



# 4-H School Enrichment Projects



## UC COOPERATIVE EXTENSION MARIPOSA COUNTY

Dear Mariposa County Educator,

The University of California Cooperative Extension 4-H Office in Mariposa County is pleased to offer excellent 4-H educational projects for your students free of charge from our lending library. Some we have offered in the past, and this year we have several NEW projects to choose from. All of these projects are FREE to you and we will deliver them directly to you and pick them up upon completion.

### ***What is 4-H?***

4-H is a youth development program of the University of California. It is an integral part of our nation's public education system. 4-H is learning, growing, fun, and educational!

### ***THIS YEAR OUR PROJECT LIST INCLUDES:***

#### ***Butterfly Pavilion***

Observe the Life Cycles of Real Live Butterflies!

This intriguing *springtime* project lets students study the life cycle of the butterfly, from larvae to chrysalid to adult. Under your students' inquisitive eyes, the life cycle will unfold. Caterpillars feed for 7-10 days before forming chrysalides, then metamorphose into butterflies after an additional two weeks. Includes a pavilion, curriculum, reader, life-cycle models. Painted Lady larvae will be sent directly to you at your school. Call early as this curriculum is very popular!



#### ***Edible Plant Parts***

Grades 2-3

Eating flowers at dinner? Serving stem and root hors d'oeuvres? These sound like unusual food dishes to say the least. But if you think about it, they are not so peculiar. Students will be fascinated to learn that when broccoli is served at dinner, they are eating flowers and when celery and carrots are served with a dip, they are eating stems and roots.

This project encourages students and teachers to examine the six basic plant parts in a unique way. Hands-on activities are included for each basic plant part. At the same time, the students learn about California agriculture and food production. Includes twenty-eight color photos of fruits and vegetables grown in California.

#### ***4-H Chick Hatching Project (Embryology)***

"Watch a chick hatch!"

4-H Chick Hatching is a complete educational kit that teachers can use to teach students about the beginnings of life. This 21day project comes with one incubator with turners, candler, brooder with heat light, chick food, water, feeder, educational booklets, readers, and videos.



There are six embryology kits available, so reservations are on a first come, first serve basis. We will deliver and pick up all equipment and supplies to & from your site.

You will have to find your own source for the fertilized eggs. The incubators can hold chicken, duck, and geese eggs.

**This can be a fall and spring project!**

#### ***Entomology***

Grades 3-12

Study the seven major orders of insects. This project will challenge students and provide opportunities to explore a wide assortment of insects. Included are displays of harmful insects, beneficial insects, and the seven major orders plus curriculum.





### ***Honey Bee Project***

The Honey Bee Project teaches fascinating facts about the life cycle of the honey bee. There is curriculum and a display of the various parts of the hive and different bees. The video “The Honey Files: A Bee’s Life”(20 min.) takes the students into a journey inside a bee hive to learn more about bees, honey, and pollination. Students will learn about different types of bees and their various jobs.

***TWIGS*** (Teams with Intergenerational Support) Curriculum for teachers focusing on Gardening and Nutrition

This curriculum package includes 30 field-tested lessons connecting gardening with nutrition for children in Kindergarten through sixth grade. The focus is on positively influencing participants’ nutritive choices through the development and harvesting of a vegetable garden.

Each 1 ½ hour activity follows the same format of providing rationale, helpful information, step-by-step guidance and extensions. Lessons are flexible and meant to be selected based on interests, timing of project, and available materials. Nearly all lessons include a handout suitable for reproducing.

### ***Root-View Garden***

Watch various roots get deeper and deeper in the soil!

Teachers and students will observe the growth of various plants such as peas, carrots, herbs, and more. Provided is the root-view garden, potting soil, seeds, and curriculum.

### ***4-H Junior Master Gardener Program***

The Junior Master Gardener Program (JMG) is a new and innovative 4-H youth gardening project. It is modeled after the highly popular Master Gardener program, and offers horticulture and environmental science education through fun and creative activities.

