

# New Mexico 4-H Youth Development Curriculum Kits

## INTRODUCTION

This publication contains a summary listing of 4-H Curriculum Kits available to you through your County Extension Office. Curricula are available for Kindergarten (K) through High School and may be used for School Enrichment, Special Interest, or Club Programs. The 4-H Youth Development Program is designed for in-school and out-of-school programming. Feel free to involve your youth in 4-H through the following curricula or others that may be available through your local County Extension Office.

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**Contact your local County Extension Office <http://aces.nmsu.edu/county/> to order these materials on a check-out basis.**

**Reviewed in 2018 by:**

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**Ag Links Grades 3-5 (New!)****09002**

Agriculture is a contributing factor in our everyday life, but we don't always know it! This lesson set helps children learn how the products they use every day come from the Ag industry. Kit includes product samples, descriptions and industry information that can be used as a teacher led lesson or a learning game.

**Acres of Adventures****Grades 3-5**

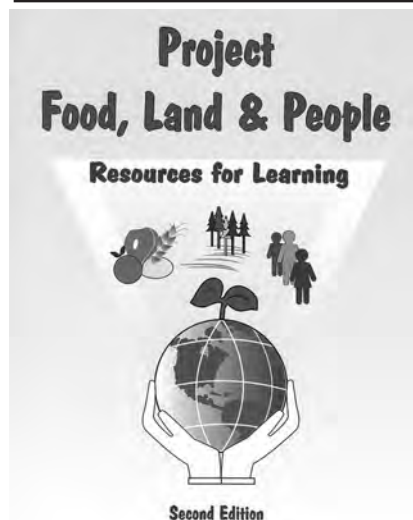
Each uniquely themed guide contains 40 hands-on lessons developed in cooperation with curriculum specialists from the National Consortium of State Agriculture in the Classroom programs, Extension 4-H professionals and experts from the field of child-care education. It was designed to increase agricultural literacy among 3rd through 5th grade audiences while developing their understanding, appreciation and application of science through a variety of agriculturally-based activities.

**Acres of Adventure I****09222**

Adults and older youth will enjoy using these lesson plans to quickly engage youth in learn-by-doing agriculture activities within the following thematic units: Plant Detectives, Mystery Agriculture, All about Agriculture, Fast Food Agriculture. (100 pages)

**Acres of Adventure 2****09223**

This group activity guide provides ready to use lesson plans that will quickly involve youth in experiential activities related to the following thematic units: Insect Invasion, Farm Physics, Agriculture Gone Wild, Frontier Living. (100 pages)

**Food, Land and People K-12****09760**

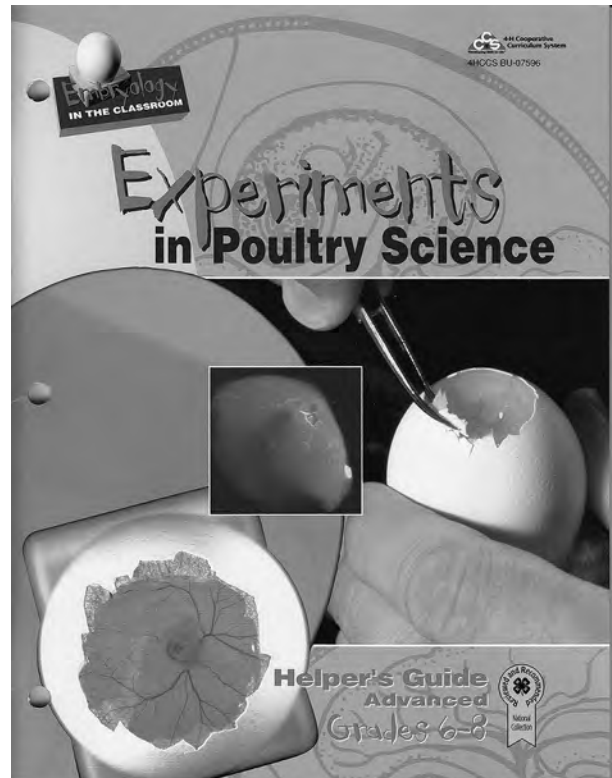
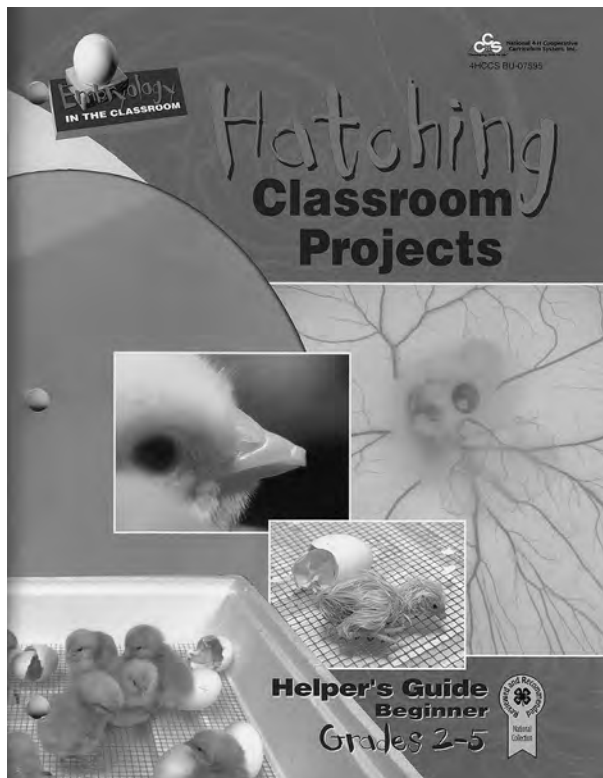
Food, Land and People (second editon) is a curriculum notebook that contains lesson plans for use with youth groups. The program teaches an appreciation for land, agriculture, agricultural products and society. The lesson plans include the background information needed to teach the lesson, materials needed, activities and games that are ready to use. Suggested uses include 4-H Club meeting programs, Agriculture Day events, classroom, after school programs, camps and youth groups.

**From Egg to Chick Grades 2-6**

**09005**

Students will learn some basic principles of reproduction. They will incubate, hatch chicks, and observe live chicks. A Teacher's guide and embryology video is available.

Most young people are fascinated with the wonders of life. This study of the avian egg provides them with an opportunity to understand some of the theories and principles of reproduction. The use of the incubator in the classroom is a very popular project.



**Pizza Garden, An Agricultural Adventure Grades 2-4**

**09205**

Agricultural adventure resource is designed for educators to teach young people about where their food originates from by using something children love to eat: PIZZA! Using 8 lessons and fun hands-on activities, this resource material helps young people learn about nutrition, careers and language arts all at the same time.



**Horse Education**

The horse project manuals provide an interactive curriculum for youth that is hands-on and grounded solidly in subject matter. With the addition of new content to the series, youth will be able to develop life skills while exploring horse science.

**Horse Project Outcomes**

Youth will gain a greater understanding of key subjects within horse science. Youth will demonstrate enhanced life skill development.

**Horse Education - Level 1 – Giddy Up & Go (40 pages) Grades 3-4 09207a**

Focuses on the introductory basics and familiarizes youth with horses. Activities include horse body shop, designing the perfect horse, paper dolls, human cues and group relay knot.

- Parts of the Horse
- Colors & Markings
- Designing the Perfect Horse
- Horse & Herd Behaviors
- Safety Around Horses
- Knot Tying
- Dressing for the Barn

**Horse Education - Level 2 – Head, Heart and Hooves (40 pages) Grades 5-6 09207b**

Youth learn about horse behavior, detailed anatomy and basic care practices for horses. Activities are pony up to the salad bar, body condition scoring, bad hair day, and long in the tooth.

- Conformation
- Horse Skeleton
- Feeding & Grazing
- Grooming
- Hoof Structure
- Dental Care

**Horse Education - Level 3 – Stable Relationships (40 pages) Grades 7-9 09207c**

Keeping horses healthy and teaching basic care to youth are the heart of this activity guide.

- Horse Health
- Breeding
- Genetics
- Diseases and Parasites
- Fencing and Pastures
- Finances of Showing

**Horses Helper's Guide (40 pages) For Adult and Teen Leaders**

Interactive group activities help leaders make knowledge come to life for youth. Special tips for leaders to help youth acquire life skills. There is added attention to safety and subject matter throughout the series. Included in each kit.

**Pets – Level 1 - Pet Pals (36 pages) Grades 2-4**

**09103**



From gerbils to snakes, frogs to ferrets, youth will find this action packed activity guide makes learning about pets fun and exciting. Youth learn about pets through activities such as selecting a pet, identifying pet parts, pet art, handling pets, providing the right kind of housing and meeting the daily needs of pets.

