Empowering Youth to Thrive: Toolkit for Teaching Health in Schools

CLINICAL SCHOLARS

A Robert Wood Johnson Foundation program

Empowering Youth to Thrive: Toolkit for Teaching Health in Schools

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ABOUT

This toolkit is designed to help initiate a program of health education in an elementary school. The enclosed information provides an opportunity for young children to thrive by learning life-long healthy behaviors and leveraging empowerment.

Audiences for this toolkit might include: Teachers (elementary and high school), parents, policymakers, state health departments, departments of education, homeschooling, 4-H, children's camps, health promotion, and public health professionals.

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Executive Summary

Empowerment through early health education puts children on the path toward wellness.

Kentucky now has the highest rate of obesity in the U.S. and one of the highest rates of youth tobacco product use. Our youth are vulnerable and are being taken advantage of by the tobacco and food industries, and these industries achieve great wealth at the expense of our youth. The key to the industry's financial success is achieving market renewal from a large base of our children and teenagers. In Kentucky, 5,700 "replacement" youth start smoking each year, and 11% of youth try smoking by age 11. Trying and regularly using addictive vaping products by youth continues to escalate. Recent data show that cigarette and smokeless tobacco companies spent more than $9 billion on advertising and promotional expenses in the U.S. Similarly, fast food restaurants spent almost $4 billion on advertising in 2017. Yet, the nutritional quality of the foods advertised remains suspect, containing more calories, saturated fat, added sugar, and/or sodium than recommended. For decades, these two industries have marketed their products to children and teens, using sophisticated promotional strategies that include "starter products," celebrity endorsements, digital marketing through social media, clever product designs and names, and an abundance of sugar- and fruit-flavored products. Disturbingly, the advertising budgets for these two industries continue to increase annually. Evidence also shows that tobacco and food industry advertisements and promotions influence the young to start using tobacco and consume fast foods. The result is a striking upsurge in tobacco use and obesity in our children and adolescents.

The insidious strategies of tobacco and fast-food industries come at the expense of Kentucky's youth and set in motion a pattern of poor health behaviors that often last decades and even generations. **Middle childhood (6-12 years of age) is a period of development and opportunity for learning about health and risky behaviors.** During middle childhood, the capacity for logical thinking and understanding of societal norms of good conduct and behavior emerges. Thus, this period serves as the foundation for sound decision-making that influences various outcomes, including education, health, well-being, and interpersonal success. Children of this age also want to fit in, and peers strongly influence their behaviors.

Our proposed strategy is to empower youth to build a solid foundation for health through relationships with their peers, teachers, high school/college students, family, and community. The strategy emphasizes the implementation of a multifaceted, evidence-based, primordial prevention program for elementary school-age children that targets healthy behaviors. Key to the success of this program is the implementation of a novel health education program involving **local high school students who serve as peer Health Ambassadors** at the elementary school. Underlying the program are **Brief, Regular, Innovative, Energetic, and Fun (BRIEF) Health Lessons** taught by teachers and the Health Ambassadors. Successful implementation steps include gathering information and getting to know the community, building trust, gaining social capital, identifying key stakeholders, and determining the community's needs toward building an infrastructure of health. The needs of the community may lead to community-identified solutions such as developing a reward program for participation; in our case, we established a Health Ambassador Scholarship Fund. The sequential progression through these steps allows the 'interested person/group' to identify and address the social determinants counteracting healthy behaviors and, through community engagement, collaboratively create a sustainable program that is appreciated and valued by all involved.

Planning

Across Kentucky, elementary-aged children in school do not receive consistent health education related to health behaviors that can prevent illnesses that are affecting Kentuckians, one of the states with the poorest health outcomes in America. Behaviors associated with primordial prevention need to be taught earlier including:

- Consuming nutritious food.
- Participating in physical and mental health activities.
- Preventing injuries and illnesses.
- Preventing tobacco use.
- Performing proper oral health hygiene.

America's Health Ranking Annual Report from 2021 ranked Kentucky 49th in dental visits, smoking, and multiple chronic conditions. Kentucky also ranks last in nutrition and physical activity, 48th in insufficient sleep, and has the highest rate of childhood obesity in the country https://stateofchildhoodobesity.org/states/.

We implemented the Teach Youth, Empower Youth, Act Collaboratively, and Meet Health Goals (T.E.A.M.) based on the Center for Disease Control and Prevention's Whole School, Whole Community, Whole Child (WSCC) Model. This approach ensures that the children and adults in children's lives (i.e., parents, teachers and school personnel, and community leaders) were engaged in the effort.

We are a diverse group of healthcare providers who have concerns for disadvantaged communities. We reached out to several social scientists and community agencies that led us to Casey County, Kentucky, where efforts to improve the community's health already had some momentum. We began meeting and listening to various stakeholders, including teachers, parents, community organizations, and children. We became known in the community, and a clear and consistent message was delivered that we wanted to help. Our approach ensured that we explored opportunities with a wide range of community agencies and facilitated the creation of authentic partnerships by building trust.

