



**Extension - Science, Engineering and Technology (E-SET)**  
**Curricula Resources**  
**Educator Professional Development Workshops**  
**2004**



**CURRICULA RESOURCES**

<i>Title</i>	<i>Format</i>	<i>Description*</i>	<i>Target Audience</i>	<i>To Obtain**</i>	<i>Order #</i>
<b>A Crime, A Clue and Biotechnology</b>	Helper/Educator Guide	Solve a mystery using biotechnology.	Grades 6-8	Extension Distribution Center	4H-950
<b>Biotechnology School Enrichment Grades 4-5: Cells and Microscopes</b>	Teacher guide Checkout kit available from county extension office	Activities to introduce students to microscopes, cells, and biotechnology	Grades 4-5	Extension Distribution Center, preview at county extension office	4H-955B
<b>Biotechnology School Enrichment Grades 5-6</b>	Teacher guide Checkout kit available from county extension office	Activities to expose students to the scientific and technological issues related to biotechnology	Grades 5-6	Extension Distribution Center, preview at county extension office	4H-955C
<b>Biotechnology School Enrichment Grades 7-8</b>	Teacher guide Checkout kit available from county extension office	Activities to expose students to the scientific and technological issues related to biotechnology	Grades 7-8	Extension Distribution Center, preview at county extension office	4H-955D
<b>Cut the Fat – Keep the Flavor</b>	Teacher resource unit	Biotech unit focusing on making healthy lifestyle choices and decisions about biotech products	Grades 6-12	Extension Distribution Center, preview at county extension office	4H-956
<b>Elementary Engineering: Bridges and Structures</b>	Educator guide Checkout kit available from county extension office	Students develop technology design skills as they cooperatively design, build and evaluate a bridge. Kit provides resources for building a bridge large enough for students to crawl across.	Grades 3-5	Reserve through county extension office	4H-958
<b>Funtivities: Hands-on Science and Math</b>	Helper guide Trainer guide Youth project manuals grades 4-5 and 6-8 Checkout kit available from county extension office	4-H science and technology project guides with activities related to magnets, electricity, air pressure, chemistry, density and mathematics.	Grades 4-8	Extension Distribution Center, preview at county extension office	4H-952 grades 4-5 4H-953 grades 6-8 4H-952LDR Lev I leader guide 4H-953LDR Lev II leader guide
<b>Kitchen Science for Kids</b>	Educator guide	From smells to color changes and nutritious snacks, explore the science behind the foods found in your kitchen.	Grades 4-6	Extension Distribution Center	4H-954LDR
<b>Mars City Alpha</b>	Kit with Educator guide, Youth Manuals and Resources	Interdisciplinary site-based simulation to design and build a scale model of the first Mars human habitat.	Grades 6-12	Challenger Center for Space Education. 800-98-STARS	
<b>Marsville: The Cosmic Village</b>	Educator Notebook	Simulation involving youth working in teams of 5 to 7 in "base operations" and then combining with other teams of youth from other locations to participate in a link-up day experience to create a full-scale Mars habitat.	Grades 4-6	Challenger Center for Space Education. 800-98-STARS	
<b>National 4-H Aerospace Curriculum</b>	Helper guide, four Youth Activity Manuals grades K-2, 3-5, 6-8 and 9-12	Youth project manuals with a variety of activities related to flight and space.	Grades K-12	Extension Distribution Center	4H-82A - K-2 4H-82B - 3-5 4H-82C - 6-8; 4H-82D - 9-12; 4H-82LDR - leader guide
<b>Ready to Navigate with GPS</b>	Educator/Youth guide Checkout kit available through county extension office	Educator guides with activities for youth covering areas of science, math, agriculture education and technology skills using a compass and Global Positioning System.	Grades 4-12	Reserve through county extension office	
<b>Robotix®: Roving on Mars</b>	Teacher guide Checkout kit available from county extension office	Design, build and program robots while developing technological design skills	Grades 6-8	Reserve through extension office	4H-959

These resources may be used in any of the following delivery modes: clubs, afterschool, camps, school enrichment, educator workshops and public events.

