

**Nature SPIN Club for Urban Youth**

Master's Project

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## Table of Contents

Abstract.....	3
Introduction.....	4
Literature Review.....	9
Method to Complete Project.....	19
Project Content .....	22
Recommendations.....	24
Refences.....	25
Appendix.....	30
Appendix #1: Nature SPIN Club!.....	30
Appendix #2: Evaluation .....	57
Appendix #3: Best Practices for Working with Urban Youth.....	64

## Abstract

Studies show that exposure to nature has significant benefits for both youth and adults in the areas of academic achievement, mental health, and physical health. But we know that youth in urban areas often do not get to experience the same opportunities that other youth get due to the environment, culture, the current stress on the urban school systems, the ability of some urban organizations' capacity to serve larger populations, and the current 4-H club structure not fitting the needs of urban youth and urban volunteers. By using the 4-H Special Interest (SPIN) club structure with a nature topic, there is a new, adaptable opportunity to support urban youths' exploration of nature while meeting the needs of the participating youth. This project presents an outline of a developed SPIN club of 4-H Youth Development based curriculum that allows youth to explore nature in a safe, structured setting with trusted adult guidance.

## **Introduction**

Youth in urban areas often do not get to experience the same opportunities that other youth get due to the environment, culture, the current stress on the urban school systems, the ability of some urban organizations' capacity to serve larger populations, and the current 4-H club structure not fitting the needs of urban youth and urban volunteers. One area that urban youth may have limited exposure to is nature (*Connecting Urban Youth to Nature - Urban Parks and Programs (U.S. National Park Service)*, 2015). There are local examples of some organizations who have created programs for adult participants to create pocket parks, pollinator gardens, and community gardens, but little to no structure on getting youth involved in the process or afterward. This paper will discuss and present a special interest (SPIN) club outline that is based on current 4-H curriculum as a possible solution in filling the gap between nature and urban youth through the 4-H Youth Development program.

## ***Populations***

The United Nations has predicted that by 2030, 60% of the world population will reside in Urban areas and 60% of that urban population will be children under the age of eighteen (*Population2030.Pdf*, 2015). In the United States of America, 80.7% of the population is currently living in an urban area (Bureau, 2021). According to the U.S. census the urban population percentage of growth was 12.1% in the last decade (Bureau, 2021). Ohio has the seventh highest urban population at 11.7 million people in the United States (Partridge et al., 2010). Although Ohio seems to have a variety of rural and urban environments, 77.9% of Ohio's population lives in urban areas (*Urban Percentage of the Population for States, Historical | Iowa Community Indicators*

*Program*, n.d.). In fact, more than 50% of Ohio's population can be found in just nine of the 88 counties: Butler, Cuyahoga, Franklin, Hamilton, Lorain, Lucas, Mahoning, Montgomery, Summit, and Stark Counties. These counties include large cities such as; Akron, Canton, Cincinnati, Cleveland, Columbus, Dayton, Toledo, and Youngstown (Partridge et al., 2010).

According to the Ohio Department of Education 55 public school districts fall within the urban category, as described by them the school districts have high to very high student poverty and average to very large student populations (*Typology of Ohio School Districts* | *Ohio Department of Education*, 2013). These 55 school districts serve 410,000 youth. These districts have an average 66% student poverty rate and an average 47% minority rate (*Typology of Ohio School Districts* | *Ohio Department of Education*, 2013). 42 of the 55 school districts are located in Cuyahoga, Franklin, Hamilton, Lucas, Mahoning, Montgomery, Summit, and Stark counties. Eight of the largest urban public school districts, also in the urban counties mentioned, have a current average dropout rate of 18.8% compared to the state average of 11% (*Ohio School Report Cards*, 2022). 74% of these urban public-school districts have an overall school grade card of a D or F, 70% have a D or F in the student growth (value-added) category, and 90% have a D or F in the category for student proficiency (Performance Index). Within the eight urban counties listed above, there are 197 charter schools that are also graded on the A-F Ohio School Report Card System. 68% of these charter schools received a D or F grade for an overall rating, 60% received D or F in 'student growth', and 92% received a D or F in 'student proficiency' (*In the Urban Big Eight, Focus on the School Not Just the District*, 2018).

## ***Youth Organizations***

There are many different youth organizations that interact with urban youth. However, many of them focus on helping with academics and how to improve test scores for the youth. Although that is an important aspect for youth, youth also need enrichment with other topics to expand their knowledge and help them better apply things to the real world. Parks, YMCAs, Boys and Girls Club, and the United Way are all examples of organizations that can be found within urban areas. The YMCA is a nonprofit organization that works to strengthen communities by working with all ages of the community's members. The Boys and Girls Club is a national organization that focuses on helping urban youth with character development, improving behaviors, and personal accomplishments, ultimately keeping them off the streets and out of trouble. The United Way is a privately funded charity that serves over 48 million people of all ages by working with community partners. These organizations generally have a structured after school schedule for youth that allows for help on homework, snack/dinner, and then some type of enrichment activity. Overall, they work to create a safe environment for learning and belonging along with helping youth build relationships with trusted and caring adults. In the Mahoning Valley, many of the enrichment activities are provided by other outside programs, such as 4-H Youth Development, the public library system, OH WOW! the Roger and Gloria Jones Children's Center for Science and Technology, and many other organizations.

4-H is a youth development organization that is designed to help empower youth. Almost six million young people, through 100 public universities' Cooperative Extension branches, currently participate in the National 4-H program (*What Is 4-H?*, n.d.).

4-H has over 200 projects available, ranging from coding to natural resources to mindfulness and to financial responsibility. Exposure to these programs could potentially lead to youth finding their future career path (*About Ohio 4-H | Ohio 4-H Youth Development*, n.d.). 4-H offers youth a variety of ways to engage with the 4-H curriculum including project books, school enrichment, community clubs, and Special Interest (SPIN) clubs. Project books are self-guided learning tools that youth use by following the activities laid out in each section. School enrichment programs are usually one-day events led by Extension professionals or trained teachers. They can be in-school or afterschool and focus on a topic for a group of students to move through activities together. Community clubs, led by trained volunteers, offer support to youth as they work through their projects individually, and sometimes offer a group project along with individual projects.

The 4-H Special Interest (SPIN) clubs are relatively new to 4-H. The idea behind SPIN clubs and the curriculum used in SPIN clubs are not new, but the structure of the SPIN club models and policies are relatively new. This change was to provide opportunities to youth that weren't traditional 4-H club members. They allow any size of groups to meet at any time while focusing on one topic, where community clubs allow each individual member to focus on their own projects. The flexibility and focus of these clubs make this opportunity accessible to a new group of participants and volunteers (MacArthur et al., 2016). The clubs are short term and allow youth to experience a topic, but not feel overwhelmed or bored with the topic. The youth then have the power to truly follow their interest and go further if the topic resonates with them.

