

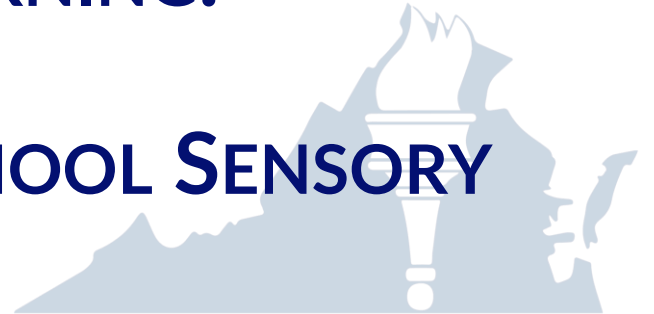


SUPERVISED AGRICULTURAL EXPERIENCE (SAE)–SERVICE LEARNING:



PULASKI COUNTY HIGH SCHOOL SENSORY TRAIL

VIRGINIA DEPARTMENT OF EDUCATION



SESSION INFORMATION

- **Please put all questions in the Q&A**
- **Use “speaker view” for the best experience**
- **Mute your microphone during the session presentation**
- **All sessions are being recorded**
- **Complete the survey at the end of the session for PD points – please do not leave the Zoom**



**LAVETA NUTTER, AGRICULTURAL
EDUCATION AND RELATED CLUSTERS
SPECIALIST, OFFICE OF CAREER, TECHNICAL,
AND ADULT EDUCATION, VIRGINIA
DEPARTMENT OF EDUCATION**



**CARLEY PAVAN-BALLARD, AGRICULTURAL
EDUCATION TEACHER, PULASKI COUNTY CAREER
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**MEGAN ATKINSON, CTE DIRECTOR
PULASKI COUNTY PUBLIC SCHOOLS**



**Sensory
Trail**



SUPERVISED AGRICULTURAL EXPERIENCE (SAE) - SERVICE LEARNING: PULASKI COUNTY HIGH SCHOOL SENSORY TRAIL



Carley Pavan-Ballard



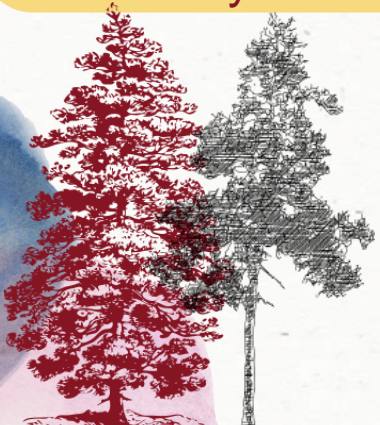
WHAT WE WILL COVER TODAY

PROVIDE AN EXAMPLE OF AN SAE IMMERSION
SERVICE-LEARNING EXPERIENCE.

Part 1- What it is
and why it started

Part 2- How to
implement it

Part 3- Projects
explained



WHAT IS THE SENSORY TRAIL?

- Outdoor educational space
- Accessible to ALL
- Student-led and integrated instruction
- Service-learning project that all Ag students participate in



OUTDOOR EDUCATIONAL SPACE



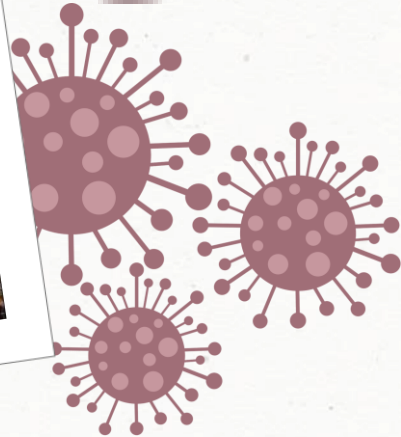
- Educational and Sensory Exhibits
- A learning environment for Pulaski County High School teachers to use (outdoor classroom)
- Open to the public when school is closed
 - Community Garden
- Field trip destination
 - Life Centered Education students giving tours



