

Virginia (Virginia Polytechnic Institute and State University, Virginia State University Combined)

Plan of Work for 2023-2027

Status: Final (Approved 10/3/2022)

Executive Summary Overview

Virginia Cooperative Extension (VCE), a partnership between Virginia Polytechnic Institute and State University (VT) and Virginia State University (VSU), the Virginia Agricultural Experiment Station (VAES) and the Virginia State University Agricultural Research Station (VSUARS), enables people to improve their lives through research and education using scientific knowledge focused on the issues and needs of the citizens of Virginia. Audiences are involved in designing, implementing, and evaluating needs-driven programs. VCE, VAES and VSUARS are dynamic organizations which stimulate positive personal and societal change leading to more productive lives, families, farms, and forests, as well as a better environment in urban and rural communities.

VCE's GOALS are to: 1) develop and transfer new knowledge in applied and basic life sciences, 2) perform relevant, objective, and timely research 3) improve the quality of life for communities and citizens in the Commonwealth, 4) use a systems approach to programming, with task-oriented work teams that respond to the needs of individuals, groups, and organizations, 5) work with at-risk, underserved, and underrepresented audiences who need focused and specialized attention, 6) fully integrate a culturally diverse paid and volunteer staff in planning, implementing, and evaluating programs, and 7) recruit and collaborate with public and private partners to better utilize resources, heighten impact, and reach a more diverse audience. In particular, VSU's Extension program goals are to: 1) improve local and state economies by helping small and limited-resource farmers and citizens garner resources to own, operate, and sustain small businesses, 2) educate and empower socially disadvantaged farmers to produce, distribute, and market, organic, locally grown, and ethnic foods to feed Virginia's citizens, 3) ensure safe food supplies by teaching small-scale growers and farm families effective food safety practices, 4) address health issues and nutrition practices that confront limited-resource urban and rural citizens, 5) help youth, families, and seniors manage money to survive during challenging economic times, and 6) enable parents and families to leave their children in high quality and safe child-care environments. The mission of VAES is to perform basic and applied research on agricultural, environmental, and natural and community resource issues related to the future needs of Virginia, the region, the nation, and the world. Research is designed to provide knowledge that will enhance the quality of individual and family life and the social and economic vigor of Virginia. Researchers utilize the best techniques of qualitative and quantitative research to form the knowledge base for instruction of and application to the broader mission of the land-grant university. The mission of VAES is to perform basic and applied research on agricultural, environmental, and natural and

community resource issues related to the future needs of Virginia, the region, the nation, and the world. Research is designed to provide knowledge that will enhance the quality of individual and family life and the social and economic vigor of Virginia. Researchers utilize the best techniques of qualitative and quantitative research to form the knowledge base for instruction of and application to the broader mission of the land-grant university.

VAES is committed to developing and implementing research that addresses societal needs, expectations, and future pressures and opportunities. VAES is focused on creating knowledge, integrating advanced technological and scientific innovations to create efficiencies and economic growth, and translating knowledge into practice to enhance agricultural and food systems, including agriculture and food, natural and environmental resources, and life sciences. Research encompasses near- and long-term issues and opportunities pertaining to invasive pests and organisms, infectious disease, health and wellness, quality, social interactions, and economics in animal, plant, human, natural resources, environment and climate, advanced technology and computer-human interactions.

The research focus of VSU's Agricultural Research Station includes; develop production systems that conserve natural resources; improve the sustainability and profitability of indoor agricultural production, develop sustainable pest management system for small scale agriculture, identify novel genes that can be used to improve crop tolerances to environmental stresses, improve the profitability and health of small ruminant production, develop a resilient farming system that can cope with the adverse impacts of climate change; develop competitive and sustainable small-scale agricultural systems, develop bio-based energy production systems, improve food safety and quality, generate scientific information on value-added plant and animal products to improve the profitability of farms. Research is conducted on campus and at a nearby VSU farm.

PLANNING: VAES, VSUARS, and VCE address a broad range of problems and issues facing citizens of Virginia through focused research and educational programming. The foundation for Research and Extension programs are built on the identification and prioritization of strategic issues through situation analyses, which are accomplished through the examination of trends and emerging issues identified by local advisory groups in Unit offices (Extension Leadership Councils), Agricultural Research and Extension Center (AREC) Advisory groups, and individual Extension specialists. Each year Unit offices are asked to review their latest local situation analysis for necessary updates. Unit situation analyses are the background and rationale for deciding which problems and issues will be addressed and reported on by VAES, VSUARS, and VCE.