## ***Gap for Urban Youth and 4-H***

In Ohio, there is a statewide goal to have 4-H reach one of every five youth by the year 2030. To reach this goal, Ohio 4-H is going to have to look for new audiences, new ways to engage youth, and focus on topics that youth are interested in. These youth can be reached through community clubs, SPIN clubs, or school enrichment programs. 4-H SPIN clubs are an important way to help bridge the gap between new urban audiences and the opportunities that 4-H has to offer. 4-H SPIN clubs allow any size of groups to meet at any time while focusing on one topic. The flexibility and focus of these clubs make this opportunity accessible to a new group of participants.

According to a National Recreation and Parks Association study, people, including youth, are becoming disconnected with the natural world due to technology, overscheduling, and accessibility (*Connecting Urban Youth to Nature - Urban Parks and Programs* (U.S. National Park Service), 2015). The National Recreation and Park Association completed a survey to explore the challenges that the urban parks and recreation agencies face when trying to make programs more effective and available. These agencies attempt to bridge the gap between urban youth and nature. The first key finding of this research was that working with local schools is effective. Local schools can offer specialized programming to enrich the content youth are already learning in school along with making schoolyards greener to help youth's relationship with nature. Due to the number of items competing for youth's attention, some parks have decided to embrace parts of the competition, especially technology. Some urban parks created apps to let people engage with citizen science, play outdoor games through apps, and help them identify various parts of nature. The parks also installed



charging stations attached to benches and other rest stops (*Connecting Urban Youth to Nature - Urban Parks and Programs* (U.S. National Park Service), 2015). However, upon observation it appears that parks are understaffed or not trained to create or execute the programming and curriculum.

This provides an opportunity to Ohio 4-H to use their curriculum to help partner with the parks and school districts by offering curriculum and personnel. This mutually beneficial partnership allows 4-H to reach a new audience of youth with 4-H curriculum, plus, it allows urban youth to better connect with the nature around them and understand the true importance of having a relationship with nature. 4-H SPIN clubs are the key to helping bridge the gap between urban youths' relationship with nature and meeting the Ohio 4-H goal of one in five by 2030.

## **Literature Review**

### ***Urban Youth in Nature***

There is an increase in concern that children from economically disadvantaged families are inhabitants of urban areas that have limited access to greenspace which can negatively affect both youth and adults (Bates et al., 2018). Bates argues that the decrease in interaction between youth and nature significantly affects academic achievement, mental health, and physical health in youth. Youth need more accessibility to nature and green spaces to help them develop into productive adults in the future (Heinitz, 2018). Exposing youth to green spaces is a precursor of creating a positive relationship with nature (Heinitz, 2018). Heinitz (2018) alludes that increasing the interaction between urban youth and the environment increases their

academic achievement. The research above indicates that nature and green spaces contribute to sustaining physical activity and mental stability of young people.

Studies have shown that greenspace and nature access benefit mental health for youth in urban areas (Birch et al., 2020). The intervention of youth spending time in nature appears to be an effective intervention for promoting positive changes in mental health (Zamora et al., 2021). Potential factors of the positive interaction could be less noise, fewer air pollutants, more nature sounds, and overall, less annoyance. At the end of one of the studies, the participating youth reported that nature did help to relieve their stress or anxiety and helped them feel more peaceful and calmer (Zamora et al., 2021).

Loyola University in Chicago studied a broader effect that green schoolyards had on low-income urban neighborhoods. They surveyed adults after these green schoolyards were implemented regarding changes in safety, injuries, teasing/bullying, and gang-related activity. Observations of the youth in the green schoolyards focused on physical activity and social interaction with peers. The study found that the schoolyard was now perceived safer with fewer injuries and less teasing, bullying, and gang-activity. Observations revealed that there was a slight increase in physical activity in all youth and a large increase in youth kindergarten through fourth grade, along with an increase in positive interactions of youth and their peers (Bates et al., 2018).

The *Relate Expedition* is a weeklong wilderness program where urban teens are provided with one-on-one caring adult mentors and outdoor experiential learning opportunities. These opportunities include backpacking, hiking, canoeing, camping, and activities that help improve teamwork, communication, and problem-solving skills. Quantitative data was collected from the youth pre, post, and 90 days post using the

Search Institute's 40 Developmental Assets Profile. This measures support, empowerment, boundaries, expectations, time management, commitment to learning, positive values, social competencies, and positive identity. The data shows the *Relate Expedition* had significant positive impacts in all areas with additional improvements still being seen 90 days post assessment. The largest improvements could be seen in positive identity, time management, and commitment to learning (Norton & Watt, 2014).

Adventure Central is a partnership between the Five Rivers MetroParks (an urban park district in Dayton, Ohio) and Ohio State University Extension 4-H Youth Development. The partnership created an afterschool program that assists with homework, conducts a variety of out-of-school educational programs, works to strengthen values, develop long-term positive relationships, and build life skills in the hopes of creating caring, capable, and contributing citizens (*Adventure Central*, n.d.). In a study on youth opportunities and youths' perspectives in Urban 4-H Youth Development Programs, Adventure Central found that the opportunities led to new doors including future career paths, learning new skills, increasing youths' confidence, keeping them out of trouble, and overall allowed youth to have fun. They also found that youth were able to transfer their learning from Adventure Central to other aspects of their lives and believed that their experiences would have a positive impact on their future plans (Ferrari et al., 2009).

### ***Natural Resource Opportunities for Urban Youth***

Many distinct groups have developed programs to help reconnect youth with nature. The National Recreation and Park Association had many different opportunities that have helped to reconnect youth with nature. The *Wildlife Explorer* is a new nature

discovery program designed to help children ages five-to ten-years old discover nature through hands-on learning. To help expand the use of this program, grants were made available to encourage and support nature spaces for youth (*New ‘Wildlife Explorers’ Program Connects Urban Youth with Nature | National Recreation and Park Association*, 2016). *Canoemobile* is a program that helps meet youth where they are in both location and content level. This program is designed to be a complete cycle by engaging community members, creating the environment, and generating outdoor-related jobs (*Connecting Urban Youth to Nature - Urban Parks and Programs (U.S. National Park Service)*, 2015).

Some other opportunities that have been created are *Green Works* and *Project Wild*. *Green Works* helps provide environmental programming to students to help them prepare for their future. *Green Works* does this through their *Outdoor Nature Discover Program*. Students that participate in the program are supported by *Green Works* to find internships to help better prepare youth for the workforce (“Green Works Connects Urban Youth to Nature through Education and Job Training,” 2020). *Project Wild* is not a program for youth but an opportunity for the trusted adults to become trained in order to teach youth about wildlife-based conservation and environmental education. This program has activities that make learning fun for youth while still following next gen science standards. There are four editions to their of curriculum including Project Wild, Aquatic Wild, Flying Wild, and Growing Up Wild (*Project WILD*, n.d.).

