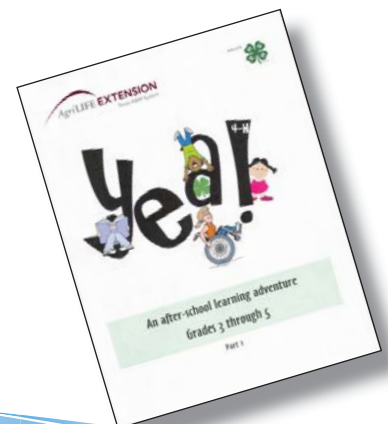
*Green Acres (Ag Literacy Unit)* Agricultural Science & Technology Education, Science, Career Orientation, Fine Arts, Mathematics, Social Studies

*Buggin' Out (Entomology Unit)* Career Orientation, English, Language Arts, Reading, Science

*Biz Venture (Entrepreneurship Unit)* Business Education, Career Orientation, Economics, Fine Arts, English, Language Arts, Marketing Education, Reading, Social Studies, Technology Application

Cost: \$50.00 (4-Hy.6-8)

Available from AgriLife Bookstore





## Environmental Education and Earth Science

### Give Water A Hand

Grades: K through 12th

Give Water A Hand tells young people about water. It asks them, "Do you want to keep animals, birds and fish healthy? Do you want to be sure that water is safe to drink? Do you want to make sure there is plenty of water? Do you like to have fun with water? Do you care about water in your neighborhood?" This curriculum allows them to investigate water in their communities and see how their actions make a difference. It incorporates mapping exercises, community service project ideas, and numerous small projects.

TEKS: Science

Available on-line at [uwex.edu/erc/gwah](http://uwex.edu/erc/gwah)

### Predators in the Classroom

Grades: 4th through 7th

Predators in the Classroom targets fourth graders with information regarding the biological and social impact of predators in Texas. This multi-media module consists of a display, interactive computer program video and lesson plans. Pre-test and post-test methodology is used to measure program impact.

TEKS: English, Fine Arts, Health, Language Arts, Mathematics, Reading, Science, Social Studies

Available from Dr. Dale Rollins at 325-653-4576, or by e-mail [drollins@ag.tamu.edu](mailto:drollins@ag.tamu.edu).

### White-Tailed Deer

Grade: 3rd

The White-tailed Deer is a multimedia module to teach third graders about wildlife and wildlife habitat in general and white-tailed deer specifically. The module consists of a hands-on display, lesson activities and videos. Pre-test and post-test methodology is used to measure program impact.

TEKS: Science, Language Arts, Mathematics, English

Available from Dr. Billy Higginbotham at 903-834-6191, or by e-mail [bhiggenb@ag.tamu.edu](mailto:bhiggenb@ag.tamu.edu).

### Investigating Water

Grades: 4th and 8th

Investigating Water is a comprehensive activity base curriculum that examines water, from its physical properties to ecosystems and conservation. Lesson based activities are included, most of which can be performed with kitchen utensils or recycled materials. Fun with science is the key!

TEKS: Science

Cost: \$50.00 (4-H 17-1)

Available from AgriLife Bookstore

### Something's Fishy

Grade: 4th

Something's Fishy is a multi-media module targeting fourth graders with information on aquatic science, aquaculture, sport fishing, water quality and water conservation. The module consists of a display, computer program, lesson activities, videos and water test kits. Pretest and post-test methodology is used to measure program impact.

TEKS: Language Arts, Mathematics, Reading, Science

Available from Dr. Billy Higginbotham at 903-834-6191, or by e-mail [bhiggenb@ag.tamu.edu](mailto:bhiggenb@ag.tamu.edu).

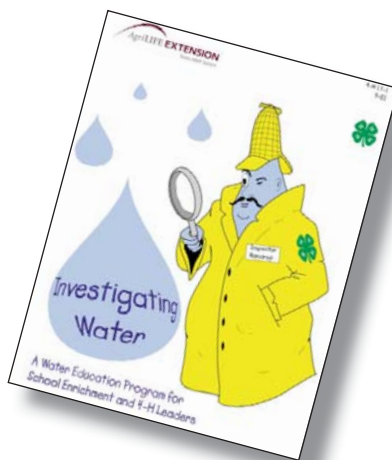
### Wildlife Success Stories and Endangered Species

Grade: 3rd

Wildlife Success Stories and Endangered Species is a multi-media module targeting third graders with information on wildlife species that have been recovered through management. The module also discusses endangered species, their status and recovery efforts. The module consists of a display, computer program, lesson activities and videos. Pre-test and post-test methodology is used to measure program impact.

