Sustaining our Future through Youth Education

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Mission Statement

“K-State Research and Extension is dedicated to a safe, sustainable, competitive food and fiber system and to strong, healthy communities, families and youth through integrated research, analysis, and education.”
Statistics

• Most American adults are not scientifically literate
• In a public survey, $\frac{1}{2}$ of the people surveyed did not know that the earth revolves around the sun once per year.
• 55% of adults do not complete a chemistry class and 80% do not complete physics
• 2/3 of 3rd graders get less than 2hrs/wk of science
• By 8th grade only 1/5 of students have positive attitudes towards science
• By high school most students lose interest in science; they find it boring, difficult and irrelevant

E.A.R.T.H. is a year long environmental educational program

• Focus on middle and high school students
• Curriculum satisfies Kansas Department of Education Curricular Standards for Science.
• Provides kits with supplies to complete all activities.
• Sponsors an annual student workshop
E.A.R.T.H.’s Goal

• Make students aware of environmental issues

• Give them the tools to identify, prevent or solve environmental problems.
E.A.R.T.H. in the Classroom

Each year begins with teacher training

Then teachers take curriculum and supplies into their classrooms
Activity Kits

✓ Packed so all students can participate in hands on activities.
✓ Provides supplies needed to complete all curriculum lessons.
AIR
- Outdoor air pollution
- Indoor air pollution
- Air sampling
- Acid Rain
- Radon
- CO2 Lab

SOIL
- Soil as a filter
- Soil pollution
- Composting
- Erosion
- Riparian areas

WATER
- Water Cycle
- Chemistry
- Oil Spills
- Aquifers and nonpoint pollution
- Water Treatment
- Wetlands

LIVING RESOURCES
- Macroinvertebrates
- Habitats
- Predators & Prey
- Cycles
E.A.R.T.H. lessons are correlated to the Kansas Science Standards.

Each lesson meets at least one science standard.

E.A.R.T.H. was reviewed by the NAAEE Curriculum Review Board and

E.A.R.T.H. met 27 of the 28 Guidelines for Excellence
The E.A.R.T.H. Workshop provides students with opportunities to explore careers in the science field.

At the E.A.R.T.H. Workshop local environmental professionals lead sessions on real world applications to classroom studies.
Program Sponsors

Financial assistance for this project has been provided through EPA - Section 319 Nonpoint Source Pollution Control Grant C9007405 99 (3889 9591) through a grant agreement with the Kansas Department of Health and Environment.
Over the past 5 years, E.A.R.T.H. has been replicated in 22 Kansas Counties

E.A.R.T.H. serves 5,000 students statewide
Stakeholders

• Teachers
• Students
• Steering Committee Members
• Funders
• Workshop Presenters
• Workshop Volunteers
Engage

• Grab their attention
• Draw them into the topic
• Use activities that connect what they already know to what they will learn
Explore

• Get the learners involved
• Have them use their hands and minds
• Provide a common base of experience
• Guide the learning
Explain

• Discuss the exploration activity
• Use formal terms and define them
• Explain the concepts they experienced
• The terms are more meaningful after the experience
Extend

• Practice the new knowledge, skills and behaviors in new, but similar ways
• Have students apply the new understanding to the world around them
• Use the formal labels and definitions
Evaluate

• Assess the learner’s understanding and abilities
• Observe change in knowledge and behavior
• Self-assessment
• Open-ended questions
• Interviews
• Written, oral, behavioral, assessment