Youth Outdoors, which started in 1999, is another partnership between Ohio State University Extension 4-H Youth Development and a park district, the Cleveland Metroparks. Youth Outdoors created an ‘adventure club model.’ This adventure club

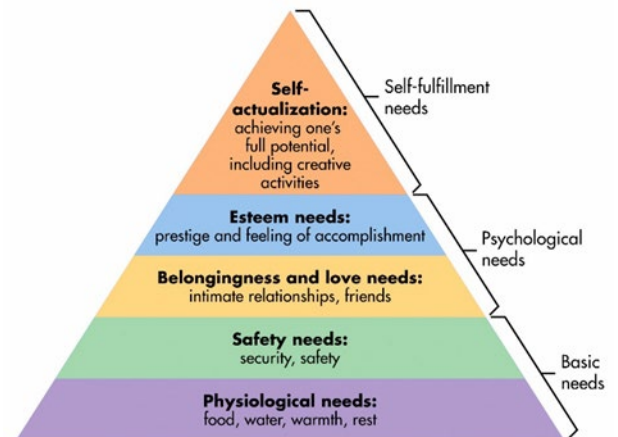
was short term, served small groups that had about 12 youth and 2 caring adults that would complete monthly outings based on topics such as hiking, fishing, camping, cross-country skiing, biking, and more. Youth Outdoors' program helped to address the needs of inner-city youth, youth-serving organizations, and the unequal access to the outdoors ("Celebrating 20 Years of Youth Outdoors," 2019). Unfortunately, due to COVID-19 and the lockdown the Youth Outdoors partnership has been dissolved.

However, many of these programs mentioned above are only located in certain areas, are meant for youth to do on an individual basis or require prior training for the group leader. Through my experience I have noticed the content and curriculum of the programs are extremely helpful, but logistically it does not always work in an urban setting, where youth need more structure, guidance, and supervision of a trusted adult. This is what has led to the creation of the Nature SPIN Club, an easy to use simple and flexible outline that can be used by professionals, volunteers, and teachers while still having the content base on proven curriculum and backed by scientifically proven theory.

### ***Maslow's Hierarchy of Needs***

The structure needed to help youth explore nature must create safe environments, healthy relationships with trusted adults, and meet all the needs of youth in order for them to learn and grow (McLeod, 2018). The first theory I will discuss that helps build this structure is Maslow's Hierarchy of Needs. The hierarchy was developed by Abraham Maslow in 1943. He determined that individuals were only able to achieve growth if and only if the deficiency in needs were met. When deficiency happens an individual's motivation is focused on meeting the need of that deficiency. Maslow does

admit that the deficiency does not have to be 100% met before motivation and focus are transferred to the next need (Mcleod, 2018). Maslow originally studied monkeys before transitioning the ideas learned from their behaviors to human behaviors. With this research Maslow concluded that physiological needs must be met before safety needs, safety needs met before belongingness needs, belongingness needs met before esteem needs, and esteem needs met before self-actualization can occur (Poston, 2009). This commonly illustrated by the pyramid shown here.



The foundational physiological needs include food, water, warmth, and rest. The second tier of safety needs include security and safety. Belongingness includes love, intimate relationships, and friends. Esteem needs include prestige and feeling of accomplishment. The tip of the pyramid is self-actualization which is when the individual is able to achieve their full potential. Maslow's hierarchy of needs sets a great foundation for the safe environment, healthy relationships, and basic needs being met, but there is still a structured need for youth to build knowledge and have meaningful experiences after their needs are met. The experiential learning model and the 4-H Thriving Model combined offer this structure to the educational experience for youth while maintaining the foundation of a safe environment, healthy relation, and meeting youths' needs.

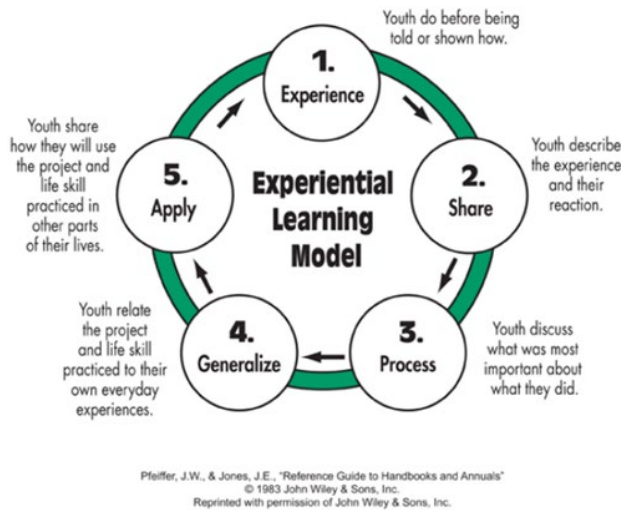
## **4-H Youth Development**

4-H Youth Development is a youth outreach program that creates positive learning experiences, positive relationships, safe learning environments and opportunities for youth to take positive risks (*4-H and Positive Youth Development*, n.d.). Ohio 4-H contains eight essential elements that are in four different components.

1. Belonging, which includes the following essential elements: a positive relationship with a caring adult, an inclusive environment, a safe emotional and physical environment (*About Ohio 4-H | Ohio 4-H Youth Development*, n.d.).
2. Mastery, including the essential elements of opportunity for mastery and engagement in learning (*About Ohio 4-H | Ohio 4-H Youth Development*, n.d.).
3. Independence, which includes the opportunity to see oneself as an active participant in the future and opportunity for self-determination as essential elements (*About Ohio 4-H | Ohio 4-H Youth Development*, n.d.).
4. Generosity, which includes just one essential element, the opportunity to value and practice service to others (*About Ohio 4-H | Ohio 4-H Youth Development*, n.d.).

4-H is designed to engage youth in intentional, experiential, and inquiry-based learning (*4-H and Positive Youth Development*, n.d.). 4-H has adapted to the experiential learning theory that was originally developed by David Kolb in 1948. Kolb pulled influence from other theorists such as John Dewey, Kurt Lewin, and Jean Piaget. The main basis for the theory was “learning by doing” which leads to the heavily

involved hands-on learning found in 4-H today (*Experiential Learning Theory*, 2020).



The 4-H experiential learning model consists of five steps; experience, share, process, generalize, and apply. This model helps youth the most when youth reflect critically on their experiences, differentiate the valuable information themselves, and can use the knowledge in real-life

situations (Martz et al., 2009).

