

4-H SET Plan of Action

Name of Land-Grant University: Washington State University

Person Submitting Plan: Janet Edwards

Title: Extension Youth Development Specialist

Address: PO Box 1495, Washington State University Spokane

City: Spokane State: WA Zip: 99210-1495

Email Address: edwardsj@wsu.edu

Telephone Number (numbers only, no hyphens): 5093587867

Summary of 4-H SET Plan (limit to 200 words):

Washington State University and WSU Extension have embarked upon an academic prioritization process to increase effectiveness of University programs to students and residents of Washington as well as maximize the use of limited resources. Taking the academic focused priorities to youth audiences through rich 4-H programs will support the University mission and contribute to the strength of 4-H.

The Provost and task force identified six priority programs that included 4-H Youth Development. 4-H is also positioned to respond to two other high priority areas—water programs and energy programs.

The Washington SET plan will focus on replicating existing programs to reach underserved audiences. Programs in the environmental sciences including forestry, wildlife, energy, outdoor education, and water are being delivered in many locations. We will expand current programs as well as develop new programs. A second target area will be to replicate and expand technology and engineering programs. The third focus is on animal science projects, one of the largest areas of participation in WSU 4-H. The SET plan will seek to maximize the science emphasis with increased curricula and leader training particularly in experiential science adventures.

The SET plan will continue to serve youth through the traditional 4-H club model. There will be increased effort to reach new audiences through broadened afterschool programs, camps and school enrichment.

Please check the blue box to the left of the methods/strategies/curricula that will be used in the plan.
Please check the red box to the right of the methods/strategies/curricula that are primary:

Delivery Methods:

- 4-H Clubs Special Interest 4-H Afterschool
 Residential1 Camps Day Camps School Enrichment
 Special Summer Activities on university campuses
 Self-Directed Projects Others (please list):

Teaching/Instructional Strategies:

- Youth/Adult Partnerships Teens Teaching Youth
 Train-the-Trainer models Volunteer Facilitated
Mentors/Coaches Self-directed
Use of Partner volunteers to teach youth
Web-based instruction CD/Video/Cell Phone
Others Please list:

Curricula:

- Environmental Science (ex. Alternative Energy, Biofuel, Wind Energy, Solar Energy, Ecology,
Fishing, Forestry, Outdoor Education/Recreation, Waste Management, Water)
Earth and Space Science (ex. Astronomy, Geology, Soil)
Agriculture Science (ex. Astronomy, Geology, Soil)
Plant Science (ex. Gardening, Horticulture, Plants/Crops)
 Food Science (ex. Food Safety, Food Preparation)
 Animal Science (ex. Beef Cat, Dairy Cattle, Dairy Goat, Dog, Embryology, Entomology,
Farm Animals, Horse, Llama, Meat Goat, Pets, Poultry, Rabbit, Swine, Sheep)
 Technology and Engineering (Aeronautics, Computer, Electric, Engines, Geospatial, Robotics,
Media Technology, Other Engineering, Other Technologies, Science/Technology Discovery,
Woodworking)

Please list estimated percentage of each of the following you anticipate reaching with 4-H SET programming (total of each category should equal 100%):

Audiences:

AGE GROUP/LEVEL:

K — 2nd Grade (Ages 5-8) 3rd- 5th Grade (Ages 9-11)

6th – 8th Grade (Ages 12-14) 9th – 12th Grade (Ages 15-19)

Ethnicity: Hispanic or Latino Non-Hispanic or Latino

Race: White Black or African American American Indian or Alaskan Native

Native Hawaiian or Pacific Islander Asian More than one race

Undetermined

Residence: Farm Town<10,000/rural non-farm

Towns and cities (10,000-50,000) and their suburbs

Suburbs of cities over 50,000 Central cities of over 50,000

Targeted Audiences: If your program will focus on a specific group of youth, for example, girls, minorities, rural, etc., please list the characteristics of the groups here (for example: girls, ages 11 — 14 in intercity communities):

Target audiences will be out of school time youth.

Estimated percentage (total should equal 100%) of females and males to be served

Estimated funding to be secured (2008 - 2012) to support 4-H SET: \$

Please list the sources of funds to be secured - do not include funds from National 4-H Council.

Sources may include: national, state, and local government and private sources.

Sources of funds: \$700,000

University allocation (\$30,000 annually) Program user fees (\$5000 annually) 4-H Foundation (\$5000 annually) State funded grants (Office of Superintendent of Public Instruction, Parks & Recreation, etc. \$10,000 annually) Private Foundation grants (\$50,000 annually) Business and Industry Partnerships (\$40,000 annually)
--

Estimated number of NEW youth to be reached (2008 — 2012):

(New youth are new to 4-H; those who have not been involved with 4-H before)

Estimated number of 4-H Youth currently served with 4-H SET programming:

(Please use the attached definition of 4-H SET to determine SET activities/programs to include when making this estimate).