TEKS: Science, Language Arts, Mathematics, Reading, Science

Available from Dr. Billy Higginbotham at 903-834-6191, or by e-mail [bhiggenb@ag.tamu.edu](mailto:bhiggenb@ag.tamu.edu).



### Managing Largemouth Bass in Texas Ponds

Grade: 9th through 12th

Learn firsthand what biologists, landowners and volunteers practice daily in Texas in order to conserve and manage our natural resources! This curriculum is designed to teach high school students key science and math principles pertaining to natural resources management. It uses a Texas fish species, largemouth bass, and real-world scenarios that occur across the state. The lessons involve all phases of managing natural resources: data collection, analysis and interpretation. In addition to the classroom work, optional field exercises are included to encourage the students to put their classroom experiences into action. The lessons can be conducted in the classroom and reinforced with field activities where appropriate. This TEKS-aligned curriculum includes 9 science and 10 math lessons along with pre- and post-tests in TAKS test formats. It includes a CD that contains the curriculum as well as a PowerPoint presentation and a poster of common Texas fish species. 344 pp., 1 CD, 1 poster

TEKS: Mathematics, Science

Cost: \$50.00 (notebook, CD, and Poster) (B-6206)  
\$19.99 (CD only) (B-6207)

Available from AgriLife Bookstore

### Managing the White-Tailed Deer: A Wildlife and Fish Management Curriculum for High School Math and Science Students

Grade: 9th through 12th

Learn firsthand what biologists, landowners and volunteers practice daily in Texas in order to conserve and manage our natural resources! This curriculum is designed to teach high school students key science and math principles pertaining to natural resources management. It uses a Texas deer species, White-Tailed, and real-world scenarios that occur across the state. The lessons involve all phases of managing natural resources: data collection, analysis and interpretation. In addition to the classroom work, optional field exercises are included to encourage the students to put their classroom experiences into action. The lessons can be conducted in the classroom and reinforced with field activities where appropriate. This TEKS-aligned curriculum includes 9 science and 10 math lessons along with pre- and post-tests in TAKS test formats. It includes a CD that contains the curriculum as well as a PowerPoint presentation and a poster of common Texas fish species. 344 pp., 1 CD, 1 poster

TEKS: Mathematics, Science

Cost: \$50.00 (notebook, CD, and Poster) (B-6227)  
\$19.99 (CD only) (B-6228)

Available from AgriLife Bookstore



## Plants and Animals

### Agricultural Literacy Fairs

Grades: K through 12th

Agricultural Literacy Fairs are events planned and coordinated by county Extension personnel and other partners to expose youth to the world of agriculture and how it impacts everyday life, even if you live in the city. Ag fairs can be held on site or students may be taken to another location for the event. Educational stations are set up and manned by volunteers. Students rotate through each station on a schedule to learn about agriculture. Sessions are tailored to the agriculture in the area. Examples of sessions include: livestock species (beef, dairy cows, sheep, swine, horse, etc), crops (corn, cotton, rice, wheat, etc), horticulture (gardening, floriculture, grape production, etc), Safety, Nutrition, Entomology, Soil Erosion, and much more. In addition to the interactive fair, classrooms are provided with a support package of lessons and activities that can be conducted prior to or following the ag fair to reinforce learning.

TEKS: Health, Science

Available through local county Extension Office

### Food & Fiber

Grades: 7th through 8th

The Food & Fiber Curriculum Enrichment Guide is used as a resource for Ag Literacy Fairs. The lessons focus on the agriculture commodities that make Texas the second largest commodity-based producer. Students will learn about the production cycles for 10 major commodities in Texas, the economic impact of agriculture on the Texas economy and the career opportunities associated with agriculture.