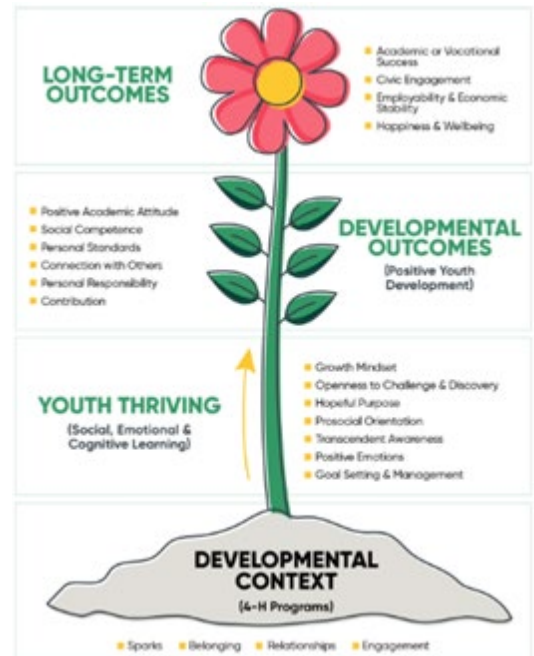
- Experience is the space where youth try on their own before they are told how to complete their project. This gives youth the opportunity for discovery, innovative ideas, and experiments (Martz et al., 2009).
- Share is the discussion of the experience that youth had in the experience phase. Youth should reflect on how they felt, (Martz et al., 2009.).
- Process is to reflect on mistakes that were made, solutions that were developed, why they made certain choices, and how they would do it differently in the future (Martz et al., 2009).
- Generalize is to identify how to use the newfound knowledge in the real-world. Explore the new skills gained and how they might be used in the future (Martz et al., 2009)



- Apply is what youth should do with the knowledge and skills they now possess.

These skills and knowledge should be able to cross subject matter (Martz et al., 2009)

The 4-H Thriving Model helps to illustrate the theory of change for positive youth development through 4-H. The model connects high quality programming with the process of positive youth development to show the promotion of thriving youth (*About the 4-H Thriving Model – 4-H PLWG Standing Committee on Positive Youth Development*, n.d.). The model starts at the ground with 4-H programs that adhered to the aforementioned core components and essential elements. It then adds in social, emotional, and cognitive learning theory pieces that help youth thrive. Next comes the positive youth development outcomes for youth. Finally, everything leads to the long-term outcomes of youth success, engagement, happiness and wellbeing, and stability (*About the 4-H Thriving Model – 4-H PLWG Standing Committee on Positive Youth Development*, n.d.). 4-H SPIN clubs, although relatively new, utilize core 4-H curriculum and this model, with the flexibility needed to serve urban youth now and into the future.



The combination of the eight essential elements, the experiential learning model, and 4-H thriving model create the perfect blend for positive youth development. The experiential learning model helped to ensure that the developmental context being taught is created to help youth learn while the eight essential elements help youth begin

to thrive in their learning, both of which are foundational parts of the 4-H Thriving Model. They work together to create safe environments that promote learning in positive ways. With the help of trained volunteers and Extension professionals, youth are about to develop healthy positive relationships with both adults and their peers. This combination also provides youth structured lessons to expand their knowledge while still allowing the freedom to take positive risks in a safe environment.

### ***SPIN Clubs***

An Ohio 4-H SPIN club is a short-termed club that allows the group of youth to focus on one topic collectively, compared to community clubs that allow youth to focus on their own projects individually. SPIN clubs get their name from taking the first two letters for “special interest.” Other states, such as Utah, call them Discover clubs, but they are the same type of structured activity (Utah State University, 2022). According to a study conducted by three different universities comparing SPIN clubs to traditional 4-H clubs, youth are more likely to attend SPIN club meetings because they are focused on topics that youth are already interested in (*Extension | What Is a 4-H SPIN Club?*, 2022). These members can be anywhere from the age of five to eighteen as of January 1<sup>st</sup> of the current year. The members that complete SPIN Club are considered bona fide 4-H members (*Why SPIN Clubs?*, n.d.).

Although the structures of these special interest clubs can vary from state to state, there are a few structural elements that they all have in common. For SPIN clubs there must be trained volunteers or 4-H professionals to be able to maintain care, custody, and control of the club. Within these SPIN clubs, there is not a need for club officers due to the short-term nature. After the leader is established, there must be a

location, dates, and curriculum selected in order for the club to be promoted to youth. The club should have clear objectives or goals that the participants can realistically reach. Regulations for the amount of contact hours or sessions and number of youths are dependent on the state that the club is taking place in. In West Virginia, the clubs are expected to run for four to six weeks, but the Cooperative Extension does allow flexibility for the SPIN clubs (*Extension | What Is a 4-H SPIN Club?*, 2022). In Michigan, the clubs meet for one hour at a time for a total of six to eight hours within a two-to-three-month period (*4-H SPIN Clubs*, n.d.).

In Ohio, SPIN clubs need to have five youth from three different families, and it must meet a minimum of six hours (*Ohio SPIN Club Charter Final.Pdf*, 2019). According to a survey of all Ohio 4-H professionals, Ohio had 81 SPIN clubs that took place in forty-two counties. Twelve of these SPIN clubs have been repeated within the county that they initially took place. These SPIN clubs had many different leaders; 42% of the SPIN clubs were led by 4-H Professionals, 35% were led by trained 4-H volunteers, and 23% were led by a combination of both 4-H professionals and 4-H trained volunteers. The topic of these SPIN clubs included healthy living, Cloverbud (ages five to eight years old), photography, sewing, coding, cooking, and natural resources.

### **Method to Complete Project**

The project was completed in 2022 and 2023. The main objective was to create a ready to go outline for 4-H professionals or trained volunteers based on 4-H projects, research, and personal experience. This program will not have its own pilot testing done during the timeframe but will have a one-year evaluation done to collect feedback from

anyone that implemented the program or used the best practice sheet to keep them both relevant.

January through August of 2022, I worked to become comfortable with SPIN clubs in general and become comfortable teaching urban and underserved youth audiences, through personal experience and contact hours. By working with after school groups in Campbell City (January 12 through February 16, 2022), Sebring Local School District (June 14, 2022, July 14, 2022, August 9, 2022), and Youngstown Community School (November 16, 2022, through March 6, 2023), pilot SPIN clubs were tested. All of these schools enroll underserved youth and two of the three are considered urban districts. The pilot SPIN clubs covered the topics of nature, rocketry, STEAM, financial literacy, future readiness, and coding. These programs covered youth from 6 years old (first grade) to 18 years old (senior), but not all at one time. These SPIN clubs were completed in different time increments, but still met the Ohio 4-H requirement of six hours.