CASEY health

Coordinating Activities to Support the Empowerment of Youth Health

Project Team

Charles R. Carlson, PhD: Psychologist, Mental Health and Physical Activity Expert

Julie Plasencia, PhD, RDN, LD: Registered Dietitian Nutritionist, Nutrition Expert

Angie Grubbs, DNP, APRN: Nurse Practitioner, Injury and Illness Prevention Expert

Audrey Darville, PhD, APRN: Nurse Practitioner, Tobacco Prevention Expert

Craig S. Miller, DMD, MS: Team Lead, Dentist, Oral Health Expert

Key Skill Sets

We purposefully orchestrated a team with subject matter expertise in the areas associated with the poorest health outcomes in Kentucky: tobacco prevention, nutrition, psychology, oral health, injury and illness prevention, and physical activity. To work with schools, we also needed leaders with experience working with low-resource communities. We identified leaders with skills in community engagement who understood how to form and sustain authentic partnerships and ensure that the community's needs would drive the outcomes. Our team members also had strong collaboration skills that ensured engagement from stakeholders. Lastly, we sought out experts with sociocultural and community insights and experience in developing programming for youth and schools.

Funding

This project leveraged funding from the Clinical Scholars, a Robert Wood Johnson Foundation program, to support team members' time and efforts in coordinating, planning, and completing the activities. Funds were used to provide educational tools and resources for health activities in the elementary school, to initiate and establish the Casey Health Ambassador Endowment Fund, and incentivize teachers and parents to provide input on the BRIEF Health Lessons. We collaborated with the elementary school principal and school board superintendent to purchase an outdoor shaded classroom and a projector for the school gym (i.e., to help promote health messaging).

Additionally, we leveraged other opportunities, including:

- Awarded the Community Change Leadership Network Grant ($1,000) to support the Summer Backpack Program that provides food for students in the school who are in need.
- Awarded the University of Kentucky College of Agriculture Food and Environment Faculty Research Activity Award ($2,750) to fund graduate students' work related to the focus groups.
- Awarded a COVID-19 Rapid Response Grant ($10,000) to improve school personnel's mental health and wellness.
- Received a summer intern, M.P.H. student from the Gilling School of Public Health, the University of North Carolina, to help develop the scholarship program.
- Leveraged the strengths and relationships of our team to secure a team of *promotoras* from the University of Kentucky's Center for Clinical and Translational Sciences to culturally translate the BRIEF Health Lessons into Spanish.

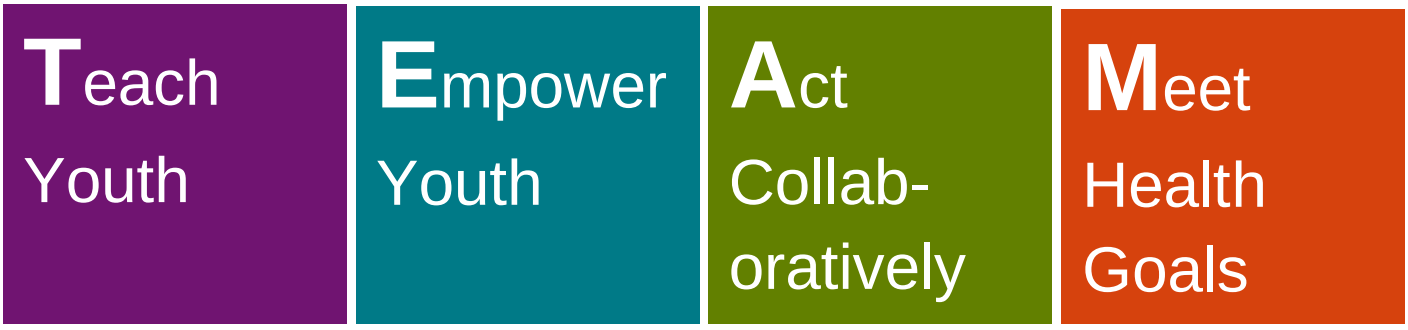
Community Partnerships

Community partners are critical to advancing health efforts in schools. We developed community partnerships with schools and used the circle of involvement, and a logic model **(Appendix A)** to discuss possibilities for potential partnerships. We started with individuals within the school and quickly learned that change in school leadership positions is common. Therefore, our team assigned one member to be the liaison with the school so that there was a single contact that would remain constant. Next, we contacted organizations bringing activities and events directly to the school. This is where the school identified the 4-H agent as a champion for health efforts in the school that were not already part of the academic curriculum. We engaged the school principal and curriculum coordinator by sharing our budget and asking them to obtain input from school personnel, especially teachers, in identifying needs and prioritizing how we spend the funds. Some examples include the purchase of 3 cubic foot refrigerators for each classroom to make fresh food available and an outdoor shade for teachers to have a sheltered space for children to spend time outside learning and playing.

Project work

To achieve our goal of promoting primordial prevention in at-risk youth, we established a four-pronged approach and several activities listed in our Timeline (**Appendix B**). We conducted focus groups to gather information and found that teaching health was primarily the responsibility of the physical education teacher. Teachers are required to teach a curriculum consistent with state-mandated educational requirements. From the focus groups we learned that asking teachers to lead health education is an added burden for the already constrained demands on the time they have available to teach. We were interested in promoting a culture of health by seeking ways to encourage, engage and enhance collaboration between teachers, parents, administrators, and students in teaching health and modeling healthy behaviors. By focusing our efforts on third-grade students, we hoped to empower youth to establish healthy behavior patterns at an earlier age than currently established programs, which focus on health-related behaviors at the fifth-grade level and up. Finally, we wanted to work toward meeting health goals for the community, specifically related to safety, oral and mental health, and reducing high levels of child obesity and youth tobacco product use. We structured our interventions using a:

Teach, **E**mpower youth, **A**ct collaboratively, and **M**eet health goals approach.