TEKS: Agriculture Science & Technology, Business Education, Economics, Language Arts, Home Economics Education, Reading, Social Studies

Available through local county Extension Office

### Southwest Dairy Farmers Mobile Dairy Classroom

Grades: K through 12th

Mobile Dairy Classroom is a traveling milking parlor, featuring a live cow and an oral presentation. Trained instructors will demonstrate how to milk a cow, describe how milk goes from the farm to the consumer, and then answer questions from the audience. This is an innovative program that brings the dairy experience directly to children. At schools, students and teachers share an experience that includes math, science, health (nutrition), and agriculture, all presented in an outdoor classroom format.

TEKS: Health, Mathematics, Science

Available for booking through the Southwest Dairy Farmers website using their online request form [mobiledairy.com/request\\_form](http://mobiledairy.com/request_form)

### H2O for You: Water Fairs

Grade: 3rd

H2O for You: Water Fairs focuses instruction on teaching youth about uses of water, where water comes from, and conservation of water both inside and outside of the home. The water fair consists of 6 learning stations that are conducted at the school. Some sessions take place outside and others in the classroom. Students rotate through the 6 stations, learning concepts to help them be water conservationists. Teachers are provided a packet with a pre-test and lessons that can be taught before the water fair. Students are also given a post-test following the event to determine the knowledge gained after participating in the classroom learning experiences and the water fair.

TEKS: Health, Language Arts, Physical Education, Science

Available through local county Extension Office

### Food & Fiber for the 21st Century

Grade: 1st through 6th

Food and Fiber for the 21st Century is a resource guide for elementary school teachers to use as a classroom aid in teaching agriculture. The curriculum gives the student numerous opportunities for exploring geography and history, for developing internet-based research projects, and for practicing their writing skills. Science-based activities in plant and soil science, and a unit in biotechnology are included, all with agriculture as the theme.

TEKS: Geography, History, Mathematics, Reading, Science, Writing

Available from Texas Farm Bureau, P.O. Box 2689, Waco, TX 76702-2689. Lessons are posted on their website at: <http://www.txfb.org/agclass.asp>

### Texas Farm Bureau Mobile Learning Barn

Grade: 1st through 6th

Texas Farm Bureau has created an exciting interactive adventure called the Mobile Learning Barn that will help students create a connection between people and agriculture, and the impact it has on our lives. The trailer can display up to seven commodities with two sections being portable, stand alone barns that can be set up curb side. The various commodities displayed in the Mobile Learning Barn include, corn, cotton, grain sorghum, pork, beef and dairy, to name a few. With a variety of commodities, the displays are flexible to meet the needs of the various regions in Texas.

TEKS: Geography, History, Science  
Available from Texas Farm Bureau, P.O. Box 2689, Waco, TX 76702-2689. Lessons are posted on their website at: <http://www.txfb.org/agclass.asp>





## Plants and Animals

### Biscuit Bingo

Grades: K through 12th

Students in a class are divided into two groups (Red Farm and Blue Farm) and are responsible for farming decisions involving risk management on two 100 acre wheat farms. Students choose Bingo cards to learn what a farmer actually experiences (weather, disease, pests, or price). They engage in a decision making process based on these experiences 30 days, 60 days and 90 days after planting the crop. Mathematics skills are incorporated to share expected yields per acre, loss or gain of expected yields, and finally net income.

TEKS: Mathematics, Science  
Module can be reserved through local county Extension Office who can check-out through the Extension Resource Library at <http://av-library.tamu.edu/>

### Texas Uncovered

Grade: 1st through 6th

Texas Uncovered is a three by three foot product that depicts Texas and its four major regions. Youth will begin by seeing the state with magnetic covers over pictures that depict the region. The presenter will uncover one magnetic cover one at a time revealing a picture that is common to the region. They will then have to find its match. It is a memory game for the participants. These participants will attempt to remember facts and figures that the presenters outlined for them and then try to match the region of Texas with the picture. This module is great for an agricultural fair day or classroom activity. It is perfect for a geography class as well.

TEKS: Geography, Science  
Available from Texas Farm Bureau, P.O. Box 2689, Waco, TX 76702-2689. Lessons are posted on their website at: <http://www.txfb.org/agclass.asp>

### The Importance of Agrochemicals

Grades: 3rd through 6th

This module teaches the importance of agrochemicals and how they protect crops against insects, weeds, and diseases. The module consists of a four by five foot display that has a wheel mounted on it. The youth participants spin the wheel and are asked a question from the category on the wheel.