Partnerships: Please list any primary partners that will be involved in the 4-H SET program (Examples: Faculty in other departments of the university, other universities, National Association of Rocketry, NASA, After-School partners, other youth organizations, business partners, etc.).

School's Out Washington, Washington Afterschool Network, Washington Afterschool Association, Center for Youth Workforce Preparation, Office of Superintendent of Public Instruction, WSU Energy Program, Eastern Washington University, WSU College of Education, Center for Community Collaborations, Teachers of Teachers of Science, WSU School of Veterinary Medicine, Microsoft, Boeing, Pacific Science Center, County Governments, City Governments, Public Utilities.

4-H SET Plan of Action Program Development and Design

Goal: Develop and deliver 4-H SET programs that are content and contextually valid to youth in different settings and locations that meet the needs of youth from a wide variety of backgrounds.

Objective: Increase knowledge, skills, and competencies and improve the attitudes of youth in science, engineering and technology.

Strategies to use:

The focus for the state SET plan is two fold. Our primary effort will be to fortify current 4-H programs that are already teaching SET abilities by raising awareness of SET knowledge, skills and abilities that are included in current 4-H projects. The second focus will be to expand current programs or design and deliver new SET programs that will utilize a variety of delivery modes to reach new and underserved audiences. A primary delivery will be expansion to afterschool programs. A variety of strategies and delivery modes will be employed including:

- Day camps and residential camps
- Partnerships with museums (Pacific Science Center, Museum of Flight, Mobius Kids)
- Technology Van
- Super Saturday workshops
- Club activities
- Environmental projects
- School senior projects
- School enrichment programs
- Afterschool programs
- Science in a Box kits for loan
- Branch Campus programs
- Content areas to be explored and expanded include but are not limited to Environmental Sciences, Robotics, GIS/GPS, TerraPod, Animal Science, Food Science and Engineering.

Who	What	How	When
Janet Edwards	Organize SET Team	Recruit volunteers, teens, staff	2007-2008
SET Team	Introduce SET	Training at Forum	2007-2008
SET Team	Conduct needs assessment	Survey	2008
SET Team	Complete inventory of Curriculum	Survey /interviews	2008
County Teams	Plan Camps	Choose SET focus/resources	2008-2012
SET Team	Develop Science in box kits	Identify focus, gather materials	2008-2009
SET Team	Training on SET abilities	District events	2008-2012
Various faculty	SET topic guide sheets	Write/post on website	2008-2012

Outcomes/Indicators:

4-H Staff and leaders are more aware of SET programs and opportunities
Increased program offerings at local levels in SET topic areas
Increased enrollment in SET project areas
Teens show increased awareness and knowledge of SET education and career opportunities
Increased focus on SET skills in public presentations at local and state level events
4-H youth have increased knowledge of application of science inquiry skills

Comments:

The WA SET team was formed after the SET Conference in Lincoln, NE in 2007. The team includes a statewide representation of faculty, staff volunteers and youth. Each team member serves on a SET subcommittee to focus on the specific sections included in the SET plan of action. There is enthusiastic support from WSU Administration to expand SET programs throughout the state. SET has been identified as a priority program area for youth development programs. New partnerships are forming with university departments that will contribute to the development of resources and training opportunities.

Professional Development

Goal: Create a well-coordinated system of professional development opportunities so that 4-H youth and adult volunteers and staff are eager and well-prepared to incorporate science, engineering and technology into 4-H.

Objective: Increase the knowledge, skills, competencies and comfort level of youth and adult 4-H volunteers and staff for offering hands-on, experientially-based 4-H SET learning experiences to youth.

Strategies to use:

Provide training at Forum pre conference on implementing SET programs
 Provide multiple workshops at Forum in SET content and skills
 Conduct survey to identify current programs that fit SET focus area and training needed to support programs
 Develop youth adult partnerships to deliver training
 Provide district wide training on new SET programs
 Partner with neighboring states to multiply training opportunities
 Conduct satellite training across the state to increase SET program resources and skills
 Develop online training strategies in SET content

Who	What	How	When
SET team and various faculty	training at Forum	develop workshops	2008-2012
Volunteers/faculty	workshops on SET Content	experiential workshops	2008-2012
SET sub committee	Develop survey	web based or email	2008
Teen Leadership committee	build youth-adult teams	recruit and train	2008-2012
SET Committee & faculty	district training	web based/face to face, satellite	2008-2012
Janet Edwards	ongoing communications with SET liaisons in OR, ID, MT, AK	mail, telephone/face to face	2008-2012
SET sub committee	satellite training	work with Communications partners on campus	2009-2012
SET sub committee	online training resources	replicate trainings to web based options	2009-2012