\*For a more complete description of materials visit the E-SET website at [www.extension.iastate.edu/e-set](http://www.extension.iastate.edu/e-set) To contact the E-SET office call 515-294-5738 or [speake@iastate.edu](mailto:speake@iastate.edu)

\*\*Extension Distribution Center, 119 Kooser Drive, Iowa State University, Ames, IA 50011. 515-294-5247 [pubdist@iastate.edu](mailto:pubdist@iastate.edu) Contact Extension Distribution Center for publication costs.

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<b>Rockets Away!</b>	Helper guide, Youth Project Manual, computer software, web page Checkout kit available from county extension office	Activities on the basic concepts of rocketry and information to design and launch a 2-liter bottle rocket.	Grades 5-12	Extension Distribution Center, preview at county extension office	4H-81 – Student 4H-81LDR - Leader
<b>Toys in Space</b>	Helper/Educator guide and student activity sheets in folder Video tape Checkout kit available from county extension office	Youth play with toys, observing how the toys perform on earth, and then predict how these same toys would perform in the microgravity of space. The youth can judge the accuracy of their predictions when they watch a videotape of the astronauts.	Grades 2-12	Extension Distribution Center, preview at county extension office	4H-87 - 2-5; 4H-88 - 6-12; 4H-87A - video
<b>Wonderwise</b>	Nine different kits available for checkout; youth and educator guide, CD, and videotape.	Educator guides with activities covering a wide range of science topics and careers.	Grades 4-6	Reserve through extension office	

### RESOURCES – Kits, Displays, Software and more

<i>Title</i>	<i>Format</i>	<i>Description*</i>	<i>Target Audience</i>	<i>To Obtain**</i>
<b>Biotech Educator Newsletter</b>	Newsletter	Biotechnology updates, resources and educator sharing section.	Educators	To subscribe call 1-800-643-9504
<b>Biotech Web site</b>	Web site	<a href="http://www.biotech.iastate.edu/">http://www.biotech.iastate.edu/</a>	Grades K-12	
<b>Biotechnology Careers</b>	Handout	Information on biotechnology at Iowa State University`	Grades 6-12	Extension Distribution Center, 4H-957
<b>DNA Extraction Kit</b>	Kit	Nonexpendable supplies for DNA extraction lab found in Grades 5-6 and 7-8 Biotechnology School Enrichment	Grades 5-12	Reserve through county extension office
<b>DNA Fingerprinting Kit</b>	Kit	Kit with equipment for DNA fingerprinting lab	Grades 6-12	Reserve through county extension office
<b>Elementary Engineering: Bridges and Structures</b>	Kit with curriculum	Kit with supplies to build metal, truss bridge and K’NEX building materials for group bridge building.	Grades 3-5	Reserve through county extension office
<b>E-SET Display</b>	Display	Promotional display.	General	E-SET office
<b>Exploring the Universe</b>	Kit	Kit with telescope and curriculum books	Grades K-12	Reserve through county extension office
<b>Funtivities: Hands-on Science and Math</b>	Kit	Nonexpendable supplies for use with Funtivities curriculum. Activities include: magnets, electricity, math, density, air pressure and chemistry.	Grades 4-8	Reserve through county extension office
<b>Robotix®: Roving on Mars</b>	Kit	Kit with Robotix® sets, video tape, and curriculum	Grades 6-8	Reserve through extension office
<b>Rockets Away!</b>	Kit	Kit with rocket launchers, curriculum and nonexpendable supplies for 2-liter bottle rockets	Grades 5-12	Reserve from county extension office
<b>Science is Here</b>	Planning Guide and Activities	Planning information and activities for a community/school science event.	Grades K-6	Print from E-SET office home page*, county extension office.
<b>Toys in Space</b>	Kit	Kit with toys, video tape and curriculum	Grades 2-12	Reserve from county extension office

Educator workshops are available for all curricula resources or can be custom designed to fit your needs.

- Workshops may be attended by any educators including teachers, youth volunteers, home school and community programs staff.
- Workshop minimum: 10 participants. Maximum numbers dependent on content of workshop.
- Workshops vary in length from 3 to 15 hours depending on workshop content.

Most check-out materials are available at minimal or no cost. Please contact your local county extension office for specific information.

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