Teach Youth

Curriculum development has been a focus of our project, so we asked ourselves:

- Who are we going to teach?
- Who will present the content?
- What content are we going to deliver, based on our expertise and learner needs?
- What teaching methods can we use to keep children engaged?
- How will the content align with current state educational standards?
- How will the content be incorporated into the classroom and school?
- How will we evaluate the content and delivery?
- What interventions are most effective at promoting a culture of health?

To help us answer these questions, we reached out to various experts: Teachers, school administrators and support staff, educational experts, parents, and community stakeholders. Our interactions with these constituencies were key for ensuring the health-based curriculum was relevant and tailored to the educational setting in which it was delivered.

Empower Youth

We acknowledge that many factors influence the health and health beliefs of elementary age children. Some of these can promote healthy behaviors, but there are also counterforces which impact children, such as food and tobacco industry marketing. Third grade children, with an evolving sense of self, can be empowered to make their own choices, and overcome the negative influences they increasingly face that put them at risk for unhealthy behaviors. Key elements to engaging and empowering youth included:

- Promote a culture of health in the school by engaging in health-related activities with teachers, parents and school administration.
- Enlist and train high-school age Health Ambassadors to deliver the curriculum, which fosters relatability with the students and empowers youth leaders.
- Provide a scholarship opportunity to high school student Health Ambassadors to continue their education post-secondary school.
- Offer support for creating a healthy school environment, including outdoor classroom space and weekly health promoting activities through BRIEF Health Lessons.

Act Collaboratively

Our team understood that while we have expertise in specific clinical areas, we are not experts in elementary education or in the culture of our target community. We reached out early, attended school functions, and provided support for a teacher 'wish list,' which included water bottle filling stations. Critical to our project was establishing a trusting and collegial relationship with key stakeholders in the school and the community. Once relationships were established, we met regularly to listen to their concerns and discuss the specifics of implementing strategies to promote a culture of health at the school. We identified a 'Circle of Involvement' for our project, which included school,

district, community, state government, university and foundation personnel to reach out to at various levels of involvement. This provided us with a working document to help us identify both champions and potential collaborators across multiple levels of involvement and engagement.

Through collaborative meetings, we learned of interest in and explored engaging high school youth in presenting the health curriculum to third grade students. While some initial hesitation was expressed by teachers regarding this approach, we were able to work closely with the 4-H Youth Development/Extension Agent, who championed the project and whose personal connections facilitated teacher support.

Meet Health Goals

Lasting improvements in child health take time to measure. Our state gathers data on youth using the Kentucky Incentives for Prevention (KIP) survey biannually. Due to the pandemic, the survey was not conducted in 2020 and results released in 2022 are likely impacted by these external factors. This has limited our ability to determine if our efforts have made an impact to date, but we are hopeful that we can expand our BRIEF Health Lessons for third graders to additional settings in the near future and can continue to track KIP data over time. We recognize the steps we have taken toward promoting health beliefs, knowledge and behaviors of third grade students will need to be linked with improvements in KIP-measured data over time.

We have been able to get a snapshot of parent thinking in the development, administration and analysis of our Health Belief and Behavior Inventory. We collected preliminary data from third grade students regarding their knowledge acquisition after participating in the BRIEF Health Lessons. We have obtained follow up feedback from school personnel and the Health Ambassadors about their experience with the program, which will be used to evaluate effectiveness and make modifications as needed.

Ambassador Story

Hi! My name is Gabby Hatfield. I was selected as a health ambassador for the 2021-2022 school year. I grew up with my grandparents, and I had previously attended Walnut Hill Elementary which is the school that was selected to be the beginning of the Casey County Health Ambassadors Program. Being a health ambassador gave me the opportunity to educate third grade youth about healthy habits in their everyday life. It was such an enriching experience, and I loved seeing their warm smiles and laughs as I walked in each month. The children and I got to know each other relatively quickly and I knew this program was going to be a fun experience for both the students and I. This was an experience I will never forget, and I highly recommend it for anyone even slightly interested in ambassador work or healthcare in the general.

Evaluation and dissemination

The project evaluation began with understanding the community of Walnut Hill Elementary School. First, we developed a focus group strategy for elementary teachers in the third and fourth grades. Part of this process was preparing and obtaining approval from the University of Kentucky Institutional Review Board for the Protection of Human Participants to conduct the focus group. Because of the Covid-19 pandemic, the focus group was conducted via Zoom. One of the key findings of the focus group initiative was that teachers made it very clear that they are challenged by completing daily tasks and don't have room in their schedules to teach more subjects to their students.

Another way in which we gathered information about the community was to develop a Health Beliefs and Behaviors Inventory (HBBI) to obtain information from parents, guardians, and teachers in a structured manner (**Appendix C**). This inventory was developed using the expertise of team members and subject matter experts at the University of North Carolina. After completing the necessary materials for the University of Kentucky's Institutional Review Board (IRB) for the Protection of Human Participants and obtaining IRB approval, the HBBI was administered. The important findings from this initiative revealed that:

1. **Parents care deeply about the health of their children**
2. **There is a need to address accident prevention**
3. **The health issues of children are linked to family size and minority group membership.**

Our team also took seriously the task of evaluating the processes associated with our work together. We used weekly team meetings during the three years we worked together to ensure strong lines of communication among the team. One of the ways we used to promote shared ownership was to rotate leadership responsibilities among the team for our weekly team meetings. This ensured everyone had equal responsibilities for organizing the meetings by preparing an agenda, keeping the time limits set for the meeting, and recording minutes. A cumulative record of the minutes was posted and maintained in a shared hard drive.