WHY THE SENSORY TRAIL PROJECT STARTED

- COVID-19 /Virtual learning
- Students in-person learning once or twice a week
- Hands-on work vs. computer/paper and notes
- Accessibility challenges for several students.
- A school with goals for inclusion
- Students wanted high-quality lessons with real purpose

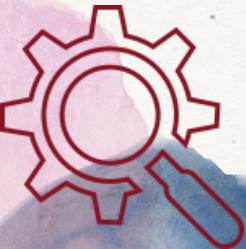
Fall 2020



SAE IMMERSION SERVICE- LEARNING EXPERIENCE

PCHS AG SAE Requirements

- **Required for all Ag students**
- **50 hours total (25 hours from outside of school, 20 hours from school and 5 hours of community service)**
 - **Community Service vs. Service Learning**
- **Many students could not perform a high-quality SAE at home**
 - **20 hours from school helps**
- **SAE projects must correlate with learning objectives based on the course they are enrolled in when working on the Sensory Trail**
- **Students conduct semester-long projects as individuals or in groups for the Sensory Trail**



SAE IMMERSION SERVICE- LEARNING EXPERIENCE

- Skills learned in the classroom through general instruction or students teach the needed skills to their peers
- There are learning objectives and competencies that the students must meet with their SAE projects
- Students submit weekly updates through the AET Record Keeping System and present updates to the class for grades





Group or Individual Projects

- Identifying a hazard, problem, or need/want
- Research
- Pitching the ideas
- Approval of ideas
- More Research
- Updating the class on the research found
- Window shopping
- Quotes, estimates, budgeting
- Finding funding
- Working with professionals to purchase the best products
- Designing, Building, Installing

LOOK AT THE LEARNING

- Leadership
- Team Work
- Hands-on
- Budgeting and estimates
- Marketing
- Native/Invasive Plant Species
- Garden/Grass Management
- Wildlife/habitat Protection
- Ecology
- Landscape Design
- Plant Identification
- Woodworking



List of competencies covered

FISHERIES AND WILDLIFE

1,2,6, 14, 5, 16, 17, 18, 19, 22, 23, 24, 31, 32, 33, 34,35, 36, 38, 39, 41, 42, 43,45, 47,48, 49, 52, 53, 54, 55, 59, 60, 62. 64. 66. 67. 104

HORTICULTURE

1,2,6,8,13,14,15,18,19,20,21,22,24,25,26,27,28,33,37,40,41,42,43,44,45,46

FLORICULTURE

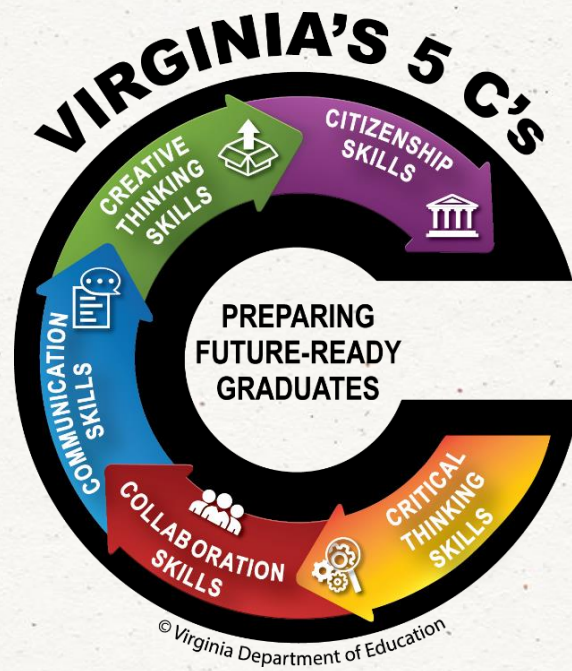
1,2,6,9,10,11,12,13,14,16,17,18,19,20,21,28,30

FLORAL DESIGN

1,2,6,9,10,11,12,13,14,16,17,18,19,20,21,28,30

APPLIED AGRICULTURE CONCEPTS

1,2,8,15,16,17,19,20,30,31,32,33,34,35,36,37,38,43,44, 45,46,47,48,49,52,53,54,55,56,57,58,59,103,104,105,109, 110,



Critical Thinking: develop a project to meet a community need or solve a community problem.