There is a handbook and a leader/teacher guide. Level One of the program is designed for grades 3-5.

Group activities can be done with a school class, JMG club, after-school program, home school group, or any group of interested young gardeners.

The JMG program introduces young gardeners to the art and science of gardening, and helps them develop leadership and life skills to become good citizens within their communities, schools, and families.

### ***Where’d You Get Those Genes?***

Grades 5-7

This five-lesson unit teaches students the basic concepts of genetics using agricultural commodities as examples. Includes brief biographies on people involved in genetic research as well as a creative writing assignment. *Aligned to the Content Standards for California Public Schools.*

### ***The Mysterious Plant Caper***

Grades K-1(in English & Spanish)

Students use observation and evaluation skills in a series of scientific experiments and hand-on multi-curricular activities to learn the basic parts of plants and that plants are living things that require water, air, light, and nutrients for survival.

### ***What Do Plants Need to Grow?***

Grades 2-4 (in English & Spanish)



In this comprehensive science unit, students learn that plants, in order to survive and reproduce, require certain nutrients. Thirteen interrelated hands-on lessons and activities allow students to experiment with plants and relate what they learn to the food they eat.

### ***Skills for Life-Dairy (set of 4 books)***

Grades 4 & up

Animal Science Series has three books with a leader/teacher guide. Students will learn about the dairy industry while developing important life skills.

### ***Learning About Dairy Cows***

Grades 4 & up

A resource guide designed to provide basic dairy information for helping students learn more about dairy cattle, dairy management, and the dairy industry.



### ***What’s Bugging You?***

Grades 4-6

Students participate in activities that include higher-order thinking skills, creative thinking, role playing, and problem solving. Scientific principles on pest management are provided *Aligned to the Content Standards for California Public Schools.*

### ***Create-a-Bug Curriculum***

Grades K-3

This curriculum was developed to improve the quality of health and science education by promoting partnerships between scientists and teachers that will enhance the science teaching skills of the classroom teacher. There are 20 lessons, five for each grade level K-3.

Enjoy creating bugs with your students and then they can enter them at our local Mariposa County Fair!

### ***Where Does It Come From?***

Grades 2-3

Students examine a variety of food and fiber projects. Through hands-on activities and experiments, students learn about the raw sources of food and fiber products, trace a product back to the farm and examine food, packaging and storage techniques. Sixteen slides show the origins of many foods.

### ***Tree to Table***

Grade K-3

Lessons integrate language arts, mathematics, science, social science, and visual and performing arts concepts while following food production from the tree to the table.

### ***Counting on Cooperatives***

Grades 5-6

This six lesson unit introduces students to the study of economics including an overview of basic business types and systems. Social studies, history and mathematics concepts are reinforced in this motivating unit which highlights agricultural cooperatives.

### ***That Was Then, This Is Now***

Grades 3-6

The purpose of this series of lessons is for students to learn about food prices, and how that have changed over time as they perform math computations, analyze data charts and compare information.

### ***Science Fair and Lesson Ideas***

Grades 3-12

Contains three sections-

- 1) provides stimulating questions that teachers can use when teaching a specific scientific topic.
- 2) provides science fair ideas.
- 3) list of websites that educators and students may find useful for preparing their projects.

### ***Starting All Over Again-The Cycles of Nature***

Grades 6-8

Focuses on plant nutrient cycles.

### ***Project Food, Land, & People***

Grades K-12

Provides teachers and their students with 55 lessons with map, all supporting Food, Land, & People's mission to develop citizens literate about the relationships between agriculture, the environment, and human populations.

Also includes the correlations to California State Content Standards.

### ***Commodity Fact Sheets***

Fact sheets on various crops from almonds, artichokes, forest resources, plant nutrients to agriculture water.