**Pets – Level 2 – Scurrying Ahead (36 pages) Grades 5-7**

**09104**

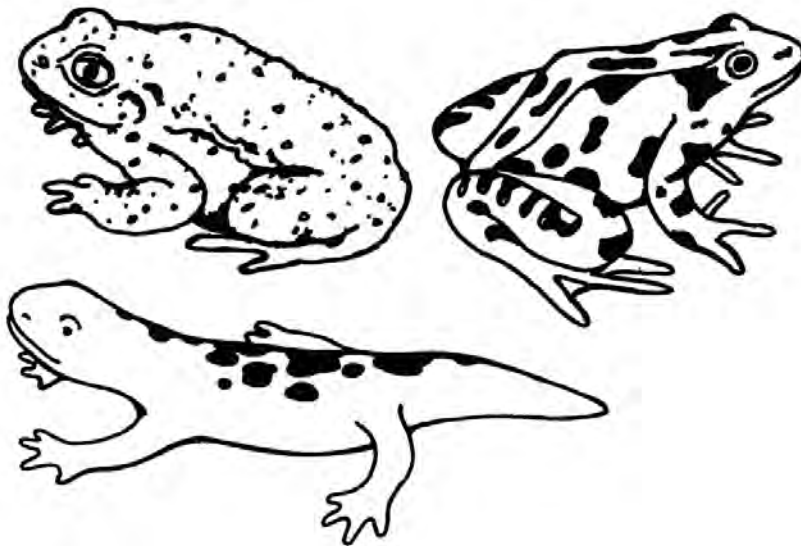
Youth develop planning and decision making skills as they practice feeding and caring for their pets, observing pet behavior, exhibiting pets, debating pet sayings and creating a story about a pet.

**Pets – Level 3 – Scaling the Heights (36 pages) Grades 8-12**

**09105**

Through these activities youth explore genetics, pet issues, reproduction, caring for newborns, starting a business and entering exciting careers. *Scaling the Heights* provides several opportunities for you to develop your leadership skills as you strive to complete the Scaling the Heights Achievement Program.

**Pets – Pet Helper’s Guide (36 pages) Included with each of the level kits.**



Project helpers will find many fun and engaging group games and activities to further expand the pet project experience for youth. In this guide you’ll also find helpful hints about characteristics of youth, life skill development, teaching experientially, project meeting ideas as well as answers to many of the activities in the youth guide.

## **Veterinary Science**

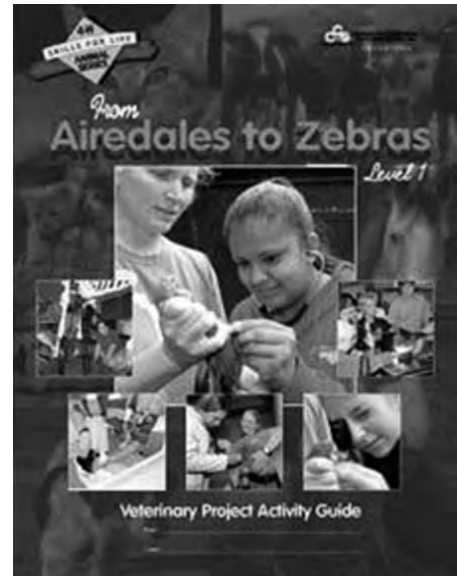
This curriculum emphasizes disease prevention and the veterinarian's role in protecting animal and public health. Youth will practice veterinary science project skills as they learn to be knowledgeable and responsible animal caregivers. Overall, the curriculum will stimulate interest in veterinary and animal science careers.

### **Life Skill Outcomes**

- Learning to learn
- Acquiring and evaluating information
- Communication
- Character development
- Disease prevention

### **Veterinary Science Project Outcomes**

- Develop knowledge and skills regarding Animal Health management
- Disease prevention
- Body systems
- Behavior
- Nutrition
- Career readiness



## **Veterinary Science - Level 1 – From Airedales to Zebras (40 pages) Grades 3-5 09209a**

This innovative series of three youth activity guides will lead youth through an exploration of the exciting world of veterinary science. The first guide introduces youth to the normal animal, basic anatomy and systems, elementary principles of disease and careers with animals.

### **The Normal Animal**

- A Breed Apart
- Basic Needs
- Fur and Feathers as Friends-and More
- Get Growin'
- Systems Check
- Body Language, Animal Style
- What's for Lunch?

### **Diseases, Pests and Problems**

- Pet Safety Patrol
- Not a Shot in the Dark
- Better Safe than Sick

### **Investigating Careers**

- Jack of All Trades
- Cool Tools!
- Furry Friends in Fact, Fiction and Film
- Here's the Story

**Veterinary Science - Level 2 – All Systems Go! (40 pages) Grades 6-8 09209b**

Youth will examine health and disease topics, normal and abnormal conditions and veterinary careers.

**The Normal Animal**

- Files for the Future
- All for One and One for All!
- All Stressed Up with No Place to Go
- The Defense Department

**Diseases, Pests and Problems**

- Biosecurity Blanket
- What's Eating You?
- Quality Counts!
- Not-So-Secret Agents
- When Good Feeds Go Bad

**Investigating Careers**

- Playing the Part
- Not Special K, Special T!
- You Do the Math
- A Shadow of Your Future Self
- Where Do You Stand?

**Veterinary Science - Level 3 – On the Cutting Edge (40 pages) Grades 9-12 09209c**

The guide involves youth in in-depth investigation of normal and abnormal systems, preparation for college and exploration of the diversity of the veterinary profession.

**The Normal Animal**

- Bond, Animal Bond
- TherioWHAT?!
- May the Best Gene Win
- Swell Cell Organelles
- Behave!

**Diseases, Pests and Problems**

- Have You Lost Your Marbles?
- It's a ZOO Out There!
- Could an Apple a Day Keep the Vet Away?
- It's Raining Cats and Dogs

**Investigating Careers**

- Your Future is in Your Hands
- What Else is There?
- Getting Technical
- All in a Day's Work

## **Veterinary Science Helper's Guide (40 pages)**

**For Adults and Teen Leaders**

The *Veterinary Science Helper's Guide* provides supplemental materials that help adult volunteers facilitate learning situations for various ages of youth. Numerous group activities are included to help youth develop essential life skills as they pursue their interest in veterinary medicine.

### **Mastering Project Skills**

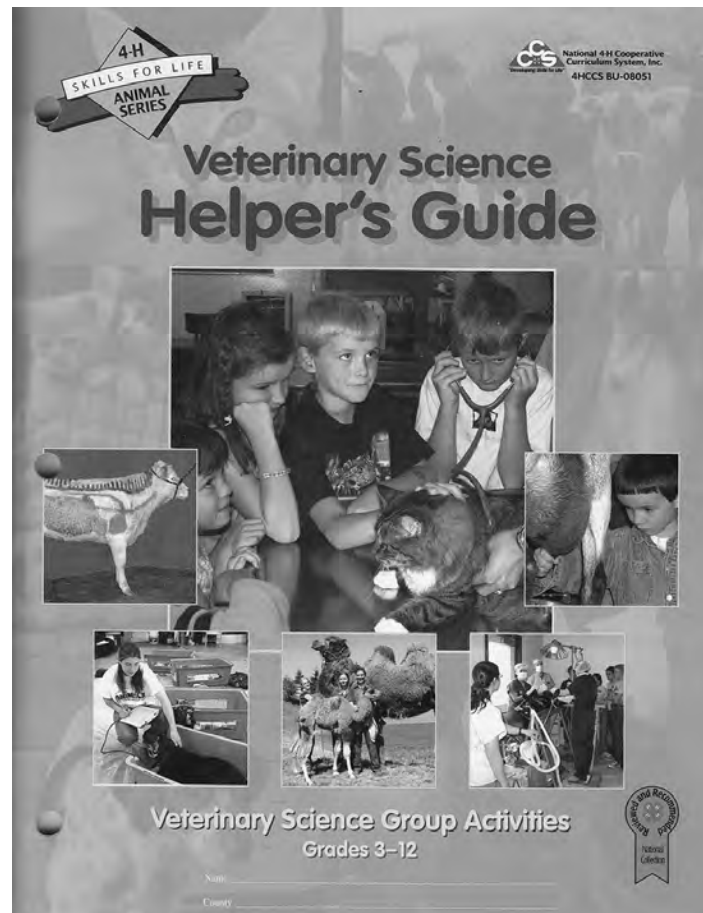
- Show What You Know
- For the Record
- Demonstration Derby Day

### **Developing Character**

- Vets helping Pets...and More
- What Makes YOU So Special?!
- Fact or Fiction
- The Truth About Cats and Dogs

### **Investigating the Profession**

- My Word!
- Surgeon, Pharmacist, Accountant, Boss
- On the Road Again
- Legal Beagles
- Is There a Doctor in the House?
- Looking for Answers





## CLOVERBUDS (5-8 YEAR OLD PROGRAMMING)

### **Cloverbuds: The 4-H Discovery Program**

**K-3**

Cloverbuds curriculum is neatly packaged in sets (Leader-Teacher and Student booklets) that can be used individually or by selecting a few activities from each booklet. Topics include:

	<b>Members</b>	<b>Leaders</b>
• Welcome To Cloverbuds	00101	00201
• Our Animal Friends	00102	00202
• Having Fun With Art	00103	00203
• Shopping Smarts	00104	00204
• Food Fun	00105	00205
• Playing It Safe	00106	00206
• Nature’s Treasures	00107	00207
• Look At Me—I’m Growing Up	00108	00208
• Family, Friends, and Community	00109	00209
• The Way Things Grow	00110	00210
• Having Fun With Science	00111	00211
• Stomp, Blow, Splash: Soil, Air, & Water	00112	00212
• Me, My Family, & My Friends (Citizenship Unit I)	00123	-----
• Exploring Citizenship Leader’s Guide (For use with Citizenship Units I and II)		00223

### **Exploring Farm Animals (36 pages) Grade K-3**

**09120**

Adult and teen helpers enjoy involving youth grades K-3 in learn-by-doing activities. Horses, goats, rabbits, pets, beef cattle, pigs, poultry and dairy cattle are explored. Youth learn about the care and feeding of farm animals, how to be safe around animals, identify species, products, terms and animal body parts. Worksheets and games are included.