Collaboration: work with community members, peers, and mentors

Communication: write and present proposals, make requests and get permissions; publicize and present final project

Creative Thinking: publicize/advertise project; solve problems and present findings

Citizenship: understand laws and regulations; seek to improve the community; increase community awareness



HIGH-QUALITY WORK-BASED LEARNING



High-Quality Work-Based Learning (HQWBL) is comprised of school-coordinated workplace experiences that are

- related to students' career goals and/or interests**
- connected to a course, and**
- performed in partnership with local businesses and organizations.**

HIGH-QUALITY WORK-BASED LEARNING

Career Awareness



**Forrest Atwood- Western
Resource Manager, Dept. of
Conservation & Recreation,
Virginia State Parks & Recreation**



**Nursery Natives of Pulaski
County**



**Salem Stone Corporation of
Pulaski County**

HIGH-QUALITY WORK-BASED LEARNING



Career Exploration

Students trying out different career pathways while building the Sensory Trail



Land surveying and mapping



Construction aggregates



Landscape Design

HIGH-QUALITY WORK-BASED LEARNING



Career Preparation



**Community-Based Instruction- Life
Centered Education**



**Ag Communications and
Media**



**Public Speaking, Networking,
Advocating, Leading**

SAE For ALL

SAE FOR ALL
EVOLVING THE ESSENTIALS

The Three-Component Model of Agricultural Education

CLASSROOM/ LABORATORY

Contextual, inquiry-based instruction and learning through an interactive classroom and laboratory.

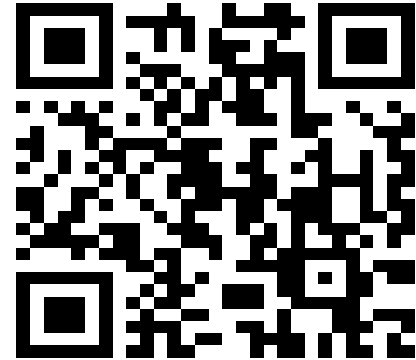
SCHOOL-BASED AGRICULTURAL EDUCATION

SAE

Experiential service and/or work-based learning through the implementation of a supervised agricultural experience program.

FFA

Premier leadership, personal growth and career success through *engagement* in FFA, National Postsecondary Agricultural Student Organization or National Young Farmer Education Association programs and activities.



AET



HIGH-QUALITY WORK- BASED LEARNING TRAINING AGREEMENT



AET Pulaski County | Evan Alger Log Out

Blue: 1
Gold: 1

Profile Journal Finances Reports

Add/Edit Journal Entry

Date:	6/20/2023	Category:	FFA Competition Activity
Activity:	<input type="text"/>		
Type:	((Please Choose))		
Level:	((Please Choose))		
Skill Areas:	<input type="button" value="Add/Explore Skill Areas"/>		
Description / Awards:	<input type="text"/> Check Spelling		
Time:	Hours <input type="text"/>	+ Minutes <input type="text"/>	

Chapter Account
Inbox
Calendar
Portfolio
Scoreboard
Sign Off

Cash/Checking: \$0
Current/Projects: \$0
Non-Current: \$0
Liabilities: \$0

Student Help
Teacher Help
AET Classroom
Ask AET a Question

**Students may earn an additional 1 credit
if they have 280 hours or more
*if the school division allows**

HOW TO IMPLEMENT ENGAGEMENT

STUDENT-LED

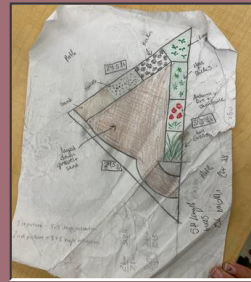
Explain the need for an educational space for all and invite Special Education teachers and peers with different abilities into the conversation. Students learn and listen to their peers.