VCE uses a program planning and reporting process that is based on the objectives identified in the 2011-2016 VCE Strategic Plan. Program Teams made up of agents, specialists, are aligned with Strategic Plan objectives and other objectives have been established as new opportunities have developed. Each Program Team coordinates programming across the state to meet the needs identified by their aligned Strategic plan objectives. This includes situation analysis, program planning, program development, evaluation, and reporting.

REPORTING: All VT and VSU Extension and research faculty annually report through the VT College of Agricultural and Life Sciences' electronic Faculty Annual Reporting System (eFARS). This system includes annual program reports focused on faculty goals, outputs, outcomes, and other data for each planned program for teaching, research, and Extension at an individual, unit, college, and organizational level. Updates to eFARS and contact reporting each year continue to better align planning and reporting with

the 7 planned programs presented in this report. All research faculty are required to propose peer-reviewed Experiment Station projects submitted to USDA/NIFA, and entered into NIFA Reporting System. Researchers prepare annual progress and termination reports reviewed by the VAES director before being submitted to the NIFA Reporting System.

Merit and Scientific Peer Review Processes

VAES RESEARCH REVIEW

Research under the Hatch, McIntire-Stennis, and Animal Health and Disease Acts is conducted in the College of Agriculture and Life Sciences, College of Natural Resources, and Virginia-Maryland Regional College of Veterinary Medicine that constitute the Virginia Agricultural Experiment Station (VAES). Researchers are required to submit a research proposal through their departmental head, conforming to the format determined by the USDA. An internal administrative review confirms that the work proposed will utilize appropriate statistical methods and that the PI has obtained any needed approvals through the institutional review boards. In the College of Agriculture and Life Sciences, the proposal is subsequently peer reviewed by a minimum of three internal or external PhD level scientists. An additional panel review may be mandated. Proposal selection criteria include: 1) research relevance to the goals of the department and college; 2) needs of the people the research would serve; 3) priorities established by task forces, work groups, or commodity research committees; 4) objectives and procedures are clearly stated; 5) proposed duration is realistic; 6) appropriate or desirable cooperators; 7) impacts for Virginia (and elsewhere) or anticipated economic importance and 8) project leader competence.

The project leader submits the revised proposal to the department/unit head, and VAES Director or Associate Director, with a letter delineating the changes made from reviewer's recommendations and/or rebuttal for any recommendations not accepted. The project leader enters CRIS Forms AD-416 and AD-417 on the CRIS website-<http://cwf.uvm.edu/dris/> and sends a copy of the proposal electronically to the VAES office. ARS Research Review Development of Proposals - Any applicant at ARS who desires to submit a proposal for consideration must first complete and submit a Request for Approval to Submit Proposals Form to the Director of Research. The Director of Research reviews the pre-proposal and notifies the applicant about a decision whether the proposal can be developed fully or not. All appropriate University and funding agencies' policies, procedures and guidelines should be adhered when developing a proposal. Review of Full Evans-Allen Proposal - A full proposal is submitted by applicant(s) to the Director of Research for review. The Director then makes a determination on how the proposal is reviewed. It could be sent to external anonymous experts in the respective fields. The Director of Research's Office facilitates this process. The proposal is reviewed for addressing the needs of the state and people of Virginia and the United States, the degree of relevance of the proposed research to the land-grant mission and priorities of the University, the need for initiation of research in new areas, and other matters related to grantsmanship. The reviewers are asked to pay particular attention to scientific and technical merit, opportunities for cooperation in the proposed research with other individuals and units within the University and the Virginia clientele. Based on the external reviewers' comments, the Director advises the applicant to address the concerns about the proposal or develop another one that incorporates the relevant suggestions.

EXTENSION REVIEW

The review process for Extension covers all programs conducted by VCE through eleven program teams (PT). The PTs, made up of Extension specialists and agents, and experiment station researchers, review programs at least annually to maintain, modify, create, and report on programs to meet needs identified through external and internal stakeholder input.

VCE addresses a broad range of issues facing the Commonwealth through focused educational programming. This is accomplished and reported through VCE's eleven Program Teams and State Program Leaders who serve as partners for each Team. A web-based planning and reporting system, organized by our seven Planned Programs, documents program outputs and outcomes. Problems and issues identified through situation analysis are communicated throughout VCE and educational program plans are developed by the interdisciplinary PTs. Program proposals identify programming outputs, outcomes, and an evaluation plan to be conducted by the PTs. The program proposals are reviewed by VCE programming leadership.