### **Exploring the Treasures of 4-H – Fun, Friends and Learning (36 pages) Grades 2-4 09220**

This youth activity guide provides a “treasure hunt” for youth to explore the joys of 4-H by discovering their interests, potential 4-H projects and finding 4-H where they live with the guidance of parents or other adult helpers.

### **Exploring the Treasures of 4-H – Helper’s Guide (124 pages) Included in each kit.**

This activity-packed group guide is designed for teachers, volunteer leaders and other educators. The activities help groups of youth explore the many treasures of 4-H. Activities are organized into eight categories linked to national education standards with suggestions provided for continued study in related 4-H projects.



**Electric Excitement – Level 1 – Magic of Electricity (36 pages) Grade 4-5 09110**

Energize and electrify youth with Electric Excitement, the 4HCCS Electric Energy Series. Electricity is everywhere. Youth explore why certain things insulate from electricity better than others, the effect that magnetism has on various substances, how to build a flashlight, build and test a compass, build an electromagnet and electric motor.

This Project Book Includes Chapters On:

- Getting Started
- Electricity on the Move
- Magnets in Motion
- Current Attractions

**Electric Excitement – Level 2 – Investigating Electricity (36 pages) Grade 6-7 09111**

Decoding circuit diagrams, sending messages by Morse code and building three-way switches are featured. Youth build circuits and test voltages, build a rocket launcher and a burglar alarm as they practice decision making and communication. This unit is designed for youth who understand magnetism, electron flow and circuit design.

**Electric Excitement – Level 3 – Wired For Power (36 pages) Grade 8-9 09112**

Youth build on skills learned in levels 1 and 2 plus learn some new ones, such as measuring electrical usage, replacing electrical switches and determining electrical loads. Youth also evaluate different light bulbs and test for electrical power. These materials promote technical and scientific literacy while teaching communication and decision-making life skills.

**Electric Excitement – Level 4 – Entering Electronics (40 pages) Grade 10-12 09113**

Youth learn about diodes, transistors, LED's, photocells, SCR's, IC's and amplifiers. This guide is designed for intermediate to advanced learners. An understanding of DC circuits, voltage, amperage, current flow, polarity and some soldering is needed.

**Electric Excitement – Electric Helper's Guide (36 pages)  
Included with each of the level kits.**

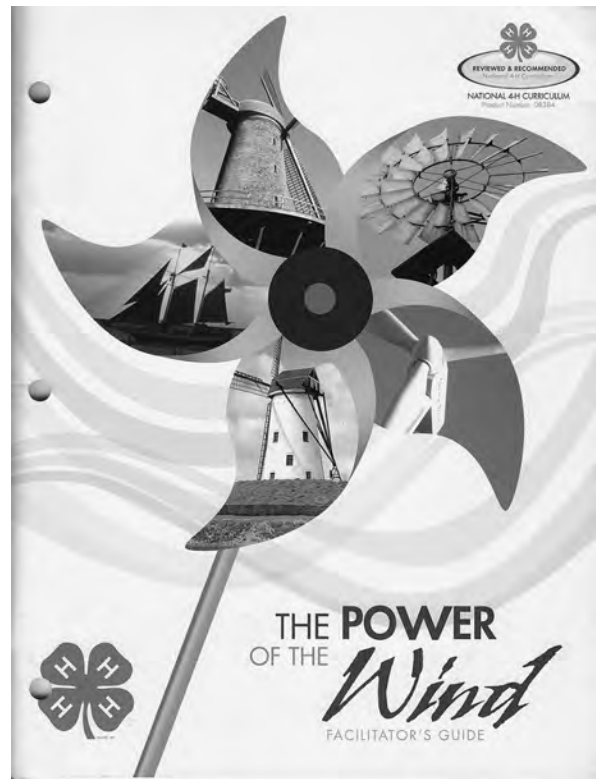
This helper guide has a number of exciting group activities that keep members coming back for more. It includes a variety of group activities that can be organized quickly and conducted with a group of three to fifteen youth. Youth learn how to conduct an electric skill-a-thon, quiz bowls, electric bingo and how to calculate amperage.

**The Power of the Wind Youth Guide**                      **Grades 6-8**                      **09221**

The Power of the Wind activities involve young people in the engineering design process as they learn about the wind and its uses. Youth Guide.

**The Power of the Wind Facilitator Guide**

The Power of the Wind activities involve young people in the engineering design process as they learn about the wind and its uses. Facilitator's Guide.



## Teaming with Insects

**Level 1** Grades 3-5

**09240**

**Level 2** Grades 6-8

**09241**

**Level 3** Grades 9-12

**09242**

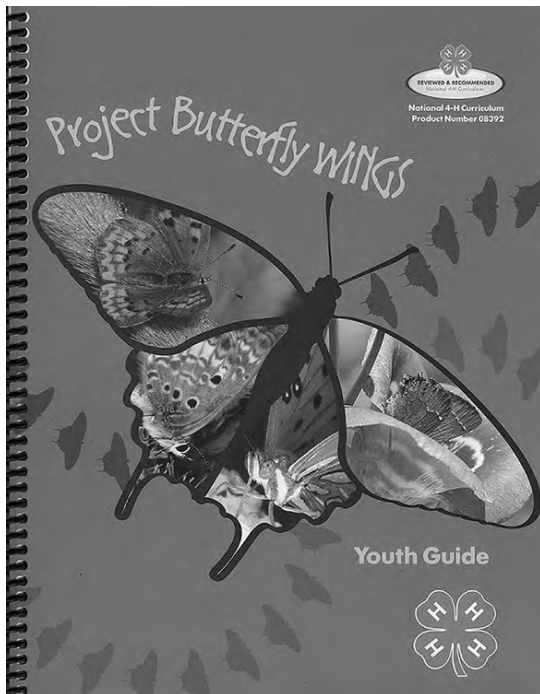
This Entomology curriculum comes with a Facilitators Guide in each kit which includes National Science standards. Level 1 includes learning about insect form and function. Level 2 includes learning how to make insect collection tools and insect diversity. Level 3 activities include research and uses the scientific method.

## Entomology Helper's Guide (Included with each of the level kits)

This guide provides practical tips, 14 group activities and supplementary information. Youth compare the leaping abilities of humans and insects, rear and release monarch butterflies, explore how insects transmit disease, study insect behavior, learn insect words, participate in a night safari, develop an insect promotion campaign and conference judge. (40 pages)

## Butterfly WINGS Grades 4-8

**09743**



In Project Butterfly WINGS, youth explore the outdoors through guided inquiry, learn to identify the butterfly families and common butterflies, and contribute to science.

### Butterfly WINGS Youth Guide

Youth explore the outdoors through their senses, play butterfly detective, create site maps of their favorite butterfly and much more! (102 pages)

### Butterfly WINGS Facilitator Guide

Facilitators guide youth through the steps in the science inquiry process, and become critical thinkers and decision makers. (88 pages)

# FINANCIAL MANAGEMENT

## Consumer Education – Consumer Savvy



Are you a consumer? You bet – we all are! Youth consume more than \$175 billion of goods and services each year. Consumer Savvy will help youth become informed and responsible consumers in today's dynamic marketplace.

## Consumer Savvy – Level 1 – The Consumer in Me (40 pages) Grades 4-5 09211a

Youth will experience what it means to be a consumer through saving, spending and sharing.

- Goods and Services
- Wants and Needs
- Wish and Save

## Consumer Savvy – Level 2 – Consumer Wise (40 pages) Grades 6-8 09211b

Introduces youth to the influence of peer pressure, the power of advertising, and the expanding Web market as they learn to make independent decisions when shopping.

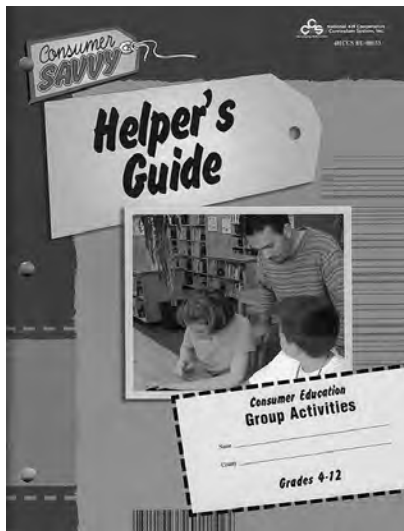
- Value Conflict
- Value Shield
- Work Activity

## Consumer Savvy – Level 3 – Consumer Roadmap (40 pages) Grades 9-12 09211c

Teens in navigate the potholes in the marketplace enroot to becoming savvy consumers.

- Me complain?
- How to Right a Wrong
- What Does That Have To Do With Me?

## Consumer Savvy Helper's Guide (40 pages) For Adults and Teen Leaders



Interactive group activities help leaders make knowledge come to life for youth. Special tips for leaders to help youth acquire life skills.

## FINANCIAL MANAGEMENT

### Be the “E” – Section 1 – Passion – Love It Grades 6-7

09208a



This guide introduces young people to the world of Entrepreneurship. Youth discover what it is, who has done it, how some famous products got started, and how to find and make business opportunities. Several activities help youth learn what it takes to be an Entrepreneur, and whether they have “The Right Stuff” to meet the challenges. Through interactions in their community, youth understand its present business types, and additional community business needs. Lastly, youth experience the special rewards...What’s in it for me?... that comes from being an entrepreneur.