Brainstorming as a class to solve problems will create unique and creative solutions and projects

INVESTMENT

The more a project is "owned" by a student, the more invested they will be

Do it for the Resume! Skills, Skills, and more Skills!





FUNDING THE PROJECT



FUNDING



Grants



Donations



Community

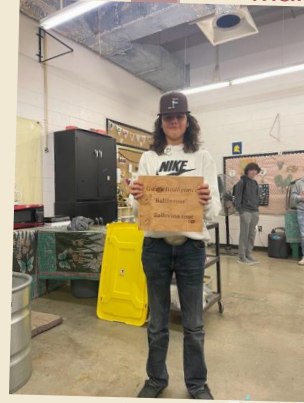


INTEGRATED INSTRUCTION

TV Media



Makers Lab



Teachers For Tomorrow

Loam-many plants thrive in this soil

- Strawberries
- Honey-Suckle
- Lettuce
- Carrots
- Beans

Silt-broken grains of quartz

- Melons
- Loving Green
- Grass
- Shrubs

Sand granular particles

- Potatoes
- Cucumber
- Lavender
- Sedum

Clay-sticks when wet, brittle when dry

- Bearded Iris
- Coneflower
- Stonecrop
- Day Lily
- Aster

THE FIVE REGIONS OF VIRGINIA

- Coastal Plain
- Piedmont
- Blue Ridge Mountains
- Valley and Ridge
- Appalachian Plateau

Robotics



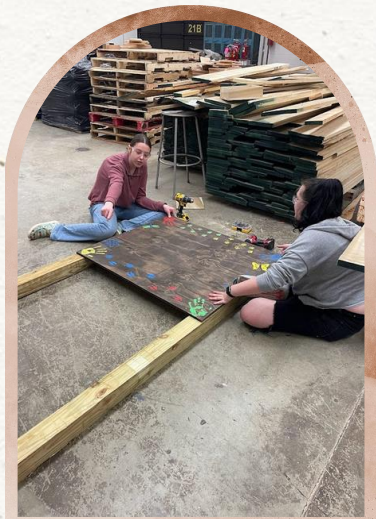
Culinary Arts



INTEGRATED INSTRUCTION PROJECTS

- Carpentry - Built the Keyosk that serves as the welcome and informational sign.
 - assisted in setting posts, attaching guide-rope, and building raised garden beds.
- TV Media- Assisting in the production of all videos and audio
- Makers Lab- Engraving QR codes into the wood for QR Code Stands and Plant ID Tags
- Welding- Built two chairs for the Sensory Trail and assisted in building the QR Code Stand
- Life-Centered Education- Assisted in the design of the trail and educated us on different abilities and impairments. Tested out every part of the trail and gave feedback.
- Teachers for Tomorrow- Soil exhibit
- Science Department- Biomes exhibit
- Art Department- Ecosystems exhibit, painting other projects to enhance the senses.
- Robotics- 3D printing elements to add to exhibits, online graphic map of the trail, braille code
- Culinary Arts- Food safety lessons, food preservation and canning of Apple Butter

Many other teachers have brought their students out to volunteer their time to spread mulch and plant plants.



ACCESSIBLE TO ALL



Path

- Wheelchair accessible
 - Causeway Path (donated by Salem Stone Corp)
- Guide-rope (funded by Virginia Outdoors Foundation)
- QR stands and brille (Co-curricular)

Education/Sensory

- Educational Exhibits with multiple interactions
- Wayside
 - QR
 - Hands-on
 - Enhancing the Senses within each designated garden space

Nature

- Raised Garden beds
- Wheelchair-accessible garden beds
 - Plant ID Signs
- Certified Pollinator Garden