### ***Exploring Your Environment***

Grades 5-12

This curriculum will help answer questions about the air we breathe, how does the food we eat and clothes we wear affect the environment and more. Each section focuses on an ecological concept and provides activities that will help explain how the environment works.

### ***Science Discovery Series***

Volume 1 (Grades 3-6) & Volume 2 (Grades 4-7)

Making science fun is the goal of the lessons and activities included in this curriculum. Volume 1 focuses on basic science exploration activities with few consumable supplies that are easy to make into self-contained kits. Volume 2 provides more in-depth coverage to six different science topics.

### ***Lady Bug Curriculum***

Ages 4 & up

Discover the metamorphosis of a ladybug with the Ladybug Land! Includes a see-through domed habitat that allows you to get a bug's eye view as you watch the small alligator-shaped larvae eat and drink from special gels and comes with a reader and curriculum. Pink Spotted ladybug larvae will be shipped directly to you at your school.



### ***Cotton's Journey*** (3 sets available)

Grades 1-8

This comprehensive kit contains teacher's manual including cotton information, poster, planting seeds, cotton samples, video, and lessons. All lessons are written for multiple subjects and aligned to California and National Education Standards. Video is produced in four segment- history, production, harvesting, and processing.

### ***Ten Things Kids Want to Know About Farming***

Grades 4-6

This 22 minute educational video takes students on a series of field trips to farm and ranch locations throughout the United States offering them a firsthand view of what happens to produce the food and clothing we use everyday.

The "Ten Things Kids Want to Know About Farming" lesson plans help teachers expand upon ideas presented to the video through classroom and field activities. The 10 lesson plans offer creative ways of teaching fundamental concepts in math, science, history, social science, geography, language arts, and visual arts. They were developed in consultation with teachers.

### ***Praying Mantis Kits***

Live Praying Mantis Egg Case - anywhere from 75 to 200 baby mantises will hatch from this egg case! The females sometimes grow over 5" long. Feed them tiny insects (like aphids) or release them to forage for garden pests on their own.

Kit includes ventilated Pop-Up Port-A-Bug habitat, one Certificate for Praying Mantis egg case and an informational sheet. Ten kits available on a first come, first serve basis.

#### **TO RESERVE YOUR 4-H CLASSROOM PROJECT OR FOR FURTHER INFORMATION CONTACT:**

Ira Jones, 4-H Coordinator  
5009 Fairgrounds Rd., Mariposa, CA 95338  
(209) 966-2417

FAX (209) 966-5321

or email: [irajones@ucdavis.edu](mailto:irajones@ucdavis.edu)

Office hours: 8am to 5:00pm Monday through  
Friday

(closed from 1-2pm for lunch)

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California Cooperative Extension of Mariposa,  
Mariposa County Farm Bureau, and  
Mariposa County.***

### ***Edible Numbers***

Grades 3-6

Provides teachers with lessons that relate experiences at the grocery store to classroom math and nutrient education.

### ***What Plants Need to Grow***

Grades 2-4

Students will learn that plants are living things that require water, light, air, and nutrients for survival.

### ***See-Through Compost Container***

Now you see it , now you don't. Three separate, water-tight compartments enable kids to view the entire decomposition process clearly and make side-by-side comparisons between different materials.

### ***How Much is Too Little? How Much is Too Much?***

Grades 5-8

Stresses the need for balanced ecosystem and encourages students to look at factual information and look at all sides of an issue before making a decision and to think for themselves. Has 11 lesson plans from plant anatomy to manure tea.

### ***Fruits and Vegetables for Health***

Grades 4-6

Introduces students to production, distribution, and nutritional value of California fresh produce.

### ***Simple & Complex Machines Used in Agriculture***

Grades 2-5

Introduces students to the simple and complex machines used in their daily lives and in food & fiber products. There are hands-on activities, create models, & more.

### ***Silkworms***

ages 7 & up

Kit contains 25 healthy silkworm eggs, ready to hatch, grow and spin silk. Eggs will hatch into hungry silkworms within 1 to 4 weeks.