1. How will the planned programs address the critical issues of strategic importance, including those identified by the stakeholders?

The Virginia Agricultural Experiment Station (VAES) conducts research relevant to the needs and priorities of the citizens of the Commonwealth and the nation. Research projects are established based on the input of advisory committees at eleven Agricultural Research and Extension Centers (ARECs) across the state. In addition, the twelve academic departments within the College of Agriculture and Life Sciences each maintain stakeholder groups and the College of Agriculture and Life Sciences has an advisory group of producers, commodity groups, and agribusiness leaders that provide important feedback to VAES. In turn, VAES provides research-based input for the VCE programming process through faculty research, Extension specialists, and administratively through AREC directors and statewide Extension program leaders.

Virginia Cooperative Extension connects with the grassroots of the state through partnerships with Extension Leadership Councils (ELCs). At the local level, this partnership represents the diversity of each county, city, and town. Representation includes VCE program representatives from 4-H/Youth Development, Family and Consumer Sciences, Agriculture and Natural Resources and Community Viability, community leaders, and other organized community partners. Extension staff and Leadership Council members work as equal partners to determine needs, establish program priorities, plan and implement educational programs, identify and secure resources, market VCE and its programs, and evaluate and report program results/impacts to program stakeholders. Currently, all 107 Extension units in Virginia report having an organized local ELC.

At the state level, local connections are made through the Virginia Cooperative Extension Leadership Council (VCELC). The partnership includes volunteer leaders representing the 22 planning districts of Virginia, at-large members appointed by the director and administrator, all VCE District Directors, all chairpersons (or designees) of FCS and 4-H leadership councils, the VCE Director (VT), the VCE Administrator (VSU), designated VCE staff from both VT and VSU, the 1862 director of the agricultural experiment stations, and the 1890 director of research. The VCELC provides a formal mechanism for VSU and VT to receive stakeholder input for Extension and research programs.

2. How will the planned programs address the needs of under-served and under-represented populations of the State(s)?

The stakeholder input process used by research and Extension includes opportunities to collect relevant issues and problems from under-served and under-represented populations. Campus-based faculty are sensitive to these populations and specifically include input from a broad representation of stakeholder groups to enhance their ability to include under-served and under-represented audiences and their needs. Field faculty are being challenged to increase and document efforts to address the needs of under-served and under-represented populations. In some cases, programs are specifically designed to address the needs of under-served and under-represented audiences. For example, parenting and bankruptcy education programs specifically target under-served and under-represented populations. Faculty are sensitive to this work and develop projects and programs incorporating input and needs from under-served and under-represented audiences. In addition, all Extension agents are required to record how they plan to serve underserved and underrepresented audiences in their personal action plans for each major program at the beginning of each program year. Finally, research and extension work at VSU is specifically targeted at reaching underserved and low- resource audiences.

3. How will the planned programs describe the expected outcomes and impacts?

Program Teams develop specific outcomes they expect faculty will address over a period of five years. These outcomes range from short-term (knowledge, attitude, skills and aspiration changes), to medium-term (practice or behavior changes), to long-term (broader impacts and situation change for individuals, communities, and systems). For each planned program, these outcomes will be monitored, evaluated, and documented each year through an evaluation plan. Program Teams are expected to meet at least twice a year to discuss their Plan of Work, including expected outcomes and impacts. Many of the teams meet throughout the year to plan, develop curriculum, create evaluation instruments, and discuss reporting. The VCE intranet contains documents, PowerPoints, and other tools to assist teams with this work. <http://www.ext.vt.edu/vce/reports/>

4. How will the planned programs result in improved program effectiveness and/or Virginia's integrated research and Extension planned programs have a historic and strong connection that increases the effectiveness and scope of both efforts. The results of the research agenda provide the basis for relevant and effective Extension programs. The outcomes of Extension programs inform the research agenda. This integrated approach embodies the Land Grant philosophy and results in improved effectiveness and efficiency of research and Extension educational programs for the benefit of the citizens of Virginia. The researcher explicates knowledge discovery and development and then connects with the Extension faculty through knowledge dissemination to change learning, behavior, and conditions.

Stakeholder input: Action Taken to Seek Stakeholder Input

Use of media to announce public meetings and listening sessions

Targeted invitation to traditional stakeholder groups

Targeted invitation to non-traditional stakeholder groups

Targeted invitation to traditional stakeholder individuals

Targeted invitation to selected individuals from general public

Survey of traditional stakeholder groups

Survey of traditional stakeholder individuals

Survey of selected individuals from the general public

Other (focus groups, listening sessions, issue forums, key informant interviews)

Brief explanation.