Also included in kit:

- Helper’s Guide
- Activity Guide

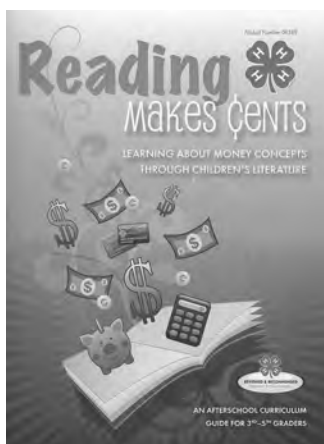
### Financial Champions – Level 1 – Money Fundamentals (28 pages) Grade 7-9 09114

No matter what you decide to do with your life, you will have to learn to manage money to be successful. Youth learn money management skills, including deciding whether to make a purchase, determining whether they can afford it, and living within a spending plan.

### Financial Champions – Level 2 – Money Moves (40 pages) Grade 7-9 09115

Youth learn about wants and needs, values, goal-setting, communications, ways to use and save money, the benefits and drawbacks of credit, advertising influences, consumer decision making and how to select financial services.

### Reading Makes Cents Grades 3-5 09243



A financial literacy and reading curriculum for use in after school programs, day camps and other special interest group settings and for school enrichment programs. Reading Makes Cents is comprised of a collection of 53 experiential activities developed around exemplary children’s literature that has money as a theme. Most of the activities are stand-alone and designed to be completed in one session.

The selected children’s literature explores ideas, activities, and strategies that help children learn how to earn, save, share, and spend money. Children’s literature provides a rich diversity of settings, people, income levels, relationships, ethnic backgrounds, cultures, religions, holidays, intergenerational friendships all related to money messages and learning.

## Money \$ense for KIDS Ages 9-12

09204

This activity is designed to teach preteens basic money management skills in a fun, hands-on way. Each session features educational activities such as reading, quizzes, role-playing, tours, skits, games, and other dynamic, challenging projects.

Guide includes suggestions for conducting a five-session day camp for youth ages 9-12. It can also be used for after-school programs or as individual money management lessons. Ideas for marketing, subject matter information, letters for parents, handouts and activities are included.

### Objectives

Participants will:

- Learn how to distinguish between wants and needs
- Learn how to set financial goals
- Learn how to develop a spending plan
- Recognize the importance of savings
- Begin a savings program
- Learn about banking services
- Learn how to write a check
- Learn how to open savings and checking accounts
- Learn how to evaluate advertising
- Learn how to make wise consumer choices



### Junior Achievement Afterschool Programs

JA Afterschool™ is a national initiative dedicated to meeting the need for quality educational after-school programming. JA's after-school efforts utilize a variety of Junior Achievement's K-12 grade business and economic programs to create rich, engaging after-school experiences for at-risk children in diverse communities across America.

As a result of JA Worldwide's partnership with the Department of Justice, Office of Juvenile Justice and Delinquency Prevention, three new after-school programs have been developed for elementary, middle grades and high school students.



## FINANCIAL MANAGEMENT

### **JA More Than Money    Grades 3-5**

**19200**

*JA More than Money* meets the after-school programming needs of a diverse group of third through fifth grade students by providing engaging, academically enriching, experiential activities in economic education. Students learn personal financial and business skills through innovative activities focusing on earning, spending, and saving money.

Students also identify personal skills and interests and learn to connect them to business/career opportunities. Working individually and in groups, students make financial decisions and learn to identify businesses they can start or jobs they can do to earn money. Students play a game that reinforces the money management skills learned throughout the program.



### **JA It's My Business    Grades 6-8**

**19201**

*JA It's My Business!* encompasses entrepreneurship curriculum for students in grades six, seven and eight. The program emphasizes entrepreneurship while providing a strong focus on social studies, reading and writing skills.

Students are encouraged to use critical thinking to learn entrepreneurial skills that support positive attitudes as they explore and enhance their career aspirations.

### **JA Company Program    Grades 9-12**

**19202**

With the support and guidance of volunteer consultants from the local business community, the *JA Company Program* provides basic economic education for high school students. By organizing and operating an actual business enterprise, students not only learn how businesses function, they also learn about the structure of the U.S. free enterprise system and the benefits it provides.

*JA Company Program* helps young people appreciate and better understand the role of business in our society.

**Down to Earth – Gardening in the Classroom (141 pages) Grade 6-8****09116**

Down-to-Earth assists the helper in using gardening as a means to explore plant growth and development. Through this hands-on, minds-on program, youth learn the basics of botany, the gist of gardening, the essentials of ecology and much more. Through gardening youth stimulate their senses and cultivate science process and life skills. By gathering data via the scientific method, youth feel a sense of pride and responsibility. This award winning 88- page activity guide is an excellent resource for school enrichment programs, organized 4-H clubs, school age child care educators, after school programs, nature centers, summer youth camps, scouts and traditional school settings.

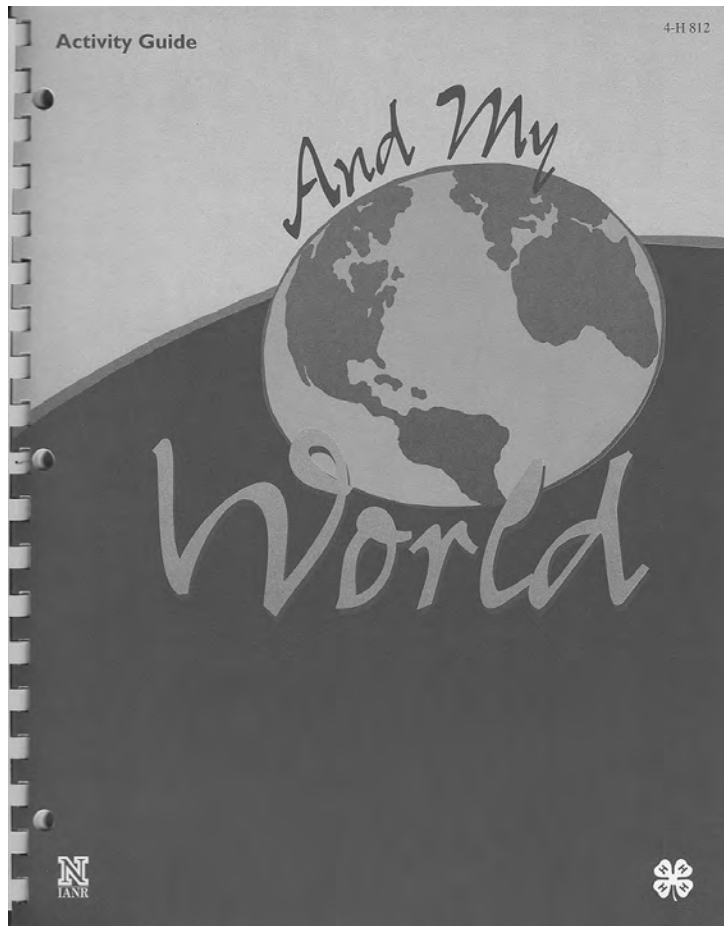


**And My World – Activity Guide (92 pages)**

**09123**

Although we live in different countries, speak different languages and follow different customs, we all share the limited resources of the planet Earth. That is why we must understand that our survival depends upon awareness of the world, understanding of other cultures and commitment to improving the quality of life worldwide. This curriculum focuses its activities around these three points. The lessons found in this curriculum are easy to use and filled with interesting, enlightening information for your club, class or group. They are independently designed for use in any order. They can be enhanced by using additional outside resources and used in a variety of settings, including:

- school enrichment
- individual study
- camp settings
- club/special interest groups
- special events – retreats, workshops, conferences
- after-school programs



**And My World – Leader’s Guide (14 pages)**

**Included with each of the level kits.**

This leader’s guide is designed to prepare you to work with 4-H youths, grades 3-12 (ages 9-19), in an informal educational setting. The level of activities varies and may be presented to a variety of ages and knowledge levels. You will help the youth demonstrate:

- Demonstrate Citizenship and Understand Issues
- Increase Open-mindedness
- Practice Advocacy in Action
- Understand Self in the World
- Practice Intercultural Communication
- Apply Knowledge and Skills

## Cultures Around The World Ages 10-18

<b>Armenia</b>	<b>09400</b>
<b>Australia</b>	<b>09401</b>
<b>Ecuador</b>	<b>09402</b>
<b>France</b>	<b>09403</b>

The United States is becoming an increasingly diverse society. Neighborhoods and communities, today more than ever, contain a complex mix of cultures, races, religions, and languages. Understanding, accepting, and valuing diverse cultures will help prepare youth to thrive in an ever-changing society.