The pilot programs showed that the SPIN clubs structure appears to be most effective with youth in grades 3 through 6 in the urban and underserved communities in Mahoning County. These youth showed the most interest, open mindedness, and commitment to the SPIN club topics and activities. One-hour for six weeks works well to keep youths' attention and interest, but there must be time to review and reflect on the previous session to get youth into the right environment and headspace for continued learning. The other key aspect I learned is to be flexible with the lesson. Youth will always ask questions and have the potential to redirect the lesson from the plan. By following the interest of the youth, you may not complete the written lesson, but you are

still allowing them to explore and understand while being an active part of their own learning. If there was important information that wasn't gone through during that lesson, it can be moved to the next lesson.

August of 2022, I pulled resources of current 4-H project books and curriculum that can be combined to develop the Nature SPIN Club. 4-H projects books were purchased from Shop 4-H and Ohio State University Publications for use in finding activities. The books used are *Why Trees Matter*, *Teaming with Insects Level 1*, *Insect Adventures 1*, *Insect Adventures 3*, *Ohio Birds*, *Exploring Your Environment*, and *Exploring the Outdoors*. There were many other options that could have been included, however the decision was made to stick with introductory level content and focus on a variety of different aspects about Nature. There are opportunities for this outline to be adapted and expanded.

In October of 2022, my focus was to develop a Qualtrics to take an inventory of SPIN clubs taking place across the State of Ohio. The survey was sent on November 21, 2022, to current 4-H professionals at both the state and county level, including program assistants, program coordinators, and educators. A reminder email was sent out on November 30, 2022, with a closing deadline of December 2, 2022. The survey started by stating the definition of SPIN clubs in Ohio. The demographic information of county professionals was collected. Lastly, the Qualtrics collected the title of the SPIN club, the number of times the SPIN club has been completed, and who led the SPIN club.

The survey was then sent out to all 164 4-H professionals across the state of Ohio to voluntarily complete for their own county. 42 of 88 counties (48% of counties)

responded accounting for 74 4-H professionals (45% of Ohio 4-H professionals). It should be noted that not all 88 counties or all 4-H professionals in Ohio have active SPIN clubs, which could account for the number of responses. There were no similarities found between the number of 4-H professionals in county to the amount of SPIN clubs in the reporting counties. There were a reported 81 SPIN clubs that had taken place or are currently taking place in Ohio with 42% of these being led by 4-H professionals, 34.57% being led by volunteers, and 23.45% being led by a combination of the two. Only 14.81% of the 81 SPIN clubs had been conducted more than once.

In November of 2022, I researched urban youth and urban youth organizations to develop a Best Practices Tip Sheet. The Best Practices Tip Sheet was developed from personal experience and this research. This tip sheet helps to bring basic needs to the front for professionals that have not worked with urban populations or would like to remind themselves of what it is like in urban areas. Many times, these basic needs are assumed to be taken care of during the traditional 4-H programing. The tip sheet is not all inclusive and could be subject to change based on the situation.

In December of 2022, information was finalized for Nature SPIN Club and Urban Youth Best Practices Tip Sheet. The Nature SPIN Club is being reviewed by other 4-H professionals to ensure that the activities are correctly taken from the 4-H curriculum and are easy to understand. Other education professionals are looking at the outline to ensure that activities are at the correct learning levels and that the outline is understandable for a non-4-H professional.

January through April of 2023, I will be finalizing all of the details of the project and filling in any gaps that may be left in the research. I will be creating an overall

evaluation plan for Nature SPIN Club that will collect summative data from all instructors across the state of Ohio. The Evaluation plan can be found in appendix number two.

### **Project Content**

Based on my research, literature review, and pilot testing, I believe SPIN clubs can be a great benefit to Urban 4-H. They offer an accessible opportunity for urban youth to participate in 4-H. SPIN clubs also provide the flexibility that the volunteers, 4-H professionals, and participants need to help youth truly discover and follow their passions. There is an example of a successful partnership in New Jersey with Extension and Urban Latino Communities using the SPIN club method. They have been able to offer in-school enrichment, summer camps, and SPIN clubs to these youth through this partnership (Bovitz et al., 2018).

The SPIN club Outline for the Nature SPIN Club can be found in appendix number one. This outline is designed to be used by both 4-H professionals and trained volunteers. The outline should be easy to understand and follow, as well as ensuring the leaders are prepared. The content within the outline comes from a number of publications already produced by Ohio State University Extension. These publications include *Why Trees Matter*, *Teaming with Insects Level 1*, *Insect Adventure 1*, *Insect Adventures 3*, *Ohio Birds*, *Exploring Your Environment*, and *Exploring the Outdoors*, all of which are current 4-H project books. The structure of the outline is based on *A Model for Curriculum Design* by Dr. Bob Horton and others (4-H 897 *Developing Experientially Based 4-H Curriculum Materials.Pdf*, 1999). This model is a popular road map for most 4-H based programs.

The Urban 4-H Best Practices Tip Sheet can be found in appendix number three. This tip sheet was developed to help both 4-H professionals and volunteers better understand how to work with urban youth populations. These populations have certain obstacles that leaders may not have planned or dealt with before, and they need resources to help overcome the deficit. The best practices were mainly developed according to Maslow's Hierarchy of Needs and my personal experiences, which will take the program planner back to the very basics of planning a program (Poston, 2009). The basics are oftentimes forgotten or assumed to be taken care of when working with community club members, as most youth are being driven, picked up, and remained accompanied by an adult guardian; that is often not the case when working with urban youth.

### **Recommendations**

The Nature SPIN Club is meant to take place in nature while learning about nature. It covers the basics of trees, insects, and birds but there is much more to nature. The following books would be recommended if there is a desire to expand the content and activities of the Nature SPIN Club: *Exploring Your Environment Facilitator Guide*, *Geology: Can You Dig it?*, *Honeybee Challenge*, *Insect Adventures 2*, *Insect Collection Guide*, *Teaming with Insects Level 2*, *Teaming with Insects Level 3*, and *Teaming with Insects Facilitator's Guide*. A follow up SPIN club could easily be done following the Nature SPIN Club to take a deeper look into whichever topic the youth most enjoyed. This helps them continue to grow their relationship with nature, expand their knowledge, and be actively engaged in the 4-H program. A culminating experience such as developing a pocket park in an urban area, creating bird houses for existing parks, or



even creating a pollinator patch would expand on youths' experience and introduce new life skills.

SPIN clubs may be newer in name and structure; however, the theory, purpose, and curriculum are rooted in the 4-H practices that have been happening since 1902, when 4-H Youth Development began. Project books are a great place to start looking for curriculum for a SPIN club; you can follow one book all the way through, or you can follow the Nature SPIN Club Outline and piece different books together to cover more of a variety on a certain topic. SPIN clubs should be fun, engaging, and follow a topic that the youth are interested in. The timeline of a SPIN club can vary, there is only a minimum of six-hour requirement in Ohio, so be flexible to best fit the youths' attention span, the site, and the content. Overall, there are countless ways to have SPIN clubs work in any 4-H program.