Virginia Cooperative Extension and Virginia Agricultural Experiment Station work with stakeholders to receive input through local Extension Leadership Councils and many other citizen groups at local and regional levels. The citizen groups reflect the agricultural producers and the socio-economic composition of their communities and focus on conducting programs which produce outcomes based on priority needs.

A systematic analysis of educational needs is integral for VCE program planning. Through situation analysis, needs of stakeholders are assessed, analyzed, and then shape program direction and plans. Traditional methodologies of seeking input include surveys, key informant interviews, issue forums, listening sessions and focus group interviews. To encourage participation, surveys are conducted with paper and web-based response options. Issue forums, listening sessions, and focus group interviews are held in multiple locations throughout service areas in convenient and comfortable environments for non-traditional and traditional stakeholders. Specific efforts are made to assess needs where underrepresented populations reside, and to market input sessions through communication channels used by targeted sectors of the population.

Representation on local Extension Leadership Councils (ELCs) includes all VCE programming areas: 4H/Youth Development (4H), Family and Consumer Sciences (FCS), Agriculture and Natural Resources (ANR), and Community Viability. Currently, all 106 Extension units in Virginia have an organized local ELC and all Agriculture Research and Extension Centers (ARECs) have active advisory councils. At the state level, VCE works with stakeholders through the state Leadership Council (VCELC). The group includes volunteers representing 22 planning districts in Virginia, at-large members appointed by the director of VCE, leaders representing Virginia's diverse population, businesses, agencies, organizations, VCE District Directors, VCE Director from VT, VCE Administrator from Virginia State University, and deans of VSU and VT Colleges of Agriculture including the associate dean for research. State and local ELC meetings are held at times and locations convenient for the membership.

Virginia is a large, diverse state and as such, meeting locations are geographically distributed to ease travel burdens for members. Travel expenses are covered by VCE administration for meeting attendance. A faculty member works directly with the VCELC to assist with organizational development and logistics. The VSU Extension program works with stakeholders through the VCELC for the systematic analysis of educational needs to plan Extension programs. To ensure that adequate stakeholder input is received from limited-resource and underserved audiences, VSU Extension is also informed by a VSU Agricultural Advisory Committee. Formed in 2008, the 15-member committee consists of members from agricultural commodity groups, the agri-business community, and public education. Other members include Extension professionals and volunteers, farmers, and a local legislator who advocates for the VSU School of Agriculture. All members work closely with or are aware of the needs of VSU's clients.

Advisory Committees inform teaching, research, and Extension programs within VSU's College of Agriculture and research programs within VAES and the college. VCE advisory committee member guidelines were used as a basis for selecting VSU Agriculture Advisory members. Committee members represent the Extension program areas of 4-H, agriculture and natural resources, and family and consumer sciences and are invited to serve by the Extension administrators and Dean of the School of Agriculture. VCE and the ARECs have long facilitated grassroots involvement, buy-in, and ownership in local programs. VCE formally connects with the grassroots of the state through partnerships with local volunteer ELCs. For the Virginia Agriculture Experiment Station (VAES), volunteer advisory councils provide stakeholder input. These partnerships represent the diversity of local clientele, communities, and industries across the Commonwealth of Virginia.

Stakeholder input: Methods to Identify Individuals and Groups

Use Advisory Committees

Use External Focus Groups

Open Listening Sessions

Use Surveys

Other (Extension Leadership Councils)

Brief explanation.

The Virginia Agricultural Experiment Station (VAES) conducts research relevant to the needs and priorities of the citizens of the Commonwealth. Research projects are established based on the input of advisory committees at each of the eleven Agricultural Research and Extension Centers (ARECs) distributed across the state along with input from selected departmental advisory committees. The twelve academic departments within the College of Agriculture and Life Sciences each maintain stakeholder groups and the College has its own advisory committee of producers, commodity groups, and agribusiness leaders that provide important feedback to VAES. VAES provides research-based input to the VCE programming process through faculty research and Extension specialists and administratively through AREC directors and statewide Extension program leaders.