Outcomes/Indicators:

Faculty, staff and volunteers design and deliver more SET programs that meet content and contextual standards
 Increased competence in delivering SET programs
 Increased training materials are available for adults/teens leading SET programs
 Increased program opportunities with neighboring states

Comments:

As we identify our program needs and opportunities, we will develop professional development activities for 4-H faculty and staff, volunteers, and youth. In addition to the 4-H team, we will provide training and resources for afterschool program staff and school partners for school enrichment programs. We will utilize various delivery modes to provide maximum reach for the training opportunities. Besides face to face workshops and conferences, we will develop online based learning, satellite programs, and self directed training tools such as fact sheets and tutorials.

Curriculum

Goal: Provide a wide variety of 4-H SET curricula that meet the National Science Education Standards (NSES) and the curricula review process established by National 4- H Headquarters to the 4-H system and external groups and organizations.

Objective: Work with 4-H volunteers and staff land-grant college and university faculty, SET content experts and other partners (museums, SET organizations, SET associations, industries, foundations, etc.) to revise and develop 4-H SET curricula that meet content and contextual standards.

Strategies to use:

Develop "science kits" that include curricula, materials, and supplies to be distributed to county offices for use in initiating a SET program (example: Robotics supplies)
 Develop fact sheets with guidelines for putting a SET focus on existing 4-H projects (example: applying science process skills in a bread baking project)
 Review and revise existing curriculum to emphasize SET content
 Work with University and community content specialists to develop new curriculum with SET content.
 Develop process for incorporating National SET curriculum resources into local programs

Who	What	How	When
SET team and faculty	Develop science kits	Gather curricula & supplies	2008-2010
Faculty partners	Develop fact sheets	Research and write	2009-2010
SET sub committee	Revise curriculum	Assemble review teams	2008-2011
SET committee, faculty partners	Develop new curricula	Use needs assessment to identify gaps	2009-2011
SET sub committee	Incorporate national curriculum	Committee review and develop implementation plan	2009-2012

Outcomes/Indicators:

Kits are available for check out in each District
 Evaluation and review process is available to assess existing curriculum
 Priorities are listed for development of new SET curriculum and resources
 SET Fact sheets are posted on the 4-H Web site
 New curriculum is added to collection yearly

Comments:

We will access the SET designated resources developed by 4-H CCS as well as explore opportunities to develop local curriculum. The SET curriculum sub committee will explore our current inventory of resources and identify project materials that can be supplemented to increase the emphasis on the SET skills.

Evaluation and Research

Goal: Put in place an evaluation and research system to measure the effectiveness of 4-H SET programs in reaching the 4-H SET goals and objectives.

Objective 1: Increase 4-H staff and volunteers' knowledge, skills, and competencies for designing effective evaluation strategies for 4-H SET programming (process and outcome).

Objective 2: Design and implement a national long-term research model to compare 4-H youth and non-4-H youth SET outcomes.

Strategies to use:

Provide training on Life Skills Evaluation tools already in place in WSU 4-H
 Adapt the Life Skills tools to include SET skills
 Identify a baseline statement of current level of programming so data can be gathered to measure the effectiveness of SET programs.

Who	What	How	When
SET sub committee	Evaluation training	Satellite and face to face	2009
SET sub committee	Adapt Life Skills tools	Review/revise/pilot/refine	2009-2010
SET sub committee	Develop statement of status	Survey focus groups	2008-2009
SET sub committee	Provide ongoing evaluation of programs	Providing instruments and technical assistance	2008-20112

Outcomes/Indicators:

Life Skills Evaluation tools include SET knowledge, skills and attitudes
 Staff and volunteers are able to design programs that include evaluation strategies
 SET program evaluations document increased knowledge, skills, and attitudes.
 Year end reports show outcomes and impacts as a result of SET programs

Comments:

WSU 4-H has developed an online evaluation tool to measure life skills. The SET sub committee will explore strategies to use that existing instrument and add additional life skills especially relevant to SET abilities. We will provide ongoing technical assistance to help program providers measure the impact of SET programs and develop effective instruments to support formative assessments as the programs grow. We will also seek to increase the capacity of program providers to evaluate programs.

Marketing and Communications

Goal: Create a strong, clear and consistent message about 4-H SET programs that is accepted, embraced and communicated by the Cooperative Extension System, land-grant colleges and universities and 4-H SET partners.

Objectives: Increase political, financial and partnership support for 4-H SET programs.