We met every other week with the leadership of Walnut Hill Elementary School. To foster the best communications possible, we selected one member of our team, Dr. Julie Plasencia, to serve as the point person for these meetings. Dr. Plasencia coordinated these meetings and summarized them in recorded minutes for team members to review if they could not attend the Zoom meetings. This regular meeting with the school leadership was especially helpful for evaluating the process of our work with Walnut Hill Elementary School since, over the three years of the grant, we worked with three different principals, all of whom were very supportive of our collaboration with the school.

There were several important key outcomes from this process-oriented approach to evaluation. The team and school personnel engaged in ongoing problem-solving to address felt needs as they arose. There were honest conversations that prevented moving in directions that were not perceived as helpful for the school and encouraged devoting resources to areas with high probabilities for success. Through this process and related efforts, we built trust between the team and school personnel.

For long-term outcomes evaluation, we developed several initiatives. First, we developed a survey strategy for the Health Ambassador Scholarship program encompassing three domains: the students in the class, the Health Ambassadors themselves, and the teachers in the third-grade classrooms. Second, we engaged in several direct classroom support initiatives, including the BRIEF cards and all-school infrastructure enhancement. **We look forward to ongoing feedback from the school on these initiatives and have learned three important lessons: take time to listen and don't rush, accept small gains, and build trust and work as partners.**

Dissemination of Findings

The dissemination of our findings took multiple forms for this project. First, we have drafted a paper to be submitted for publication that describes our work with the HBBI; we are also working with a graduate student to develop a follow-on thesis with the HBBI data. Second, we prepared and delivered a Showcase presentation to our Clinical Scholars cohort, currently available online. We also completed this Clinical Scholars Toolkit for our project, which serves as a resource for guidance and implementation strategies in working with elementary school-aged children to improve the culture of health in schools and communities.

One of the key outcomes of our project is the BRIEF Health Lesson cards to provide teachers and other adults with an easily accessible set of cards with brief health messages and activities for third graders. We have invested funds to disseminate these cards to a broad audience to obtain formal feedback on their use and have worked with the University Office of Commercialization to help in their dissemination. We plan that the BRIEF Health Lesson, along with the Health Ambassador Scholarship program, will be scalable to regional and national audiences.

Lessons learned

Challenges

We knew from early on that we were outsiders in the community. None of us on the team were from Casey County or lived or worked there currently. We needed to ensure that the community felt we were there to help, not to judge or tell them what to do. We were there to listen and support. It took us time to establish relationships at the elementary school due to a high turnover rate in administration, school personnel, and the COVID-19 pandemic.

Initially, we encountered communication issues with WHE. We learned the best way to ensure good communication was to speak regularly with key personnel at the elementary school. We designated one point person from our team to be the lead contact. We also set up standing virtual meetings with the school personnel and established monthly Zoom meetings with our local champion, the 4-H Cooperative Extension Agent, who regularly visited the school. These methods were extremely beneficial in keeping communication open and ongoing.

Successes

Three large successes of the project include the Health Ambassador Program and the associated Health Ambassador Scholarship Program, as well as the development and dissemination of the BRIEF Health Lesson cards.

In our project, the local 4-H agent leads the Health Ambassador Program. The health ambassadors are high school students who apply to the program and are trained to teach elementary students health lessons (Appendix D). The Health Ambassadors are loved by the third graders and serve as mentors. After the academic year, the Health Ambassadors are eligible to apply for a Health Ambassador Scholarship. One or two scholarships are awarded to these promising ambassadors each year to help further their education.

The BRIEF Health Lessons are a deck of 37 cards 4 x 6 inches in size. Each card covers a health lesson on nutrition, oral health, mental health, illness prevention, safety, physical health, and tobacco avoidance. The BRIEF Health Lessons provide a health lesson and a brief activity. The cards reinforce the acronym:

- **B as in brief (less than 5 minutes)**
- **R as in regularly performed**
- **I as in integrated into daily learning**
- **E as in energetic**
- **F as in FUN!**

The card deck is professionally illustrated and printed for easy use in the classroom and beyond. Our team submitted the BRIEF Health Lessons to the University's Intellectual Property and Commercialization Office and we are in licensing negotiations with an international educational company for potential distribution**.**

Shifts in Thinking

Initially, we as a team envisioned implementing Health Days at the elementary school, where children would have the opportunity to engage in health-related activities such as making and tasting smoothies and a bike rodeo. We shifted these ideas when COVID-19 hit, the school nurse was assigned to other administrative duties, and we found a new community champion - the local 4-H agent. From the onset, she was enthusiastic, willing to help, and already had ties with the elementary school. She not only took on this new role but was instrumental in developing the Health Ambassador program. We helped her create the standard operating procedures, establish an application process, implement a method for selecting ambassadors, and coordinate with the high school. This innovative program empowers high school students to teach health lessons and serve as mentors.