VCE formally establishes connectivity with the grassroots of the state through partnerships known as Extension Leadership Councils (ELCs). At the local level, this partnership represents the diversity of each county and city in which VCE exists as a resource. Representation includes VCE programming areas (4-H/Youth Development, Family and Consumer Sciences, Agriculture and Natural Resources and Community Viability), community leaders, and other organized community entities that partner with VCE. Extension staff and Leadership Council members work as equal partners to determine needs, establish program priorities, plan and implement solutions, identify and secure resources, market VCE and its programs, and evaluate and report program results/impacts to program stakeholders. Currently, all 107 Extension units in Virginia report having an organized local ELC.

At the state level, local connectivity is achieved through the Virginia Cooperative Extension Leadership Council (VCELC). The partnership includes volunteer leaders representing the 22 planning districts of Virginia, at-large members appointed by the director and administrator, all VCE District Directors, the VCE Director (VT), the VCE Administrator (VSU), designated VCE staff from VT and VSU, the 1862

director of the agricultural experiment stations, the 1890 director of research, and the director of governmental relations at VT. Extension provides a formal mechanism for VSU and VT to receive stakeholder input for Extension and research programs.

Stakeholder input: Methods for Collecting Stakeholder Input

Meeting with traditional Stakeholder groups

Survey of traditional Stakeholder groups

Meeting with traditional Stakeholder individuals

Survey of traditional Stakeholder individuals

Meeting with the general public (open meeting advertised to all)

Survey of the general public

Other (focus groups, key informant interviews, public issues forums, listening sessions)

Brief explanation.

A variety of methods will be used to collect stakeholder input and can include issues forums, focus groups, community surveys, key informant interviews, and listening sessions.

Stakeholder input: A Statement of How the Input Will Be Considered

In the Budget Process

To Identify Emerging Issues

In the Action Plans

To Set Priorities

Other (staff professional development)

Brief explanation.

Input from stakeholder groups is considered in identifying current and emerging issues, setting priorities for programs, developing implementation plans, and staff professional development offerings. This ultimately influences the budgeting process.

Critical Issues

Agricultural Viability, Profitability, and Sustainability

Initiated on: Nov 26, 2019

State: Virginia

Term Length: Long-term (>5 years)

We will use science-based research and educational strategies to address these critical agriculture issues:

- Enhance profitability and sustainability for farms of all sizes and types
- Mitigate risk in, and improve access to market opportunities for traditional, emergent, and specialty crops, aquaculture, and livestock production systems
- Empower farm transition planning
- Ensure nutritious, safe and equitably accessible local food systems
- Increase urban and organic farming success
- Improve global market competitiveness in food, fiber, and feed industries
- Improve on-farm soil health, grazing management, nutrient utilization, waste management, and pest management
- Assist producers with adherence to regulatory compliance requirements
- Build capacity among new and beginning farmers and ranchers
- Enhance agricultural literacy
- Develop low input and profitable indoor agricultural production system
- Improve the sustainability and profitability of small ruminant production
- Assess labor and economic efficiencies associated with advanced technological and scientific innovations

Science Emphasis Area

Sustainable Agricultural Production Systems

Biotechnology, Biomaterials, and Bioenergy

Initiated on: Nov 26, 2019

State: Virginia

Term Length: Long-term (>5 years)

Biotechnology, biomaterials, and bioenergy programs focus on establishing regional community and industry networks to identify, research and educate on utilization of bacteria, water, plants, animals, and forests products to produce goods for human, industrial, and agricultural needs for all Virginians, such as:

- Enhancing plants and animals via biotechnology applications to increase yields; improve nutrient utilization, disease resistance, environmental remediation, and sustainable agricultural practices
- Reducing dependence on non-renewable energy sources
- Promoting economical and sustainable bioenergy and biomaterials production
- Fostering new and economically viable and affordable opportunities in bio-based businesses
- Improving natural resource sustainability
- Identify novel genes that can be used to improve crop tolerances to environmental stresses, especially drought, heat and metal toxicity
- Use genetic and genome approaches for breeding new crops to address global climate change
- Design sustainable value-added alternatives for agricultural, food, and material waste
- Create cellular-based alternatives for addressing environmental challenges, increased agricultural production, and expanding food resources

Science Emphasis Area

Bioeconomy, Bioenergy, and Bioproducts

Community Viability

Initiated on: Nov 26, 2019

State: Virginia

Term Length: Long-term (>5 years)

Community viability programming will promote continuing prosperity and financial security for all Virginians through educational strategies that:

- Transforms traditional and at-risk local economies through entrepreneurship, small business development, and community-based local and regional food systems and enterprises
- Empowers traditional and at-risk communities through individual and community leadership development, facilitation, and conflict resolution skills
- Develops tools and resources to support best management practices that foster volunteerism
- Enhances representative civic engagement, including youth and adult involvement in community decision-making
- Minimizes losses to agricultural operations, individuals, families, and communities resulting from natural disaster or other emergencies

Science Emphasis Area

Family & Consumer Sciences

Food, Nutrition, and Health

Initiated on: Nov 26, 2019

State: Virginia

Term Length: Long-term (>5 years)

Utilizing science-based research and educational strategies, we will address the following food security and safety, nutrition challenges and health issues for all Virginians:

- Educating youth and adults about positive nutrition habits and physical activity to reduce obesity, incidence of chronic diseases, and health care expenses
- Reducing food insecurity through increased access to locally grown, safe, affordable, and nutritious foods and beverages
- Improving consumer and producer food safety and human nutrition challenges
- Reducing infectious and vector-borne diseases occurrences
- Provide best-management practices for home food production and preservation
- Develop and design innovative approaches and processes for maintaining and improving quality, nutritional value, and shelf-life of food
- Identify, develop, and evaluate novel biological and chemical resources for enhancing health and wellness for plants, animals, and humans

Science Emphasis Area

Family & Consumer Sciences, Food Safety, Human Nutrition

Natural Resources, Environment, and Climate Change

Initiated on: Nov 26, 2019

State: Virginia

Term Length: Long-term (>5 years)

Science-based research and education strategies will address critical issues of natural resource and environmental enhancement, protection and conservation including:

- Educating traditional and underserved audiences to conserve, protect, and enhance natural resources while meeting society's demands
- Reducing negative impacts of urbanization on available habitat for recreation and natural-resource-based economic opportunities
- Developing conservation and protection measures for Virginia's surface and ground water resources, including the Chesapeake Bay watershed
- Improving natural resource and environmental literacy through Master Naturalist, Master Well Owner, Master Gardener and other related efforts
- Increasing energy efficiency in homes and farms
- Develop a resilient farming system that can cope with the adverse impacts of climate change
- Minimize the effects of climate change on low income communities
- Evaluate carbon sequestration and methane emissions related to natural resources, agricultural practices, and food processing

Science Emphasis Area
Agroclimate Science, Environmental Systems

SmartFarm Technology and Security

Initiated on: Mar 31, 2021
State: Virginia

Term Length: Long-term (>5 years)

Using transdisciplinary research and education strategies, we will anticipate, develop, and advance the discovery and translation of technologies, including decisions through data analytics and machine learning, incorporating cyberbiosecurity, and address the biosecurity challenges of the food and agriculture system, such as:

- Characterizing efficiencies and economics of technology applications for crops and green industries and animal agriculture
- Identifying and characterizing risks and strategies for protection at the interface of digital, biological, and cyber physical systems in the food and agriculture system
- Integrating technology for providing security against plant, animal, and food pests, diseases, and other biological threats
- Developing workforce for meeting the future technology and security needs for the food and agriculture system

Science Emphasis Area
Sustainable Agricultural Production Systems

Strengthening Virginia Families

Initiated on: Nov 26, 2019
State: Virginia

Term Length: Long-term (>5 years)

We will support strong, healthy family development and well-being leading to stronger Virginia communities, by utilizing science-based research and education to address these critical issues:

- Maximizing the psychological, social, physical, and emotional well-being of Virginia residents in these areas: parenting and child care, dependent care, elder care, grandparents raising their grandchildren, school-readiness, risky behavior prevention, and stress reduction
- Increasing economic stability by improving youth and family financial literacy and security

Science Emphasis Area
Family & Consumer Sciences

Youth Development

Initiated on: Nov 26, 2019

State: Virginia

Term Length: Long-term (>5 years)

4-H programs focus on developing positive, healthy, skilled, productive youth to be tomorrow's leaders utilizing science-based research and educational strategies to address these critical issues:

- Developing life skills and leadership skills and abilities for traditional and at-risk youth
- Educating traditional and at-risk youth to make better dietary choices, increase physical activity and other healthy behaviors to prevent obesity
- Creating awareness and changing behaviors that prevent at-risk behaviors that may lead youth to engage in crime, unprotected sex, substance abuse, gangs, or other at-risk behaviors that jeopardize their future
- Increasing involvement and interest in Science, Technology, Engineering, Agriculture, and Technology (STEAM) careers for traditional and underserved youth

Science Emphasis Area
Youth Development