TEKS: Science  
Module can be reserved through local county Extension Office who can check-out through the Extension Resource Library at <http://av-library.tamu.edu/>

### Field of Genes: Biotechnology Teaching Module

Grade: 7th through 12th

Field of Genes: The Biotechnology Teaching Module is supported by the curriculum titled Field of Genes: Making Sense of Biotechnology in Agriculture. Students learn the process of cell division and the environmental drawbacks and benefits of utilizing materials such as paper, plastic, and cloth.

TEKS: Mathematics, Science  
Module can be reserved through local county Extension Office who can check-out through the Extension Resource Library at <http://av-library.tamu.edu/>

### Processing the Fabric of Our Lives: Miniature Cotton Gin

Grade: 7th through 12th

The miniature cotton gins are built with plexiglass to view the ginning mechanisms and are available to county Extension agents, teachers, and volunteers for educating audiences about the Texas Cotton Industry. This will allow the participants to view cotton stripping, cleaning, and aligning processes. There are four of these miniature cotton gins across the state. Please select the one that is in the closest proximity to your location.

TEKS: Mathematics, Science  
Module can be reserved through local county Extension Office who can check-out through the Extension Resource Library at <http://av-library.tamu.edu/>

### The Rainfall Simulator

Grades: 3rd through 12th

The Rainfall Simulator is an outstanding way for youth to see the importance of rainfall and how it effects the soil of Texas. This module is provided by the Natural Resources Conservation Service and is intended to be used with youth to reveal the importance of rainfall. The simulator shows various soil terrains and uses water to reveal the differences in how varying terrains are effected by water. It is amazing the differences that the soil will go through in just ten to twelve minutes. Instructions are provided at this website for constructing a RainFall Simulator. <http://texas4-h.tamu.edu/events/agliteracy/rainfall.html>

TEKS: Science  
Module can be reserved through local county Extension Office who can check-out through the Extension Resource Library at <http://av-library.tamu.edu/>





## Science and Technology

### JMG Junior Master Gardener Handbook

Grades: 3rd through 5th

The Junior Master Gardener Level 1 curriculum provides teachers with the resources to teach students about the wonderful world of gardening. There are eight chapters with hands-on, novel learning experiences for youth. The curriculum also includes activity pages, worksheets, JMG rhythms, reading passages formatted for standardized tests, and much more. After studying life skills and careers, students may culminate their learning experience with service activities.

TEKS: Language Arts, Mathematics, Science, Social Studies

Cost: \$15.00 Student Handbook, Level 1 (B6082)

\$15.00 Student Handbook Spanish, Level 1 (B6082S)

\$36.00 Teacher/Leader Guide, Level 1 (B6083)

Available from AgriLife Bookstore



### JMG Junior Master Gardener Level 2: Operation Thistle: Seeds of Despair

Grades: 6th through 8th

This level 2 curriculum for the Junior Master Gardener program combines the teacher/leader guide with reproducible pages for young participants. Through dozens of exciting and fun activities, students can investigate plant growth and development, take part in service learning projects, and earn certification--all while undertaking an urgent mission to defeat Dr. Thistle! (204 pp.)

TEKS: Language Arts, Mathematics, Science, Social Studies

Cost: \$33.00 (B-6166)

Available from AgriLife Bookstore



### JMG Junior Master Gardener Level 2: Operation W.A.T.E.R.: Dr. Thistle Goes Underground

Grade: 6th to 8th

While following the continuing saga of the evil Dr. Thistle and his plot to rule the earth's ecosystems, students in grades 6-8 can learn important lessons on soils and water. Topics in this book include soil color, texture and structure; soil nutrients; soil improvement; soil conservation; the water cycle; aquifers, watersheds and wetlands; water movement; and water conservation. Each of the eight chapters contains three hands-on activities to reinforce the concepts covered. Also included is a section on service learning and career exploration projects connected to soil and water. (212 pp.)