- **Leadership is about trust and empowerment.**
- **Inroads are made once there is trust.**
- **Go slow to go fast. Assessing the regional influences is important before rushing in.**

Teacher Quote from Focus Group

I don't like to give up my instructional time and I am one of the first ones jumping up and down if they're making us do something that's taking away from my instructional time.

And so that time is precious so . . . if they came in, they (high school student health ambassadors) better be serious. They better know what they're talking about. And not waste my time or I will not be happy. (I) hope that whatever is brought in can be implemented with my lessons and, like, incorporated, because if you do get behind you get behind.

Recommendations

This kit provides tools for individuals who wish to bring an understanding of health to young children to target the learning and behaviors of third and fourth graders. It is recommended that users have a passion for this topic, interest, and time to interact with a public elementary school and be willing to build partnerships. This toolkit can be used successfully by parents providing homeschooling and counselors at camps and scout troop leaders.

Users should realize that public education may assign health and fitness teaching to the P.E. teacher and that the other teachers may feel they do not have the time, resources, and opportunity to teach health in their classrooms. We have learned that teaching health to third graders can occur in a **Brief** amount of time, it should be **Regularly** discussed, it can be **Integrated** with ongoing lessons being taught in the classroom, and it is well received by third graders when it involves an **Energetic** activity that is **Fun**. Our development and inclusion of the BRIEF Health Lessons cards in this toolkit allow any adult to implement this strategy and use a new card to present an important health concept each week throughout the year. The BRIEF Health Lessons cards covers nutrition, safety and illness prevention, mental and physical health, oral health, and tobacco avoidance, which creates new learning opportunities beyond lessons typically taught by the P.E. teacher.

The second component of this toolkit is the Health Ambassador Program. This program engages high school students, serving as health-focused mentors and presenting health lessons to third graders. To implement a Health Ambassador program, users are encouraged to review the Standard Operating Procedures in Appendix E and begin coordinating with the local high school and elementary school early in the process. Specifically, it is recommended that program leadership identify two champions, one at the high school and one at the elementary school to ensure that an application and selection process is in place several months before entering the elementary school. The selected Ambassador(s) need to be trained using the health curriculum (**see Appendix D**). Travel between schools needs to be arranged along with the necessary permission forms completed and signed. We found that sending the Ambassadors to the elementary school monthly worked well and that the 4-H Youth Development Coordinator / County Extension agent was key to the program's success. This was partly because the 4-H Youth Development Coordinator was already well known at both schools and provided health lessons, starting at the 5th-grade level.

The third component of this toolkit is the Health Ambassador Scholarship Program. There are several key steps to the success of this program. First, familiarize yourself with Standard Operating Procedures **of your organization**. Find information regarding establishing a mission statement, application process, an endowment, and policy for disseminating scholarships. Whereas we used grant funds to establish the endowment, you will need to find donors, a grant, or a gracious benefactor to establish the Scholarship Program in your community. We recommend that the endowment be established within a non-profit entity and begin with at least $5,000. Policies for obtaining and distributing the scholarship should be clearly defined. We encourage awarding 1 to 2 scholarships annually and suggest that only Health Ambassadors who are health-focused and have completed a year of training and teaching would qualify. Sustainability is an issue that you should be aware of and have processes in place to maintain the endowment so students can benefit from the program for many years.

We believe that individuals that use this toolkit as we envision will help provide important evidence-based, primordial prevention learning opportunities for elementary school-age children that target healthy behaviors and benefit high school students, teachers, and school administrators in your community.

Getting Started

If you are going to tackle this issue in your community, the FIRST thing you should do is get to know the community. Spend time visiting and listening to the key stakeholders. Allow the community to identify the key problem(s). Build trusting relationships and partnerships with key community members to tackle the problem together.

- **Get to know the community first. Do not rush in.**
- **Do not helicopter in or assume you are the hero.**
- **Do not share your plans first . . . listen instead.**
- **Do not push your fixed agenda . . . they know what they need and want.**
- **Do not make assumptions.**