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## **Appendix**

### ***Appendix #1***

#### **Nature SPIN Club!**

Introduction: These lessons are an interactive way for students to get outside and learn about their environment. Each session requires students to be observing and learning through hands-on activities that directly places them with the topic they are exploring. If preparation is required for a session, it will be stated, otherwise all worksheets will be provided. See the activity section for any modifications that can be applied to make it more challenging for advanced students. This is a flexible framework, which can be altered depending on the group of students. The goal is to get all students involved in learning through exploration, and to be working within their own learning levels. Having the project books listed below may help provide more information if needed.

Intended Audience: Youth 4<sup>th</sup> - 6<sup>th</sup> Grade.

Time: 6 sessions, each 1 hour. Recommended 1 session per week.

#### **SPIN Club Outcomes**

Short-Term:

- By the end of the SPIN club, 75% youth will have spent at least one hour in nature each week measured by attendance and participation in the SPIN club.
- By the end of the SPIN club, 75% youth will have more knowledge on the function of tree parts measured by the Parts of a Tree Worksheet.
- By the end of the SPIN club, 75% youth should have a better understanding of insects' jobs measured by the new insect they create.

- By the end of the SPIN club, 60% youth will be able to identify three species of birds demonstrated on the Bird Search.

#### Mid -Term:

- Six months post-SPIN club, 50% youth choose to spend at least one hour a day outdoors measured through surveys and observations.
- One year post SPIN club, 50% of the participants are actively engaged in a nature-based organization (Jr. OCVNs, Audubon Society, Little Wildlife Explores, local park programs, etc.) measured through membership lists.

#### Long-Term:

- Youth will have a stronger, healthier relationship with nature leading to more emphasis on the importance of nature in urban areas, better maintenance of natural spaces in urban areas, and more opportunities for urban populations to be in nature.

#### Evaluation

There will be evaluation information attached at the end of the SPIN club curriculum. Please follow the instructions to upload student work and attendance to the drop box via the link in the evaluation information. Upon the conclusion of the SPIN club there is a short survey for the lead instructor to complete. This data will be analyzed yearly and used to improve this SPIN club along with the Ohio 4-H SPIN club structure in general. Thank you in advance for completing the data collection tools to the best of your ability.

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## Session 1: Parts of a Tree

### Overview

Start the lesson by asking students what they need to survive. Students will jot down their ideas and have a moment to share their thoughts. Humans and trees are remarkably similar in the aspect of the different components that need to survive; Sun, Air, Water, Food, Space, Protection (shelter). However, trees receive and process these differently than humans. This lesson will explore the parts of the trees, the parts' functions, and the importance of these functions to the tree.

### Skill

Identify and observe four parts of a tree.

### Background

Instructor will introduce the topic of trees by expanding on their ideas and saying that trees also need sun, air, water, food, space, strength, and protection to survive.

- Heartwood: Strength and support of the tree, much like skeletons are for the human body. Made up of dense, dead wood.
- Leaves: Food factories of a tree. Make food through photosynthesis: Use carbon dioxide from the air, water absorbed from the soil, and sunlight.
- Bark: Like the way the skin protects us from injury, this protects the tree from injury such as weather, insects, disease, and fire. Can be rough and hard, or thin or spongy.
- Roots: Anchor for the tree and what keeps it in place. Another primary role is to absorb water and nutrients from the ground that the tree needs to survive.

- Cambium: Thin layer of living, growing tissue that makes new cells that become phloem or xylem. Repairs damaged parts of the tree, much like our bodies heal cuts or scrapes.
- Xylem: carries water and nutrients from the roots to the leaves. Old xylem cells turn into heartwood.
- Phloem: also known as inner bark. Transports food made by the leaves throughout the rest of the tree.

If more information on this topic is needed, please visit *Why Trees Matter: Build a Tree* on page 8 through 11.

### Materials and Preparation

Students will need: Pencil, tree diagram worksheet, coloring utensils, clipboards.

Instructor will need to prep notecards prior to the lesson. Within an eight-notecard set four note cards will have one of the four parts of a tree being studied in this lesson. This includes heartwood, leaves, bark, and roots. On four other notes cards will be a brief description of these four parts. The number of eight note card sets will depend on the group size. To increase difficulty: Construct lesson using 7 of the building blocks of a tree making a 14-notecard set. This includes heartwood, cambium, leaves, bark, roots, xylem, and phloem. Adjust the diagram with arrows as needed.

### Activity

Students should be outside, in front of a tree to begin:

- Students will then spend 5 minutes recording any observations they notice about the tree including size, shape, color, texture, parts, etc.

- Each student will then be given a note card with either one of the four parts being studied, or a brief description of one of the four parts.
- Students will be given around 15 to 20 minutes to try to match their part to its correct description. Sizes of the four groups will vary depending on class size. Through this activity students are utilizing any prior knowledge as well as their current observations of the tree to draw conclusions.
- Once students believe they are right and agree, the instructor will ask that each group stick together and sit down. As a big group, the instructor will facilitate a discussion about each part, using the tree as a model, and make any needed corrections among students.
- Students will then complete the tree diagram at the bottom of the worksheet. There are four arrows pointing to the various parts, and as a whole, they will fill out their worksheet.

### Reflection

As students are waiting for other members to finish, have them color and decorate their tree. Start a conversation by asking if they learned anything new about trees, or how trees are similar to us. Then ask about how they decorated their trees, this will lead into a discussion about other functions trees may have or what animals use trees for food and shelter.

Name \_\_\_\_\_

What I need to survive:

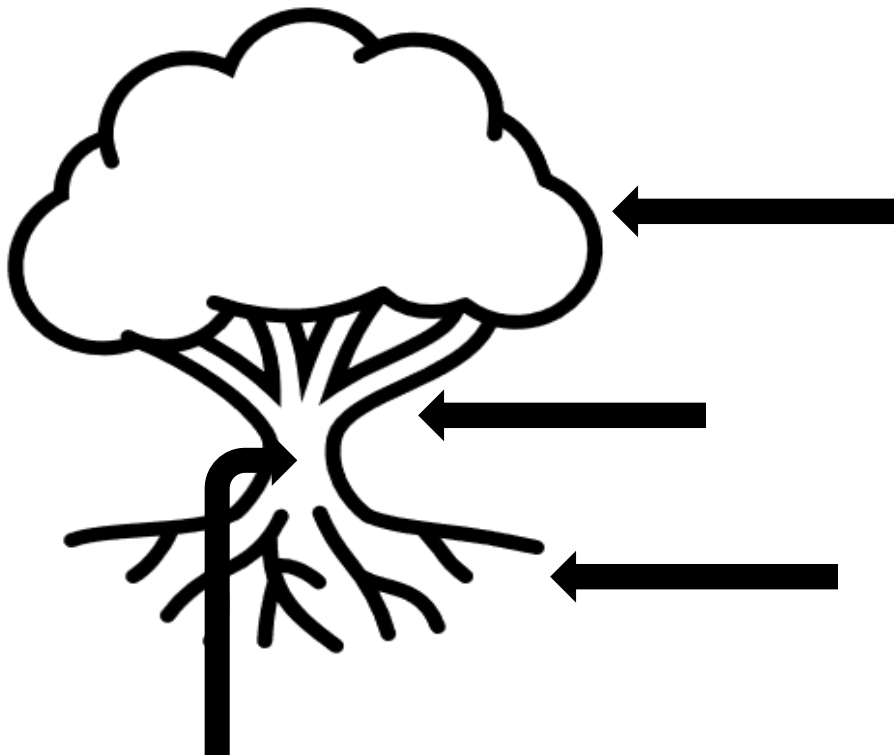
Tree Observations:

- 1.
- 2.
- 3.
- 4.
- 5.

Use the word bank to correctly label the tree.

**Word Bank:**

**Heartwood, Leaves, Bark, Roots**



## Session 2: Design Your Own Bug

### Overview

Start the lesson by defining the term entomology, the study of insects. Have youth say it aloud three times and note how similar “insects” and “entomology” even though they are spelled different. Therefore, today each student will be an entomologist as they will be studying different insects and designing their own. Insects are Earth’s most abundant organisms and are believed to be 44% of all living things on Earth. Each type of insect has its own function and behavior. Can bugs be good? Can bugs be bad?

### Skill

Exploring the parts and functions of insects’ bodies

### Background

The instructor will explain that the same way that humans have their own set of body parts, so do insects. These body parts include the antennae, head, front legs, middle legs, hind legs, thorax, abdomen, and wings (if present). Please refer to the reference photo on the worksheet. The instructor will explain that insects can also be heroes or villains. This explanation will be: “Many insects benefit the world because they are decomposers, pollinators, or predators; however, some have harmful effects. When invasive species travel into ecosystems they do not belong in, they can damage the balance that exists. Sometimes, they can even harm other native plants or insects. An example of this in the United States is the spotted wing Drosophila, an Asian fruit fly, which has invaded the United States and damages our fruit crops.” - Page 16 of Insect Adventures 3

If more information on this topic is needed, please visit *Insect Adventures 1* page 7-9 and *Insect Adventures 3* page 16.

### Materials and Preparation

Students will need: Pencil, papers, insect body parts worksheet, scissors, and coloring utensils.

Optional: prep two or three completed examples of insects for students to reference as they build their own.

### Activity

- Students will bring paper and a pencil outside to record any observations they make about insects they see or hear. Their notes should contain any colors, sounds, behaviors, or interactions within the environment that they see during this time.
- Prompt students to identify aspects that would be different between a hero and a villain and give some examples of each in the insect world. Students may want to share their own favorite superhero or villain.
- Give each student a worksheet of different insects with their body parts labeled. Students will use the worksheet as a reference on the different body parts of an insect. They will use this worksheet to draw and create their own insect.
- Once they have drawn and colored, students will answer a few questions about their insect including name, hero, or villain, where it lives and any interesting facts.

To increase difficulty- On their worksheet, have them decide if their insect is a hero or a villain and research a topic that allows them to be one or the other. For example, if they

make their insect a hero because it is a pollinator, have them research how pollinators benefit the environment and require them to write about this.

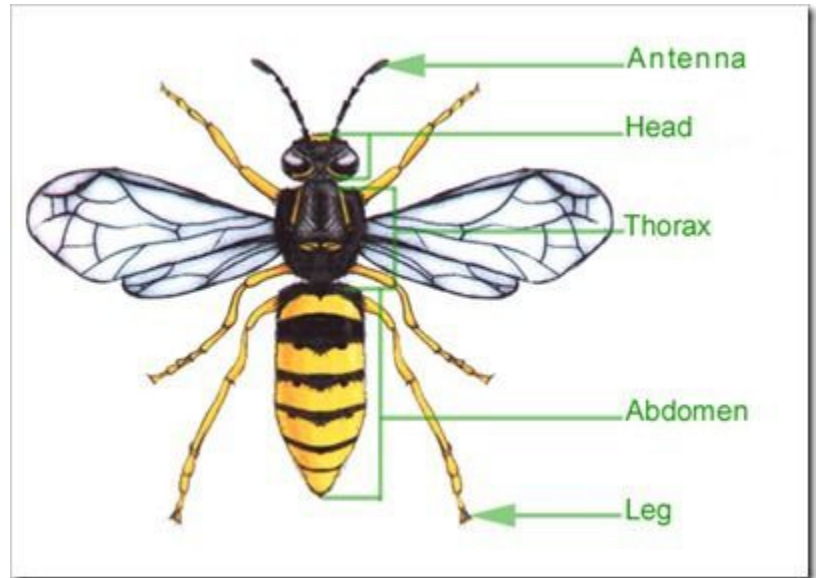
### Reflection

Students should get to walk around and view each other's newly created insects. Each student should present their work and point out the highlights of what makes their new insect special. Each student presenting should have to answer at least two questions about their insect after presenting.

## My Insect

Name \_\_\_\_\_

Examples of the different parts of  
an insect



### Information for your insect (Please draw your insect on the back)

Name of insect:

Hero

Villain (circle one)

Where does it live?

What does your insect do for the environment?

Interesting facts:

1.

3.

2.

4.



### Session 3: See like an Insect

#### Overview

Do you see the world the same way as everyone else? Do you see the world the same as a bug? Last session we talked about the different parts of an insect, but we didn't talk about their unique eyes and how they see the world in several different parts.

#### Skills

Describe and demonstrate how an insect sees through a compound eye.

#### Background

While we can look at an object and see the whole thing, an insect sees that same object divided into tons of little different pieces. The number of parts depends on the number of segments that make up the compound eye of that insect. The instructor will explain that insects cannot see red, therefore when you hold the red sheet in front of the straws and look through it, the red object should appear hard to see.

If more information on this topic is needed, please visit *Teaming with Insects Level 1* page 8.

#### Materials and Preparation

Students will need: Nature picture (one per group), handful of straws (one per group), pencil, paper, scissors, small piece of red plastic sheet (clear)

Instructor will need: All materials to make their own compound eye to make with students to serve as a guide and masking tape to distribute to each group as they are working.