Anticipated outcomes:

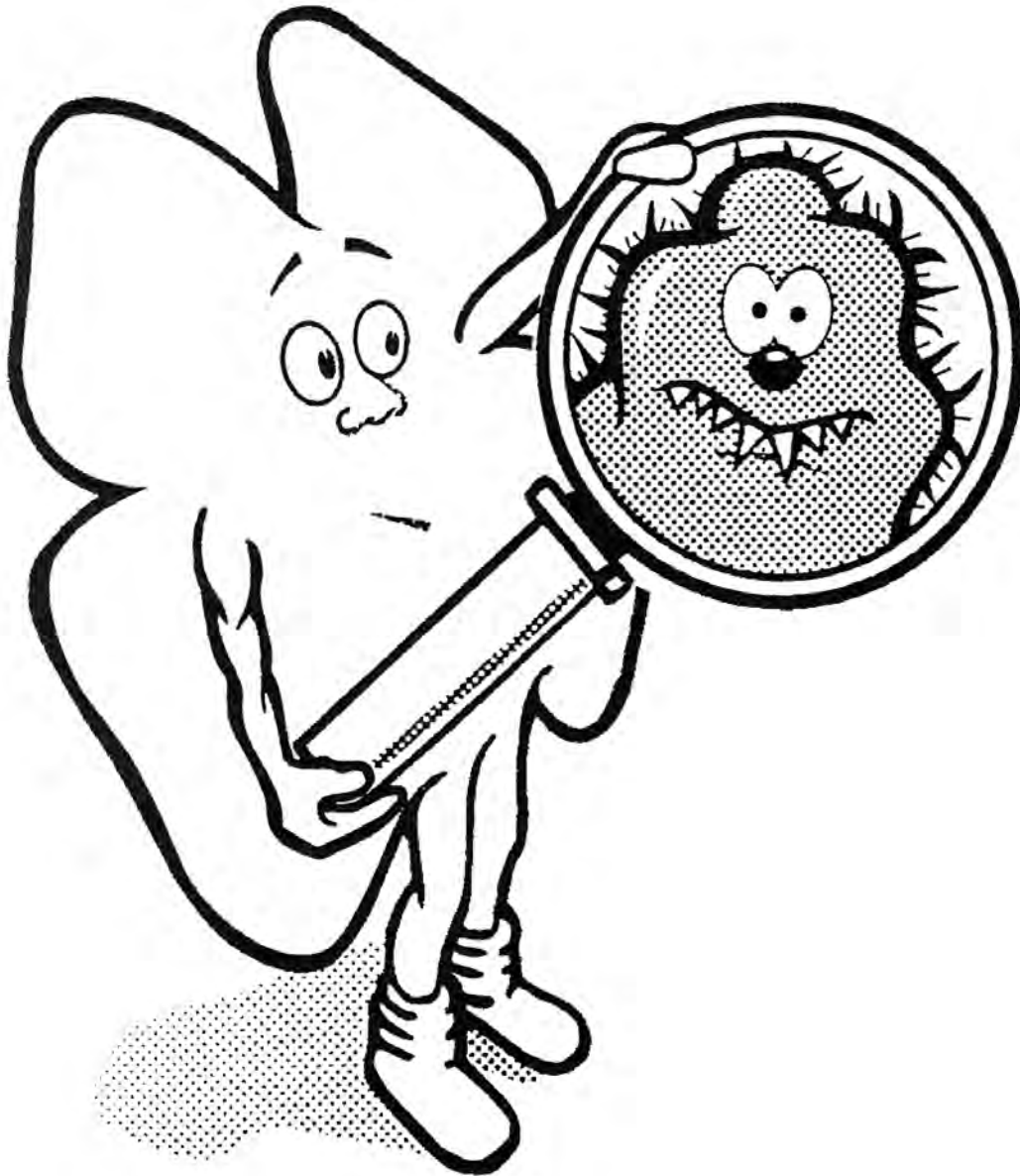
1. Youth will become more sensitive of the customs and backgrounds of the ethnic groups living in the United States and abroad.
2. Youth will find joy in learning about other cultures and will pursue additional cultural education and travel to other countries, which in turn will make them informed global citizens.
3. Youth will strive to educate others on cultural diversity and understanding.
4. Youth will become acquainted with current world issues.
5. Youth will have a better understanding of languages spoken in other countries.
6. Youth will become more familiar with world geography.



**The Germ Detective K-7****09640**

This kit helps teach good sanitary washing habits. Fluorescent dye and an ultra-violet light detect “germs” left after hand washing or by cross contamination.

The kit includes liquid or powder fluorescent dye, an ultra-violet light, stickers, lesson plans for grades K-3 and grades 4-7, coloring book for K-3, activity book for 4-7, and a take-home handout to help students remember the importance of good sanitary habits.



<b>Health – First Aid in Action (36 pages)</b>	<b>Beginning Level for All Ages</b>	<b>09224</b>
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Youth practice first aid skills to treat cuts, scrapes, nosebleeds and bee stings. They learn how to respond to someone who is choking or has broken a bone; assemble a first aid kit; and interview members of the medical profession.

<b>Health – Staying Healthy (36 pages)</b>	<b>Beginning Level for All Ages</b>	<b>09225</b>
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Youth use a self-assessment tool to identify personal talent areas – “smarts,” explore hygiene, nutrition and physical activities, and share what they discover with a new appreciation of personal interests and talents.

<b>Health – Keeping Fit (36 pages)</b>	<b>Intermediate Level for All Ages</b>	<b>09226</b>
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Youth design their personal fitness plan and track it using their fitness file. Through interviews and personal experiences youth discover the benefits to being fit as they practice making decisions, managing themselves and speaking with others.

<b>Just Be It! Healthy and Fit</b>	<b>Grades 4-6</b>	<b>09227</b>
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The Just Be It! Healthy and Fit curriculum provides educators a fun, hands-on approach to teaching nutrition and fitness to 4-6 grades. This research-based curriculum provides eleven lessons:

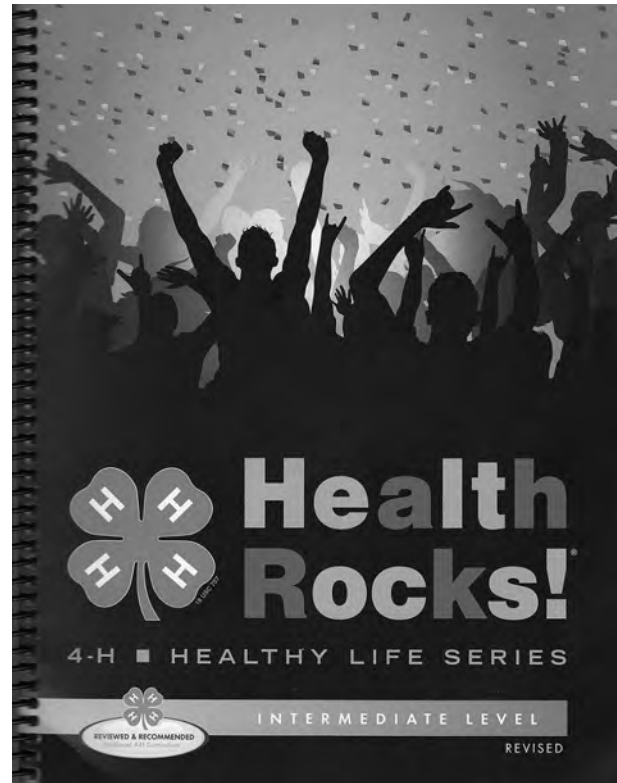
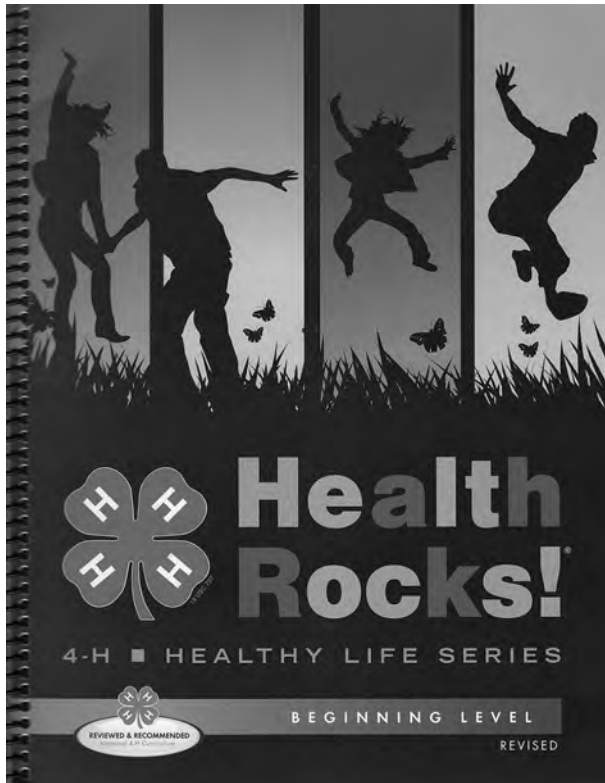
- Food Safety
- Build a Healthy Diet
- Get Moving
- Gracious Grains
- Vivacious Veggies
- Fabulous Fruits
- Dairy Anyone?
- Protein Power
- Serving Size
- Fast Food or Fat Food
- All About Diabetes

Each lesson includes nutrition and fitness activities, snack recipes, and take-home reinforcement activities including parent newsletters. A DVD is included in the back cover of the curriculum including all videos and hand-outs referred to in the lessons.

The goal of the JBI program is to reduce childhood obesity risk factors for youth by increasing nutrition knowledge, increasing fruit and vegetable intake and increasing activity level. Empowering youth with the information needed to make healthy food and physical activity choices and providing them with a supportive environment in which to practice making these choices encourages healthy lifestyles for a life time.