Best Practices

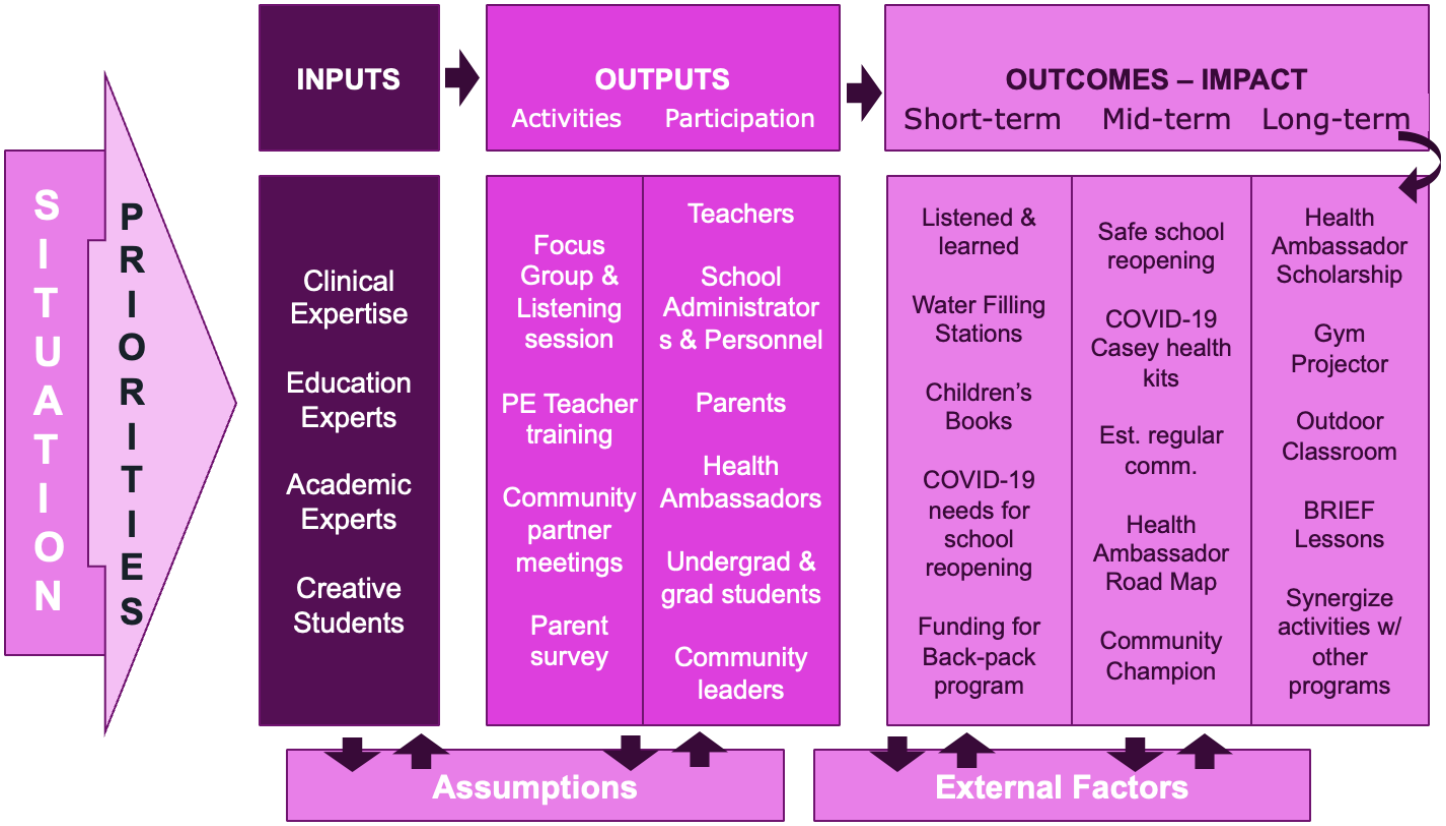
Ensure you have the support from your organization to do the work. You will need both time, expertise, and administrative support throughout the project. That there won't be more time to do more. As you work through the project you get busier and there is less time to do more. This is key when you undoubtedly encounter roadblocks. Unlike research grants, in community engaged work, your path will not be straight and roadblocks will appear. To ensure your team succeeds, surround yourself with the expertise of colleagues and leverage the expertise and strengths of your team. And remember, learning and developing is a central gesture of community-engaged work.

Our best advice is:

- **Find a key stakeholder in your target community.**
- **Listen (with purpose), absorb, evaluate, and then act.**
- **Give of yourself and enjoy helping the community.**
- **Find the right team members so you can also have fun.**

Appendices

Appendix A: Logic Model



Appendix B: Project Timeline

TIMELINE

CASEY HEALTH

THE OVERALL GOAL OF OUR PROJECT IS TO EMPOWER YOUTH TO BUILD A FOUNDATION FOR HEALTH THROUGH RELATIONSHIPS WITH THEIR PEERS, TEACHERS, HIGH SCHOOL/COLLEGE STUDENTS, FAMILY, AND COMMUNITY.

YEAR 1

Met with Elementary School Administrators (Principal, Curriculum Coordinator, and School Nurse)
Secured funding from the university for a graduate student to assist with Focus groups
Obtained input from experts at the university
Purchased water filling stations, books for children, and water bottles for all students
Secured funds from Community Change Leadership Network Equity Fund for the backpack program
Donated Oral Hygiene Supplies
Visited school to meet teachers, parents, and students, Parent Luncheon and the school Spring Fling

YEAR 1

COVID-19 PIVOT

Conducted Virtual Focus group with teachers
Created COVID-19 Fact Sheets
Obtained input on school re-opening
Involved MPH student in establishing Health Ambassador roadmap
Identified a community champion who was the 4-H agent
Purchased water bottles & items from teachers' wish list (education supplies)

YEAR 2

Established regular communications with the new school principal and the curriculum coordinator
Consulted with qualitative data expert for the analysis of focus group
Awarded COVID-19 Rapid Response Grant - School Wellness for School Personnel
Involved undergraduate students in developing CASEY Health kits for the COVID-19 Rapid Response Grant
Developed Health Belief and Behavior Index (HBBI) survey and obtained evaluation expert input
Collected HBBI from 48 parents
Implemented Health Ambassador road map developed by MPH student
Engaged with 4-H agent for input on Health Ambassador Program
Supported 4-H agent with developing Health Ambassador Program Advisory Board
Completed a listening session with teachers

YEAR 3

Implemented Health Ambassador program with three High School Health Ambassadors
Purchased Outdoor Classroom & School Gym Projector
Established Health Ambassador Scholarship Endowment
Development of BRIEF Health Lessons
Developed an evaluation survey for the Health Ambassador Program
Preparing HBBI and Focus Group Manuscript for peer-review

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Appendix C: Sample Health Belief & Behavior Index Questions

Health Belief and Behavior Index (HBBI) - 2020

For each item below, please circle the option that describes ***your child***.