TEKS: Language Arts, Mathematics, Science, Social Studies

Cost: \$33.00 (B-6193)

Available from AgriLife Bookstore



### JMG Golden Ray Series Health & Nutrition in the Garden

Grades: 3rd through 5th

Children are motivated to eat the fruits of their labor in their study of "Health and Nutrition from the Garden." This imaginative curriculum teaches children that growing and eating nutritious fruits and vegetables is rewarding and fun. This teacher/leader guide has six learning concepts, with activity pages for children and program information for leaders. (187 pp. + cards for "Fruit and Veggie Mania" game)

TEKS: Language Arts, Mathematics, Science, Social Studies

Cost: \$28.00 (B-6164)

\$15.00 Student Handbook Spanish, Level 1 (B6082S)

\$36.00 Teacher/Leader Guide, Level 1 (B6083)

Available from AgriLife Bookstore

### JMG Golden Ray Series Wildlife Gardener

Grade: 3rd through 5th

The National Wildlife Federation and the Junior Master Gardener program have joined forces to create an engaging learning opportunity for children. The Wildlife Gardeners curriculum will help children to gain a greater understanding and strengthen appreciation for the wildlife that is part of their local community. They will enjoy novel, hands-on project-based learning as they have fun gardening for wildlife. Students will learn how to build the components of a wildlife garden habitat. The program culminates in a community service project, as the students develop a site recognized by the NWF as a Certified Schoolyard Habitat. (230 pp.)

TEKS: Geography, Science

Cost: \$33.00 (B-6167)

Available from AgriLife Bookstore

### JMG Golden Ray Series Literature in the Garden

Grade: 3rd through 5th

This curriculum seeks to engage children through powerful garden- and ecology-themed children's books. It uses six books to inspire learning through outdoor activities, creative expression and open exploration. Dozens of hands-on activities encourage leadership development, individual responsibility, community involvement, and the development of critical thinking skills. (224 pp.)

TEKS: Geography, Science

Cost: \$33.00 (B-6167)

Available from AgriLife Bookstore



## Science and Technology

### Hatching Eggs in the Classroom

Grades: 3rd through 8th

Hatching Eggs in the Classroom is known by many as its more informal title, Egg to Chick. This program is a 21-25 day project which teaches youth the basics of embryological development. Materials are available which include fertilized eggs, lesson plans, film, incubator, thermometer, and Q&A about how to handle malformed chicks. Teachers will need to work with agent to supply chick feed, feeder, cardboard box, and lamp. This program should be coordinated through your county Extension office.

The Egg and Embryo Life Sciences Video: This videotape accompanies publication B-5084, "Hatching Eggs in the Classroom." There are five sections: 1) embryo development; 2) ovulation and egg formation; 3) a puppet play written by a 2nd grade class, demonstrating the potential of combining the student's experience with language arts; 4) how to use embryos as a lab experience; and 5) the Spanish version of section 1.

TEKS: Science  
Cost: \$2.00 Publication (B-5084)  
\$35.00 Video (SP-72)

Available from AgriLife Bookstore

### Veterinary Assistant Handbook

Grade: 7th through 12th

The 4-H Veterinary Science Project is a 5-year curriculum based project with 100 lessons and 50 activities that gives youth interested in veterinary medicine opportunities to work in the field. The project is career-orienting and job-training so students can prepare for a field in veterinary science. Students who participate in this project will work with licensed veterinarians at their practice. By doing this hands-on training they learn the knowledge and skills that are expected of a veterinary assistant.

TEKS: Science  
COSTS: \$30.00 Handbook  
\$4.50 Teacher's Guide  
\$7.50 Teacher's Key

Available through Dr. Buddy Faries, Jr. at 979-845-4353, e-mail f-faries@tamu.edu

### KIDzANTS

Grades: K through 2nd

"KIDzANTS" teaches students about the red imported fire ant. This teaching manual will include lessons on the history of the red imported fire ant, body structure of ants, the life cycle of the red imported fire ant, the fire ant mound, what fire ants eat and where they like to live, and other common ants in the landscape. The manual also stresses fire ant safety. In addition, extra activities such as an imported fire ant model, and a recipe on how to prepare chocolate covered ants are outlined in the manual!

TEKS: Science  
COSTS: Contact County Extension Office