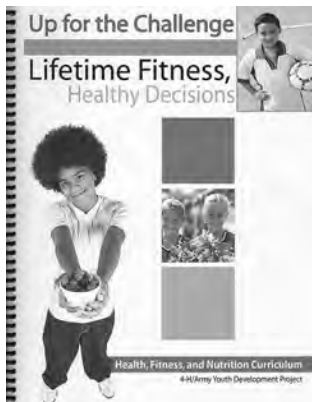
**Health Rocks**  
**Beginning Level – 8-12 year olds**  
**Intermediate Level – 12-14 year olds**

**09880**  
**09881**



Series of Leader’s curricula for a healthy living program that reduces tobacco, alcohol and drug use by youth.

**Up for the Challenge: Lifetime Fitness, Healthy Decisions**    **Grades K-12**    **09882**



A wellness approach is taken in this project – encouraging youth to be active and make healthy decisions throughout their lifetime. Lessons include fitness, nutrition and health curriculum for each of three age groups: K-5th grade, 6-8th grade, 9-12th grade.

## Food, Culture and Reading

09501

This nutrition education curriculum uses literature to learn about food, healthy living, and different cultures. Through experiential activities, youth will be able to recognize a variety of healthful foods within the food groups, taste new foods from other cultures, explore the similarities of food, and develop an understanding and appreciation of cultures that are different than their own. (106 pages)



## Child Development – Kids on the Grow Grades 3-10



Kids On the Grow includes 44 child development activities related to how youth grow and develop, how they can care for themselves, their family and community. This revision contains two new activities called Babysitting Kit and Mother's Helper, along with nine enhanced activities in the Helper's guide that encourages youth to work with younger kids in after school programs, day care centers, summer day camps and more.

### Life Skill Outcomes

- Planning and organizing
- Critical thinking
- Concern for others
- Accepting differences
- Teamwork
- Leadership
- Personal safety
- Self-responsibility

### Child Development Outcomes

- Knowledge and understanding of human growth and development
- Self-care, sibling care and babysitting skills development
- Exposure to child development careers
- Understanding critical issues related to developing healthy relationships and parenting skills

## Kids on the Grow – Level 1 – Growing On My Own (20 pages) Grades 3-4 09210a

Youth learn how they grow and develop, how to inspect toddler's toys and make their home hazard free. They also learn more about their roles in life, how to handle their emotions and accept differences in others.

### Head: Cognitive Growth

- Blooming Bags
- My Learning Box

### Heart: Emotional Growth

- Story Masks
- Potato Pals

### Hands: Social Growth

- My Morning Routine
- I Fit My Family

### Health: Physical Growth

- Home Hazard Hunt
- Be a Toy Inspector



## **Kids on the Grow – Level 2 – Growing with Others (40 pages) Grades 5-6 09210b**

Youth learn about self-care, rules, responsibility, and safety and are introduced to baby-sitting. They learn to work with others and gain awareness of common dangers in their world.

### **Head: Cognitive Growth**

- Home Alone Game
- My Plan for Me
- Picture This

### **Hands: Social Growth**

- Putting the Pieces Together
- Family Connections
- Family Rules

### **Heart: Emotional Growth**

- Toys as Tools
- Circle of Friends
- Friendly flyer
- How I See It

### **Health: Physical Growth**

- Family, Food and Fotos
- Safety Inspector
- Street Smart
- Mother's Helper

## **Kids on the Grow–Level 3–Growing in Communities (40 pgs.) Grades 7-10 09210c**

Youth explore child development careers, gain experience as a teacher or coach, participate in a community service project and learn that children with different abilities have different needs.

### **Head: Cognitive Growth**

- A-B-C Career Watch
- See How They Grow
- What's the Message?

### **Hands: Social Growth**

- Your Intergenerational Community
- A-Parent-ly
- Put Me In, Coach!
- Going Our Way

### **Heart: Emotional Growth**

- Obstacles and Assessments
- Building Friends
- Community Profile
- Block Buster

### **Health: Physical Growth**

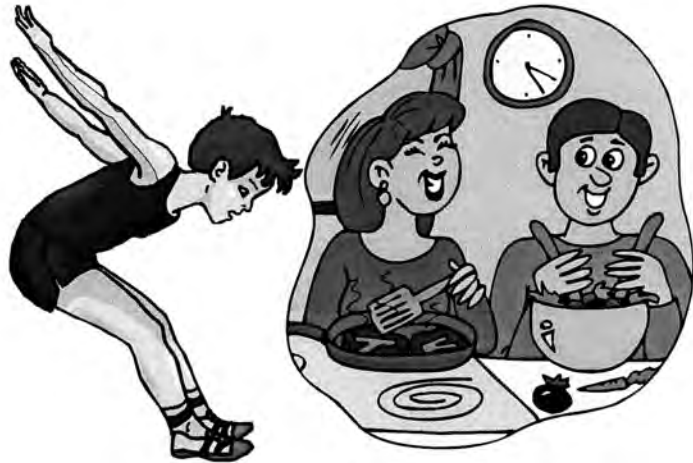
- Babysitting Kit
- Let's Play it Safe
- First Aid Kids

## Grow All Together – Helper’s Guide (40 pages)

The *Helper’s Guide* features nine enhanced group activities. Youth are encouraged to work with younger kids in after school programs, day care centers, and day camps as well as with kids in their own 4-H club.

## Jump Into Foods and Fitness Grades 3-5

Having fun with the serious business of teaching kids about healthy food choices and being physically active is built into *Jump Into Foods and Fitness* (JIFF), a new, research-based curriculum for adults and older teens to use with kids aged 8 to 11 (grades 3-5). “Jiff the Joey” sets the stage for each of the seven “Kangaroo Jumps” or sessions in JIFF. Fun nutrition, physical fitness and food safety learning activities are integrated into the program, which uses the Kid’s Activity Pyramid and the Food Guide Pyramid.



You don’t need to be a nutrition or fitness expert to work with kids on JIFF! You can learn right along with the kids in club, after-school, school and other non-formal educational settings! JIFF provides information about agencies, organizations and Web sites that offer up-to-date information on the topics covered in the book. JIFF was designed with children’s developmental characteristics in mind. The program encourages win-win situations and keeps kids active most of the time. The activities can easily be adapted for younger (aged 5 to 7) and older children (aged 12 and up). The activities and movements may need to be adapted if they present a challenge for children in your group who have physical or health-related disabilities.

The earlier children begin to practice healthy lifestyle habits, the longer they are likely to practice them. Using the information in JIFF helps kids develop healthier lifestyles to improve their overall health and fitness level, and may reduce their risk of developing life-threatening illnesses later in life.

<b>Jump Into Foods and Fitness (continued)    Grades 3-5</b>	<b>09213</b>
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**JIFF features extensive introductory materials that covers:**

- How children learn in general and how they learn health-related behaviors specifically.
- Principles for positive youth development.
- Using JIFF in various settings.
- The JIFF facilitator’s role
- Identifying other, appropriate resources for use with this age group.
- Adapting the JIFF materials for use with other age groups.
- Tips for working with children.
- Physical fitness and nutrition background information.

Helpful resources and additional information on the topics covered in the sessions appear at the end of the book.

The seven “Kangaroo Jumps” (sessions) are designed for use in 60- to 90-minute meetings, though the individual activities can also stand-alone.

<b>Sew, Read!    K-3</b>	<b>The Purple Coat</b>	<b>09650</b>
<b>Sew, Read!    K-3</b>	<b>The Boy and the Quilt</b>	<b>09651</b>

*Sew, Read!* uses children’s story books (The Purple Coat and The Boy and the Quilt) to provide the themes for teaching basic sewing skills for children age 5-8 years. *Sew, Read!* is designed to encourage both reading and sewing skills. The program involves reading the children’s story that serves as the theme for the project activities. The activities—sewing a quilt square or a teddy bear vest are designed to teach basic hand or machine sewing skills. These sewing projects provide children with tangible evidence of their abilities and encourage further achievement. In addition, this thematic approach provides opportunities to strengthen math and reading skills through activities related to the children’s books.

<b>Super Sitting    Grades 4-12</b>	<b>09750</b>
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*Super Sitting* is a program designed to teach youth how to care for young children in their own family, as a babysitter, or in a volunteer role. The video illustrates how to feed, bathe, and entertain a baby, toddler or preschooler. There is a youth and trainer manual in the program as well as completion certificates and first aid instruction.

<b>Team Nutrition – Food Works    Grades 3-5</b>	<b>09072</b>
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*Team Nutrition* is a nutrition education program that uses hands-on gardening, food preparation and language activities to teach children the basics of the Food Guide Pyramid and how to read the “Nutrition Facts” label on food products. The kits contain Teacher’s Guide, Student handout masters, posters, videos, and take home materials.

## Do I Have What It Takes To Be Your Babysitter? Ages 13-18

19210



The curriculum is designed for middle school and teenaged youth. They learn about the ages and stages of child growth and development, safety, food and nutrition, how to handle emergencies, appropriate activities to implement with children, and the business of baby-sitting. The kit contains an Instructor Guide, a Student Guide with supplementing CD Rom and a set of Student Worksheets.

This curriculum was developed in support of Army Child & Youth Services and National 4-H Outreach efforts.

# NATURAL RESOURCES

<b>Exploring Your Environment–Level 1–Eco-Wonders (56 pages) Grades 5-7</b>	<b>09100</b>
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Youth experience the challenge and excitement of exploring the ecology, science, and technology of the environment. Youth experience the four elements of life, connections among living things and how all plants and animals are affected.