My child is in the: 3rd Grade 4th Grade

My child is: Male Female Prefer not to say

My child has a learning or physical limitation? Yes No Prefer not to say

****

For each item below, please circle the option that describes ***you***.

Relationship to child: Mother Father Guardian
Grandmother Grandfather Other

Race and ethnicity: (Circle as many as apply)
American Indian/Alaska Native
Asian
Black/African American
Hispanic or Latino/a/x
Native Hawaiian or other Pacific Islander
Other
White/Caucasian
Prefer not to say

Education:
Less than completing high school
Completed 12th grade/GED
Some College
College graduate

Age: 18 to 24 years 25 to 44 years 45 to 64 years 65 or more years

Annual Income:
I have more than enough money to make ends meet
I have just enough to make ends meet
I do not have enough money to make ends meet.

For the item below, please circle the option that describes ***your family***.

Household size (number of people residing in your home full time [including yourself]):

1 2 3 4 5 6
7 8 9 10 11 12

2

Health Belief and Behavior Index (HBBI) - 2020

This section explores your beliefs about things that may affect a child's health and well-being.

Please indicate your level of agreement with the following statements.

It is important for a healthy child to:

1. Learn about health at school.

   Strongly Agree Agree Neutral Disagree Strongly Disagree

2. Brush their teeth daily.

   Strongly Agree Agree Neutral Disagree Strongly Disagree

3. Live in a smoke-free home.

   Strongly Agree Agree Neutral Disagree Strongly Disagree

4. Live in a smoke-free/vape-free home.

   Strongly Agree Agree Neutral Disagree Strongly Disagree

5. Be up to date on all their vaccines.

   Strongly Agree Agree Neutral Disagree Strongly Disagree

6. Be able to run 60 yards (about half a football field) without walking.

   Strongly Agree Agree Neutral Disagree Strongly Disagree

7. For statements 1 through 6, please select those that **"you support in your family with your children."** (Circle all that apply)

   # 1 # 2 # 3 # 4 # 5 # 6

Please tell us how much you believe that <u>a healthy child does the following:</u>

27. Willing to eat a healthy meal (that includes dairy foods, dark leafy green vegetables, or cooked beans) **instead** less healthy foods (like fast foods, pizza, hot dogs and chicken nuggets).

Often	Sometimes	Rarely	Never
(Once a day or more)	(At least once a week)	(Less than once a week)	

28. Willing to eat snack foods (like fruit and nuts) **instead of** high calorie snack foods (like potato chips and candy bars).

Often	Sometimes	Rarely	Never
(Once a day or more)	(At least once a week)	(Less than once a week)	

29. Willing to drink water **instead of** sugary beverages such (like soft drinks, fruit drinks, or sports drinks).

Often	Sometimes	Rarely	Never
(Once a day or more)	(At least once a week)	(Less than once a week)	

30. Willing to drink water **instead of** caffeinated beverages (like soft drinks, energy drinks, or coffee).

Often	Sometimes	Rarely	Never
(Once a day or more)	(At least once a week)	(Less than once a week)	

31. Willing to eat at the dinner table **rather than** in front of the T.V. or while using a mobile device?

Often	Sometimes	Rarely	Never
(Once a day or more)	(At least once a week)	(Less than once a week)	

32. Helps to prepare meals at home.

Often	Sometimes	Rarely	Never
(Once a day or more)	(At least once a week)	(Less than once a week)	

33. For statements 27 through 32, please select those that **"you support in your family with your children."** (Circle all that apply)

# 27	# 28	# 29	# 30	# 31	#32

Appendix D: Sample Health Ambassador Curriculum Lessons

University of Kentucky
College of Agriculture, Food and Environment
Cooperative Extension Service
4-H Youth Development

Casey County Health Ambassadors

Avoiding Nicotine

- Hello to everyone! My name is ?? (see if they remember)
- Ask: What did we learn about during our last meeting? What do you remember?
- Today we are going to talk about avoiding nicotine and other addictive substances.
- Question: When you hear the word addiction, what you do think of?
    - **Give them an opportunity to list several things**
    - **Say:** An addiction is an urge to do something that is hard to control or stop. If you use cigarettes, alcohol, or drugs like marijuana (weed), cocaine, and heroin, you could become addicted to them. They can really hurt you and could even kill you. (KidsHealth.org)
    - hat makes a chemical or drug addictive?
- Activity: Let's talk about our mouth. Our mouths are made up of cheeks, tongue, palate, teeth, and salivary glands. There are 20 baby teeth and 32 permanent teeth. The teeth are hard covered by enamel, *the outer coating of the teeth which is the hardest substance in the body*! There are millions of bacteria that live in our mouths. The salivary glands help made food slippery for swallowing and helps breakdown the food so our bodies can digest it.
- Demonstration: To properly brush your teeth, you should use a soft toothbrush moving it in small circles over your teeth and gums, brushing for about 2 minutes.
- Activity: One thing that can hurt our teeth is consuming sugary drinks. Let's talk about some drinks that are unhealthy for us. What are some examples of sugary drinks we should not drink a lot of?
- Demonstration: Have students measure, count, and pour amounts of sugar in cups to visualize the amount.
    - Gatorade (20oz) – 9 teaspoons
    - Monster Energy Drink – 14 teaspoons
    - Starbucks Venti White Chocolate Mocha – 18 teaspoons
    - Mountain Dew (20oz) – 19.25 teaspoons
    - McDonalds Coke (large) – 20.5 teaspoons
- Ask: How many of you have already had a sugary drink today?
- Ask: What could you substitute that drink with to be healthier?
    - Water OR milk are good choices
- Journal:
    - Write down two things you can do to keep your mouth healthy.
    - What changes are to going to make to make your mouth healthier?
- Hope you all had fun and we'll see you next time!