### ***Mealworm Beetle Barn***

ages 5 & up

Follow the life cycle of the mealworm with this easy-to-raise kit and discover insect metamorphosis first hand.

***Classroom Hydroponic Plant Factory***  
*all grades*

Provides step-by-step instructions for setting up Hydroponic system for a classroom. It details various experiments that can be carried out with a simple setup.

***Worm Farm***  
*ages 6+*

Watch worms at work! Grow vegetation, add your own earthworms and watch how they to cycle soil and help plants to grow.

***Composting Kit***  
*grades 4<sup>th</sup> & up*

Three aerated compartments allow views of the decomposition process in stages and help young ecologists make side by side comparisons between different materials. Three thermometers demonstrate temperature changes during decomposition.

**4-H SCHOOL ENRICHMENT PROJECT  
RESERVATION FORM**

**SEND, EMAIL, OR FAX TO:**

Ira Jones, 4-H Coordinator  
irajones@ucanr.edu  
5009 Fairgrounds Rd.  
Mariposa, CA 95338  
(209) 966-2417 or FAX (209) 966-5321

**Dear Educator:**  
Please check the project you wish to use with date needed and return to the address above. Thank you.

**NAME:** \_\_\_\_\_ **SCHOOL & TEL #:** \_\_\_\_\_ **email-** \_\_\_\_\_

<u>Project</u>		<u>Date needed</u>
Butterfly Pavilion	<input type="checkbox"/>	_____
Ladybug Land	<input type="checkbox"/>	_____
Edible Plant Parts	<input type="checkbox"/>	_____
4-H Embryology (chicks)	<input type="checkbox"/>	_____
Entomology	<input type="checkbox"/>	_____
Honey Bee Project	<input type="checkbox"/>	_____
TWIGS	<input type="checkbox"/>	_____
Root-view Garden	<input type="checkbox"/>	_____
4-H Jr. Master Gardener	<input type="checkbox"/>	_____
Where'd You Get Those Genes?	<input type="checkbox"/>	_____
The Mysterious Plant Caper	<input type="checkbox"/>	_____
What Do Plants Need to Grow?	<input type="checkbox"/>	_____
Skills for Life- Dairy Cows	<input type="checkbox"/>	_____
Learning About Dairy Cows	<input type="checkbox"/>	_____
What's Bugging You?	<input type="checkbox"/>	_____
Create-a-Bug Curriculum	<input type="checkbox"/>	_____
Tree to Table	<input type="checkbox"/>	_____
Counting on Cooperatives	<input type="checkbox"/>	_____
Where Does It Come From?	<input type="checkbox"/>	_____
Science Fair and Lesson Ideas	<input type="checkbox"/>	_____
Praying Mantis	<input type="checkbox"/>	_____
Ten Things About Farming	<input type="checkbox"/>	_____
Cotton' Journey	<input type="checkbox"/>	_____
That Was Then, This is Now	<input type="checkbox"/>	_____
Starting All Over Again-Cycles of Nature	<input type="checkbox"/>	_____
Project Food, Land, & People	<input type="checkbox"/>	_____
Commodity Fact Sheets	<input type="checkbox"/>	_____
Exploring Your Environment	<input type="checkbox"/>	_____
Science Discovery Series	<input type="checkbox"/>	_____
Edible Numbers	<input type="checkbox"/>	_____
What Plants Need to Grow	<input type="checkbox"/>	_____
How Much is Too Little?	<input type="checkbox"/>	_____
Fruit & Vegetable for Health	<input type="checkbox"/>	_____
Simple & Complex Machines	<input type="checkbox"/>	_____
Mealworm Beetle Barn	<input type="checkbox"/>	_____
Silkworm Book	<input type="checkbox"/>	_____
Classroom Hydroponics	<input type="checkbox"/>	_____
Compost Container	<input type="checkbox"/>	_____
Worm Farm	<input type="checkbox"/>	_____