**Ecological Themes:**

- Four Elements Of Life
- Everything Is Connected To Everything Else
- Everything Must Go Somewhere
- There Is No Such Thing as a Free Lunch
- All Plants & Animals Are Affected by the M.A.D.
- All Plants & Animals Have a Home

<b>Exploring Your Environment – Level 2 – Eco-Adventures (64 pages) Grades 8-10</b>	<b>09101</b>
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Youth engage in encouraging and challenging outdoor activities. This book will help you discover six important concepts and ideas, related to ecology, while you explore your environment. Concepts such as pollution prevention, watersheds and acid rain activity are discussed.

<b>Exploring Your Environment–Level 3–Eco-Actions (62 pages) Grades 11-12</b>	<b>09102</b>
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Youth develop scientific thinking and processing skills in relationship to basic ecological concepts. Each section of this project book focuses on an ecological concept and provides activities that will help explain how the environment works.

<b>Eco-Wonders Helper’s Guide (56 pages)</b>	<b>Included with each of the level kits.</b>
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Useful information and activities for helpers to plan, manage and teach an environmental education program are the mainstays of this guide. The purpose of the guide is to teach helpers to excite, engage and encourage youth in ecology, science, nature and technology.

<b>Outdoor Adventures</b>	<b>Grades 3-12</b>	
<b>Level 1</b>	<b>Grades 3-5 – Hiking Trails: Day Hiking Skills</b>	<b>09126</b>
<b>Level 2</b>	<b>Grades 6-8 – Camping Adventures: Base Camping Skills</b>	<b>09127</b>
<b>Level 3</b>	<b>Grades 9-13 – Backpacking Expeditions: Backpacking Skills</b>	<b>09128</b>

Youth may begin the series at any age level based on their skills and experience. The guides have been designed to be used sequentially. With each level, new outdoor skills are introduced. A Group Activity Helper’s Guide is included in each kit.

## NATURAL RESOURCES

### **Backyards and Beyond**

**09133**

Establishing a neighborhood Nature Club is the goal of this project so that nature trails and outdoor activities are linked. Club Leader curriculum and Community Organizational Guide and Tool Kit are provided.

### **Fishy Science Grades 3-5**

**09214**



The purpose of this unit is to introduce some basic concepts about fish through the use of an aquarium and selected activities and experiments. This includes having group members explore how fish swim, breath, the differences between like species of fish, the sensory features and abilities of fish, and the special adaptations of fish to water. The lessons can be used on a stand along basis, or in sequence as a comprehensive unit of study.

#### **Life Skill Areas**

- Problem solving and decision-making
- Communicating and relating with others
- Acquiring, analyzing and using information

#### **Fishy Science Teacher's Guide**

Water, water everywhere, and yet fish get thirsty. Why? Through observation and experimentation, students learn the answers to that question and many others in this four-lesson curriculum on how fish swim and breathe, their sensory features, and their adaptation to water. Units can stand alone or work as a progression. Among the activities:

- Identifying body parts of fish
- Adapting a quarter to enable it to float
- Detecting carbon dioxide in exhaled air
- Exploring the breathing mechanism of fish
- Observing fish for color vision

### **Sportfishing Grades 3-12**

**Level 1 Grades 3-5 – Take the Bait**

**09129**

**Level 2 Grades 6-8 – Reel in the Fun**

**09130**

**Level 3 Grades 9-12 –Cast into the Future**

**09131**

Level 1 focuses on basic knowledge needed to have fun and be successful in the project. Level 2 includes activities on casting, making tackle and understanding the biological needs of fish. Level 3 includes leadership, making artificial lures and aquatic ecology. A Helper's Guide is included in each kit.

## Forestry - Forests of Fun

Grades 3-12



The new 4-H Forests of Fun curriculum will open the world of forests to your youth. At every age level the materials present activities that involve youth in learning about trees, forests, forest ecology and human reliance on forests. Youth will discover forest resources near home and around the world.

### Life Skill Outcomes

- Decision-making, problem-solving
- Interpreting information, teaching others, reasoning, communicating with others

### Forestry Outcomes

- Learn about differences in trees and how they grow
- Learn about forests at home and around the world
- Learn how to keep our forests healthy
- Learn how important forests are to our lives

## Forests of Fun – Level 1 – Follow the Path (40 pages) Grades 3-5

09206a

Youth will learn about different types of trees and tree parts, characteristics of different forests, what forests need to grow and thrive and the different products people get from trees and forests.

### Introducing Your Highness

- Leafing Out
- Talking Trunks
- Hold On Tight!
- Home, Tree, Home
- Bark Buddies
- Straight and Tall
- In the Tree's House
- Down in the Dirt
- Thirsty Trees
- Spotlight: Trees
- Trees in Space
- My Couch is a Tree?
- Trees at Work
- Good 'Ole Trees
- Fun in the Forest

## NATURAL RESOURCES

### **Forests of Fun – Level 2 – Reach for the Canopy (40 pages) Grades 4-6**

**09206b**

Youth will take a closer look at the inner-workings of trees, explore forest change, learn about forest health concerns and discover the health benefits trees have on people.

- Water on the Move
- Take a Look Inside
- Circle of Life
- Trunk Time Travel
- A Tree's Home
- A Changing Forest
- Relating to Trees
- Forest Invasion
- Trees Get Sick, Too
- Stop Bugging Me!
- Fire in the Forest
- Move Over, Please!
- Am I Growing?
- Breathing Easier
- Life in a Tree

### **Forests of Fun – Level 3 – Deep Woods Thinking (40 pages) Grades 7-12**

**09206c**

Youth will learn to examine and distinguish different types of trees, look at forests on a global scale, learn to care for trees and think about how to conserve forests.

- Tree Keys
- Winter Trees
- Take a Closer Look
- History of Trees
- A Changing Forest
- Turn Left at the Tree
- A World of Trees
- Foreign Forests
- City Trees
- It's A Bird, It's a Plane, It's Super-Tree!
- Recycle me, Please
- Trim the Trees
- Wanted: Forest Owners
- Anyone Need a Tree?
- Don't Leave Me Alone!
- My Boss is a Tree





## NATURAL RESOURCES

### Forestry Helper's Guide (40 pages)

The *Forestry Helper's Guide* provides useful forest information, group youth activities and practical tips for volunteers. Using the 4-H Forest Resources curriculum, youth will develop a lifelong appreciation for forests and have loads of fun in the process. The guide also includes information on Ages and Stages of Youth Development, Teaching and Learning Experientially, Navigating the Forest, and Visiting Forest Sites.



### There's No New Water!

09502

This water conservation and water quality curriculum is grounded in a simple yet powerful concept that water is a finite natural resource whose quantity and quality must be responsibly preserved, protected, used, and reused. The curriculum includes six sequential learning modules. (155 pages)



**Junk Drawer Robotics: Level 1 - Give Robotics a Hand**

**09503**

Youth explore and learn about robot arms. Concepts covered include pneumatics, arm designs, and three dimensional space. Big ideas include form and function, scientific habits of mind, and engineering design. Youth are challenged to build robots from everyday items. None of the levels require or use computers. (78 pages)



**Junk Drawer Robotics: Level 2 - Robots on the Move**

**09504**

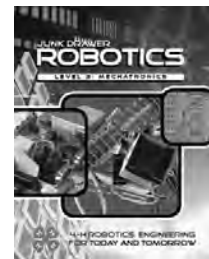
Youth learn about robots that move with legs, wheels and underwater. Concepts covered include friction, basic electrical power and motors, engineering constraints, gear systems, and buoyancy. Youth are challenged to build robots from everyday items. None of the levels require or use computers. (76 pages)



**Junk Drawer Robotics: Level 3 - Mechatronics**

**09505**

Youth will explore sensors and analog and digital systems. The track introduces simple electronic components; youth will build basic circuits to see how the components work. They will investigate basic elements of programming and instructions for robotic computer control. Youth are challenged to build robots from everyday items. None of the levels require or use computers. (92 pages)



**Virtual Robotics Track DVD**

**09506**

Youth will have opportunities to build and test virtual robots. Participants interact in a virtual environment as they learn basic science and robotics concepts without investing in expensive materials or supplies.

This track makes use of videos, simulations, animations and other media to convey content in a meaningful and engaging manner.

**System requirements:**

- Macintosh 10.4 or Higher or a PC with Windows XP or higher: Processor: 1.5 GHz or higher
- RAM: 1 GB (2GB Recommended) Free HDD Space: 3GB
- Graphic accelerator card: 128 MB Sound Card



## Robotics Platforms Track DVD

09507

Robotics Platforms Track (DVD - Includes a Facilitator Guide PDF and Youth Notebook PDF).

Youth will use commercial robotics kit to explore the world of robots. The activities developed for this track can be used with a variety of commercial kits, including NXT, and Vex.

As participants experience each module, they will develop scientific knowledge and technological understanding that will enable them to master the challenge presented at the culmination of that level.



## Microscope Kit Grade 4-6 (New!)

09508

This kit contains three microscopes to use in giving youth a basic understanding of science related to cell development. Two lessons are included: How to Use a Microscope and Looking at Cells through a Microscope. Both include student handouts, PowerPoints and lesson plans. Clean slides and lesson slides are also included.