Strategies to use:

Develop SET pages on 4-H website
 Link web site from WSU Vancouver Center for Youth Workforce Preparation to 4-H SET web page
 Develop fact sheets to post on web site to include activities, opportunities, content
 Develop a packet for press and marketing
 Post regular items in Tuesday News—point to web site and fact sheets

Who	What	How	When
SET sub committee	Develop web pages	Input from content resource faculty	2008-2012
Joy Faerber, webmaster	Design SET web site	Post resources on 4-H web site	2008-2009
Joy Faerber, webmaster	Link web sites to 4-H site	Input from counties and other partners	2008-2012
Content Experts	Develop fact sheets for web site	Connect with current project resources	2009-2012
SET sub committee	Develop marketing packet	Utilize National 4-H resources	2008-2009
4-H Faculty/staff	Post to Tuesday news	Submit news items and opportunities	2008-2012

Outcomes/Indicators:

SET Team utilizes national marketing tools and strategies to inform public
 WSU 4-H web site has easy to navigate links to SET resources and opportunities
 Increased partnerships develop as a result of marketing and communication
 Faculty, staff, volunteers and youth are trained to deliver SET messages to internal and external partners
 Youth enrollment increased in SET programs

Comments:

SET sub committee will access National Marketing tools for SET and will team with internal marketing experts to continue to tell the SET story and build support with partners.
 We will encourage 4-H members to integrate SET skills and knowledge into ongoing 4-H experiences.
 Increased skill in the 4-H SET programs will provided support to youth as they increase their activities in their formal education and pursue additional education and experiences in SET learning.

Funding

Goal: Use public and private funds at the local, county, state and national levels to support 4-H SET programming.

Objective: Increase the capacity of the 4-H System to generate private and public funds to support 4-H SET programming.

Strategies to use:

Inform and motivate potential donors and policy makers to choose to support SET programs through training, marketing and highlight of youth accomplishments
 Contact local donors
 Train 4-H team in fund raising strategies
 Pursue grant opportunities to fund SET programs
 Direct current county and WSU funding to support SET programs
 Develop a statewide fund raising campaign that focuses on specific SET content targets such as water quality, environmental education, robotics, GPS/GIS, animal science.

Who	What	How	When
SET team	Build support for SET	Share SET story with donors	2008-2012
4-H Foundation Director	Grants and partnerships	Contact donors	2008-2012
4-H Foundation Director	Build fund raising capacity	Train 4-H team	2008-2009
SET sub committee	Pursue grants	Submit proposals	2008-2012
Administrators	Develop county and university support	Redirect current funds, pursue new funding	2009-2012
SET sub committee and Foundation team	Fund raising campaign	Connect with current donors and contact new donors	2009-2012

Outcomes/Indicators:

Funding strategies are identified and targeted
 Key partners are identified
 Grants are submitted and funded
 4-H members, volunteers and faculty have increased skill in pursuing funding

Comments:

WSU and WSU Extension have added increased programming in science, engineering and technology as a high priority. We will pursue opportunities to build support for 4-H SET programs by increasing awareness of campus departments on SET opportunities. SET team will provide regular updates to administrative team on progress, challenges and opportunities.

Partnerships and Collaborations

Goal: Forge formal and informal partnerships among 4-H SET and SET professional associations, foundations, federal agencies, industry, and business and other youth organizations.

Objective: Increase the quality and availability of 4-H SET programs to 1 million youth.

Strategies to use:

Identify partners who are currently supporting 4-H programs.
 Identify potential role of current partners to expand to SET focus programs.
 Seek out new partners with an interest in SET programs.
 Forge mutual partnerships that support SET programs and advance the partners program as well. For example, work with College of Education science educators to develop field experience for pre-service teachers to deliver SET content experiences in afterschool programs.
 Identify business partners with a SET focus as potential program resources as well as funding sources.

Who	What	How	When
SET team sub committee	Identify current partners	Surveys, telephone interview	2008-2009
SET team	Invite new partners through University departments	Marketing/invitation	2008-2009
4-H Foundation Director	Identify business partners	Personal contacts	2008-2010

Outcomes/Indicators:

Existing and new partners are identified.
 Diverse field opportunities are available for hands-on learning with partners
 Partners contribute to marketing efforts to tell the SET story.
 Participation in SET programs increased as a result of partnerships.
 Increased programs and opportunities are available in SET.
 SET programs are ongoing and sustained.

Comments:

We have many strong partnerships within the College of Agriculture, Human and Natural Resources and are building relationships with other departments including the College of Education, Veterinary Medicine, WSU Energy Program, Office of Diversity and others. We also have many valuable partners in the field of afterschool care programs. We contribute to the leadership of the Washington Afterschool Association and the Washington Afterschool Network. We partner with other government agencies including the Office of the Superintendent of Public Instruction and the State Parks and Recreation Department.

We will continue to nurture those partnerships and increase efforts to emphasize and develop the SET opportunities within those partnerships. New SET programs will also open doors for us to build new partnerships and collaborations.