HOW DID WE DO IT

Accessibility Guidebook
for Outdoor Recreation
and Trails



Student-led projects



Students and professionals from the Life-Centered Education Course volunteered their time to work with us and educate on the different abilities and what they want/need from this space
Finding solutions to the many hazards or accessibility challenges



Reaching out to professional businesses/organizations or other courses for help



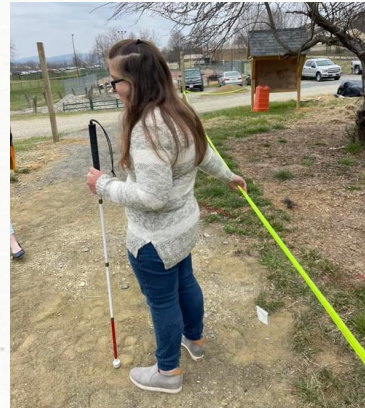
Causeway



Wheelchair Accessible Garden Bed



Guide-rope



PATHWAY

- Measuring and mapping out the area, education on how to pick a pathway for a trail from Virginia Outdoors Foundation
- Designing on paper, using a scale ruler
- Education for building pathway from Forrest Atwood Western Resource Manager, Dept. of Conservation & Recreation, Virginia State Parks. Salem Stone Donation for three styles of rock
- Setter Construction grading and laying gravel
- Tampping

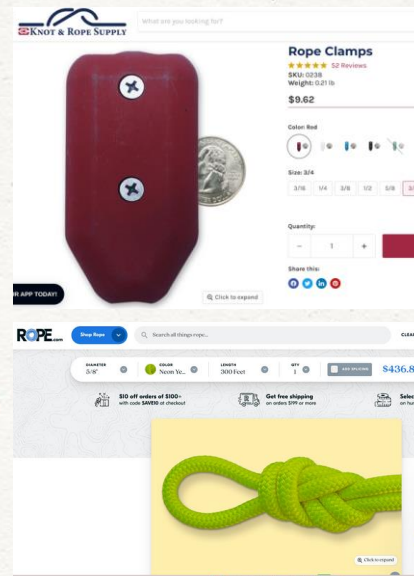


SALEM
STONE
CORP
CRUSHED
STONE



GUIDE-ROPE

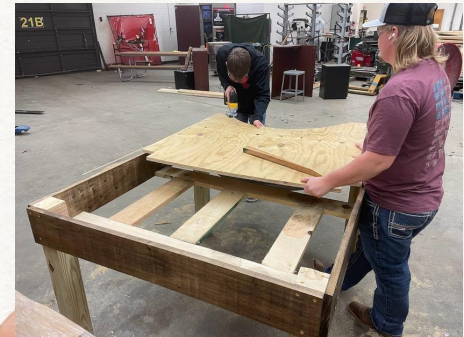
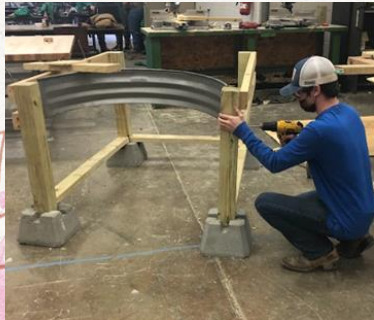
- Funded by the Virginia Outdoors Foundation Get Outdoors Grant
- Researched styles of railings and discussed which style was best for our needs.
- Students researched materials and shopped for multiple options.
- We sought help from people with visual and mobility impairments and professionals that work with people who have these different abilities.
- Students measured out and did the math to figure out how many materials were needed and then worked with businesses to start a purchase by working with a budget and creating an estimate.
- Rope.com
- Knotandrope.com
- Lowes



WHEELCHAIR-ACCESSIBLE RAISED * GARDEN BED *



- Searched for a table we could purchase- nothing!
- The students did their own research, talked to peers that are wheelchair-bound, and worked with professionals to understand that for some people, there are even more limitations to consider when designing this table.
 - ADA book
- Shopped online for products that would work, and created a budget and estimate.
- Tons of problem-solving during the creation of the first table.
- Studied the first table and made improvements.