Casey County Health Ambassadors

Personal Safety

- Hello to everyone! Remind them of your name.
- Ask: What did we learn about during our last meeting? What do you remember?
- Today we are going to talk how we can keep our body's healthy and prevent the spread of germs.
- Question: What are germs? (Give them an opportunity to list several things)
    - Germs are tiny organisms, or living things, that can cause disease. Germs are so small and sneaky that they creep into our bodies without being noticed. In fact, germs are so tiny that you need to use a microscope to see them. When they get in our bodies, we don't know what hit us until we have symptoms (signs) that say we've been attacked!
    - There are 4 types of germs:
        - Bacteria - These tiny, one-celled creatures get nutrients from their environments in order to live. Some infections that bacteria cause include ear infections, sore throats (tonsillitis or strep throat), cavities, and pneumonia.
        - BUT not all bacteria are bad. Some bacteria are good for our bodies — they help keep things in balance. Some bacteria are also used by scientists in labs to produce medicines and vaccines.
        - Viruses - These germs need to be inside living cells to grow and reproduce. When viruses get inside people's bodies, they can spread and make people sick. Viruses cause chickenpox, measles, flu, and many other diseases.
        - Fungi - These are multi-celled (made of many cells), plant-like organisms. An example of something caused by fungi is athlete's foot, that itchy rash that people sometimes get between their toes.
        - Protozoa - These one-celled organisms love moisture and often spread diseases through water. Some protozoa cause intestinal infections that lead to diarrhea, nausea, and belly pain.
    - (https://kidshealth.org/en/kids/germs.html)
- Question: What are some ways we can prevent the spread of these germs?
    - Covering mouth with coughing
    - Cover mouth and nose when sneezing
    - Wear a face covering/mask
    - Washing hands
- Question: When should we wash our hands?
    - Every time you cough or sneeze
    - Before and after you eat
    - After you use the bathroom
    - After you touch animals and pets
    - After you play outside
    - After you visit a sick relative or friend
    - After you have been at school all day.
- Share: The proper way to wash your hands is to use warm water and soap and rub your hands together for at least 20 seconds, which is about how long it takes to sign "Happy Birthday".

Casey County Health Ambassadors

Physical and Mental Health

- Introduce yourself: Name, Age/Grade, what you are involved in or hobbies
- Share: You are going to visit their classroom once a month for the coming months to discuss ways they can stay healthy and safe (including fun activities).
- Question: What do you all enjoy doing outside?
    - Share some of your outdoor interests
    - Share: The CDC (Center for Disease Control) recommends 60 minutes of physical activities every day. This can include walking, hiking, playing sports, etc. (provide other examples)
- Activity: Jumping rope is a form of physical activity. Today we are going to learn how to jump rope.
    - Distribute jump ropes and take students outside or a proper indoor area for instruction.
    - Provide step-by-step instruction to jump rope: Start with jump rope behind you, swing over your head, jump over the rope with both feet and repeat.
    - After some time to practice see how many jumps they can get in 15 seconds; 30 seconds.
    - Hold jump ropes with two hands and return to the classroom. Jump ropes are put in caddies or somewhere where they will not be a distraction.
- After returning to the classroom…
- Distribute journals for activity later. Allow 30 seconds for students to get up and exchange their journals if they do not like the color. *Only students who want to exchange should get out of their seats.* After 30 seconds they will return to their seats with the journal. No exchanges after this as they will be writing in it later.
- Question: Sometimes we can get stressed out. What are some things that stress you out?
    - Share some of your stressors
- Share: Physical activity can be a de-stressor, but some can deep breathing and relaxation. Abdominal breathing is a great way to take deep breathes to relax.
    - Abdominal breathing is accomplished by focusing on your diaphragm, the breathing muscle in your chest.
    - Place your hand on your stomach and take a deep breath. Your stomach should expand (go out) with a deep breath in, and go back in when you breathe out.
        - If your shoulders go up, you are not doing abdominal breathing
    - Practice several breaths
- Activity: We are now going to do a full body relaxation technique.
    - Sit straight up in your chair with your feet flat on the ground and your hands, palm up, on your legs.
    - Close your eyes and focusing on your abdominal breathing
    - Think about relaxing your whole body. Start are your head. Feel your neck relax; your shoulders; down your arms to your hands; your fingers. Relaxation moving down your legs to your ankles; to your feet. Feel your full body relaxed.
    - Hopefully you all feel a little more relaxed.
- To wrap up our lesson, you are going to write in your journal a few ways you can reduce stress.
- Hope you all had fun and we'll see you next time!