## Science Discovery Series 1 (72 pages) Grade 3-6

09118

Whether you are a school teacher, camp counselor, 4-H Club leader or home school, you will find the lessons in the Science Discovery Series are as much fun and interesting to teach as they are for youth to experience. Youth develop science skills as they explore whales, rocks and minerals, water quality, trees and recycling. Each lesson plan outlines subject matter and life skill objectives, materials needed, background information, a lesson outline containing detailed instructions, optional activity references and resources, glossary and an evaluation instrument.

## Science Discovery Series 2 (186 pages) Grade 4-7

09119

Making science fun is the goal of the lessons and activities included in this curriculum. Whereas 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 several different science topics. Youth explore weather, spiders, oceanography, trees and astronomy.



## Exploring Spaces, Going Places – Geospatial Geographic (CD)

09132

Welcome to the world of GIS and GPS! Beginner, Intermediate and Advanced levels in one CD. The divisions are not age or grade-level based, but instead are based on learners experiences and skill level with geographic and geospatial topics.

## SOCIAL BEHAVIOR AND DEVELOPMENT

### **Belle's Trial - Book and Activity Book** Ages 8-12

**09230**

A novel written from a dog's point of view, which empowers children to face the challenges brought on by making decisions to do the right thing and learn discipline. The activities and discussion questions can be used as enrichment exercises with groups of children that promote community involvement.

### **Belle's Star - Book and Activity Book** Ages 8-12

**09231**

A novel written from a dog's point of view, which empowers children to build new lives after escaping bullying and abuse or other difficult situations. The activities and discussion questions provide thought provoking opportunities for children to interact with others about issues raised in the novel. They provide ways to foster understanding and develop tools that can help people make positive changes at a personal and community level.

### **The Bully Free Classroom—Tips & Strategies for Teachers (168 pages) Grade K-8** 09122

This research-based book provides a broad, general overview of what bullying is, who is affected by bullying, and why it's important for adults – including you – to get involved in prevention and intervention. This book identifies problems and offers solutions under three sections: creating a positive classroom, helping victims and helping bullies. There are numerous surveys and questionnaires for both students and teachers.

### **Bullying Prevention**

**09124**

Kit contains:

- A Guide to Bullying Prevention Programs, NC State University & National 4-H Council
- Stop Bullying Now Toolkit, Activities Guide, and 3 Comics with Teacher's Guide, Dept. of Health & Human Resources

### **Communications 1 - Picking Up the Pieces** Grades 3-5

**09235**



Stimulating activities provide opportunities for youth to practice and gain confidence in communicating in a variety of situations. Practice and develop the life skills of communicating with others through interpreting information, choosing appropriate verbal and non-verbal messages, debating issues, presenting basic ideas and information, and writing with a purpose.

#### **Kit includes: Communications - Helper's Guide**

Designed to support the project. Additional learn-by-doing activities are included and can be adapted to a variety of settings. In addition, contents include communication tips, helpful hints about developmental characteristics of youth, information about teaching experientially, and project meeting ideas.

## SOCIAL BEHAVIOR AND DEVELOPMENT

### Communications 2 - Putting It Together Grades 6-8

09236



Stimulating activities provide opportunities for youth to practice and gain confidence in communicating in a variety of situations. Practice and develop the life skills of communicating appropriate verbal and non-verbal messages, presenting complex information, analyzing responses, presenting speeches and demonstrations and participating in discussions.

**Kit includes: Communications - Helper's Guide**

Designed to support the project. Additional learn-by-doing activities are included and can be adapted to a variety of settings. In addition, contents include communication tips, helpful hints about developmental characteristics of youth, information about teaching experientially, and project meeting ideas.

### Communications 3 - The Perfect Fit Grades 9-12

09237



Youth practice and develop the life skills of posing critical questions, organizing and analyzing complex information, presenting well organized speeches, critiques and presentations, presenting complex information and evaluating information.

**Kit includes: Communications - Helper's Guide**

Designed to support the project. Additional learn-by-doing activities are included and can be adapted to a variety of settings. In addition, contents include communication tips, helpful hints about developmental characteristics of youth, information about teaching experientially, and project meeting ideas.

### Get in the Act – Take I (32 pages) Grades 6-8 (Interactive CD Included)

09219

This innovative program is designed to help middle school youth explore what it takes to get their first “paying” job. This interactive experience, combining CD and activity guide formats with activities presented in the context of a movie set, helps youth recognize their learning styles and personal qualities. Youth make “real life choices” using video scenarios in the on-the-job choices game. Youth discover how to assess job possibilities in the community and create job scenarios. Helper’s Guide is included in the kit and includes activities to reinforce and extend learning.

## SOCIAL BEHAVIOR AND DEVELOPMENT

<b>Build Your Future</b> <b>Ages 14-19</b>	09601
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Curriculum consists of nine activities that help youth develop skills and knowledge in career exploration. Facilitator Guide is included in the Kit.

<b>Citizenship - Public Adventures</b> <b>Grades 6-8</b>	09600
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Adventure Kit is designed to engage middle school youth in changing a piece of the public world, discovering the possibilities of democratic citizenship and building a commitment to taking action in new and exciting ways. It is accompanied by a Guide's Handbook.

<b>A Guide to Good Manners</b>	09744
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Proper behavior and common courtesies are addressed. Topics include introductions, meal-time manners, telephone and letter etiquette, internet and email manners, and more!

<b>Theatre Arts – Imagination in Action</b> <b>Grades 5-8</b>	
<b>Level 1 – Beginner</b>	<b>09212a</b>
<b>Level 2 – Intermediate</b>	<b>09212b</b>
<b>Level 3 – Advanced</b>	09212c



This curriculum opens the world of theatre to youth in grades 5-8 (can be adapted for younger and older youth). Revised and new, these materials offer extended activities in communication, improvisation, pantomime, script writing, cultural and historical influences, stage design, and costume design. Life skills and workforce development concepts are woven throughout the curriculum, as youth master more sophisticated theatre techniques and ideas.

The curriculum books are for the facilitator of a group in beginner, intermediate, and advanced levels.

**Aerospace Adventures – Level 1 – Pre-Flight (16 pages) Grades K-2 09106**

The awesome experiences of flying an airplane, launching a rocket, conquering space and becoming an astronaut or pilot come alive as youth explore Aerospace Adventures. Through fun and challenging activities youth learn about flying, kites, hot air balloons, remote control airplanes, gliders, and rockets as they develop important life skills. Wow! Talk about fun! Youth and their helper's have a great time working together as youth learn how to talk like a real astronaut, find out how an airplane works and have fun at the same time.

**Aerospace Adventures – Level 2 – Lift Off (36 pages) Grades 3-5 09107**

Youth blast off with this guide as they fly kites, participate in airplane contests, launch rockets, explore space, make a glider, construct a straw rocket and experience disorientation.

Activities Include:

- Rockets Away!
- Gnome of Your Own
- I Want To Be
- Airfoil Magic
- From Here to There!
- Follow That Shadow!
- Can I Fly Today?
- Which Way is Up?
- Angle of Attack
- Up, Up and Away
- Round and Round
- Charlie, Oscar, Delta, Echo



**Aerospace Adventures – Level 3 – Reaching New Heights (36 pages) Grades 6-8 09108**



Youth soar as they learn to fly an airplane, launch a rocket, conquer space and become an astronaut or pilot. Controlling flight direction and experiencing shuttle technology add to the fun in this experiential curriculum. Youth make a shuttle on a string, a Japanese kite, a hang glider and a control panel of an aircraft.



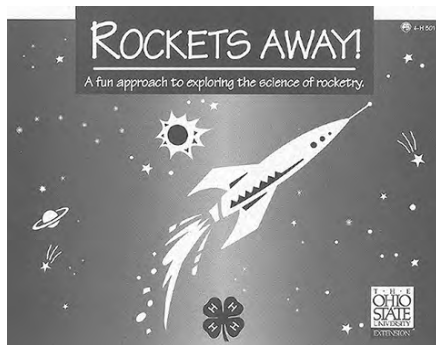
**Aerospace Adventures – Level 4 – Pilot in Command (16 pages) Grades 9-12 09109**

Youth create their own altitude tracker, determine the most fuel efficient routes between airports and make a box kite. Youth also explore pilot certification requirements, evaluate past and present navigation systems, and learn about airport issues in their community or state.

**Aerospace Adventures – Flight Crew Helper’s Guide (36 pages)  
Included with each of the level kits.**

This guide has been designed by aerospace and extension educators from across the nation to support you, as commander of the flight crew, to give leadership to a group of youth interested in exploring aerospace. This helper’s guide provides group oriented experiences that will keep youth coming back for more. Many activities are included in this guide for hands-on experiential group fun such as an aerospace quiz bowls, skill-a-thons and an airport field day.

**Rockets Away – The Science of Motion Grades 5-12 09215**



Blast off for an action-packed adventure in math, engineering, aerospace, and physics with this three-unit study of rocketry science. Lessons in motion, gravity, and aerodynamics send students’ interest soaring. All lead up to the ultimate thrill-building and launching their own rockets.

**Among the activities:**

- Understanding and applying Newton’s three Laws of Motion
- Observing the relationship between force and mass
- Testing turbulence
- Exploring stability and motion
- Constructing and launching a 2-liter bottle rocket

**The Science of Motion Teacher’s Guide Grade 4-6**

The teacher manual comes complete with lesson plans. An IBM-compatible computer diskette presents problem simulations and design and flight configurations for 2-liter bottle rockets. Also included is a program for recording and analyzing launch data.