VACKER SIGNS

POLLINATOR GARDEN

Did you know...

The flowering plants in the garden provide pollinators with food, a place to rest, nest, and even overwinter. A pollinator is an animal that fertilizes plants by moving pollen from one flower to another.

Pollinators are critical to our world. Without them, many plants and foods would not exist. In fact, pollinators are critical in the reproduction of 30% of major food crops.

Unfortunately, pollinators are under threat due to loss of habitat, invasive species, and pesticides.

Natural Allies

Flowering plants and pollinators depend on each other for survival. The pollinator gets nectar and the plant gets pollinated. A plant's color, shape, scent, and bloom time attract pollinators that are just right, making for a naturally symbiotic relationship, where both benefit.

What kinds of pollinators have you seen?

Pollinators come in all shapes and sizes – they can be birds, bees, wasps, ants, flies, mosquitoes, butterflies, moths, bats, and beetles.



Bumble Bees



Mosquitoes



Butterflies



Wasps



Moths



Hummingbirds



Honey Bees



Beetles

NATIVE PLANTS

What is a native plant?

Native plants are usually described as those that have been growing in a place for a very long time, sometimes longer than people have been there! These plants fit well into the diversity of their ecosystems, and help their communities stay strong and supported. Many animals have evolved to depend on these long standing plant neighbors, so much so that their lives depend on it. Without native plants, many insects, birds, and other creatures cannot survive in their current habitat.



Why plant natives?

In the last century, millions of acres of native ecosystems have been severely damaged or lost to development, manicured lawns and introduced plants. These introduced and cultivated plants often out-compete existing species for resources, damaging the original diversity of the ecosystem, and sometimes eliminating native plants from their habitat entirely.

Native plants provide food and shelter for insects, birds, and other wildlife. When native plants are placed in conditions that match their growing requirements, they don't need fertilizers and usually require less supplemental watering, pesticides and care.

Can you spot these plants?



Purple Coneflower



Common Milkweed



Black-eyed Susan



New England Aster



Butterfly-weed



Prairie Blazing Star



VACKERSIGN
SIGNS FOR PARKS AND TRAILS

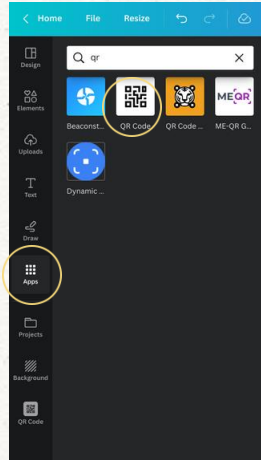
Funded by
New River Valley
Master Gardeners Association



QR CODE STAND

Provides access to information in any venue, and enables people who are differently abled to read what they cannot hear, or to hear what they cannot

see.




Native Plants QR for
Video

NATIVE PLANTS

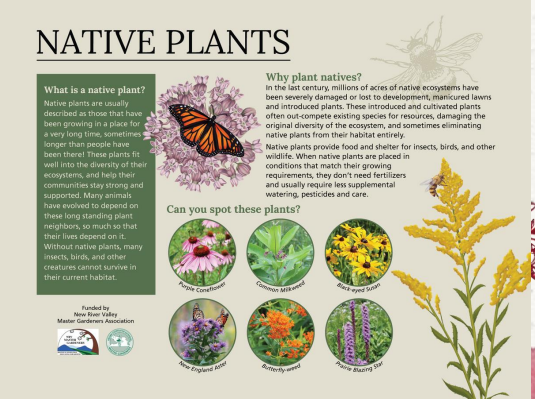
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Funded by
New River Valley
Master Gardeners Association



RIBBON CUTTING CEREMONY







Sensory Trail

Thank you

Carley Pavan-Ballard

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Pulaski County High School, Pulaski VA

Questions?



Earn Your PD Points!

Please complete the
survey at the end of this
Zoom session