## Activity

Start the lesson by putting each student in pairs. Students will be working outside, where they can have access to either a stop sign, a stop light, or a red flower/plant. The instructor will first ask each group to spend 5 minutes in silence writing a description of their nature picture. They are supposed to describe anything they can about the picture, and they are not to share ideas or notes with their partner. After the 5 minutes, students will have the opportunity to compare with their partner. Did they write similar descriptions, or did they view the picture differently? The instructor will explain that although a group of people may look at the same picture, it is likely that they will explain what they saw differently. This is because the structures of our eyes may be similar, but how we see and describe things is based on our experiences, perceptions, and ultimately what details catch our own specific eyes.

The instructor will explain to students that insects have very distinct and unique eyes that allow them to see objects differently than other animals. Insects have a compound eye, which divides objects into several thousand parts. The number of parts depends on how many facets make up each compound eye. Each group will be given the tools needed for the activity which includes a handful of drinking straws, scissors, a red plastic clear sheet, and tape. At this time, each group will be shown how to make their own compound eye. Directions to give students are:

- One group member holds the handful of straws together (the number is up to each student).

- The other group member should cut the groups of straws in the middle. There should now be two handfuls of straws, one for each partner.
- The two members should now each have a bundle of straws. They should use the tape to wrap the straws tightly to ensure they remain together.

Give students time to look at trees and one another using the compound eye. Ask that they record their findings on a sheet of paper. Ask them to look at the same items they first observed and note any differences. Lastly, give each student a red plastic sheet to cover their compound eye. Give students time to look at trees and one another using the red compound eye. Ask that they record their findings on a sheet of paper. Let students explore viewing the world around them with their compound eye. Now they can see like an insect!

### Reflection

What does it look like broken into smaller pieces? How would your description change? Ask them how the red objects change when viewed through the red plastic. Also ask them if they think insects would be attracted to a red flower, if they cannot see the color red.

If a red object is not available outside, use a picture like the following for students to look at.

Think about a situation that made you unhappy such as a getting in trouble at home or school, a bad grade, etc. If you looked at that situation like a bug, would it be different?

- How many ways could you see it?
- Would you have reacted different?



## Session 4 – Be an Insect Olympian

### Overview

This session will take place outside where there is room to run and jump. The lesson gets students moving and allows them to make comparisons between what insects and humans can do.

### Skill

Compete against one another in events that mimic insects' behaviors.

### Background

Human Olympic events include swimming, running, jumping, and much more. The Olympics is a place for the best of the best to compete, to win, and even set some world records. In the insect world they don't have an Olympics, but they do compete to survive. There are many different types of behaviors that insects utilize to survive.

If more information on this topic is needed, please visit *Teaming with Insects Level 1* page 9 and 10.

### Materials and Preparation

Students will need: Score worksheet and pencil.

Instructor(s) will need: Tape measure, stopwatch, calculator and to prep each event.

## Activity

As a whole group, ask for volunteers to share what they know about the Olympics. What are the Olympics and what happens in them? The instructor will facilitate a short conversation about the Olympics with students to activate prior knowledge.

Students will then need to be broken up into three groups for rotating through all the stations. Ideally there will be an instructor at each station, who will be timing and marking down the students' results for each event. Give each student their own paper with their name, and each event that they will be competing in. Each station will serve as its own event. The three events are flying, the 50-yard dash, and standing long jump.

- Flying: Have students stand with their arms out. Have them count aloud the number of times they can flap their arms up and down in 10 seconds. The instructor will oversee this and write down their number.
- 50-yard dash: Point out the 50 yards where it is safe for them to run. Make sure the starting and stopping points are clearly visible. The instructor will time each student at that station and write down their time.
- Standing long jump: Have a clearly marked line on the ground where students stand with their toes behind the line. They will jump directly forward as far as they can, and the instructor will measure how far they jumped in inches.

## Reflection

As a whole group talk about the purpose of the three events and relate them to what insects are able to do.

- The 50-yard dash event is that a cockroach can run approximately 50 yards in 2 minutes. The instructor could then ask the students if they had raced a cockroach, who would have won? A picture may need to be shown if students are unfamiliar with that insect.
- That a biting midge can flap its wings 1,000 times in 10 seconds. Have students compare their own number to that of this insect. A picture may need to be shown if students are unfamiliar with that insect.
- Fleas can jump 200 times their height in inches. Help students calculate their own height in inches using the tape measure and then multiply that number by 200. That is how far they would be able to jump if they were a flea.

Name \_\_\_\_\_

## **Insect Olympics!**

Event Name	My Time	Insect's Time
Flying		
50 Yard Dash		
Standing Long Jump		



## Session 5- Let's Migrate!

### Overview

This session will take place outside, where groups of students will be drawing chalk on the sidewalks or an open paved lot. This activity will give insight about what migration is and why birds in Ohio migrate to warmer climates in the winter. Students will work in groups and put themselves in the position of a bird and use chalk to draw out a migration route.

### Skills

Define migration and understand why birds migrate out of Ohio during the winter.

### Background

The instructor will have a conversation about migration with the group and students will answer the questions on the worksheet:

- First ask students: What do you already know about migration? Please spend a few moments reflecting on what your current understanding of migration is and make note of it. Explain/Summarize that in a simple definition, migration is moving from one place to another.
- Then share with students that migration for birds is part of their routine for survival. "The birds you see in Ohio may be summer residents, winter residents, year-round residents, or birds that have stopped to feed and rest during their migratory flight. Most migration flights are during the night, with the resting and feeding periods during the day. Birds migrate to avoid harsh weather and to collect food that is only available at certain times of the year." - Ohio Birds pg. 9

- Ask students: With this new understanding, why might a bird that can best survive in warm weather migrate out of Ohio? When would they do this and where might they go? Write down your thoughts for number 3 on the worksheet. Explain that birds are not the only animals that migrate. The definition of migrate is not specific to birds, however migration patterns for birds are very apparent in Ohio. Tell students to take a few moments and brainstorm what people, objects or places a bird might see during their migration route. Have them write down their ideas on number 4.

Examples of migration for use:

- Blue Jays: traveling from Ohio to Arkansas
- Hummingbirds: traveling from Texas to Ohio
- Purple Finch: traveling from Ohio to Florida
- Mallard Ducks: traveling from Ohio to Alabama
- Robin: traveling from Minnesota to Ohio

If more information on this topic is needed, please visit *Ohio Birds* page 9 and 10.

### Materials and Preparation

Students will need: Bird migration worksheet, pencil, box of sidewalk chalk (one per group).

Instructor will need to prep notecards prior to lesson: Each note card will have the name of a bird and the migration route destination written on it. The number of groups as well as group size will depend on the number of total students. Provided above are 5 group options, but an instructor is not limited to those shown. Instructor should also have a map(s) available for students to look at when they are in their groups.

### Activity

The first 15 minutes students will be learning about what migration is and filling out their notes on the worksheet through a whole group conversation. At this point students need to be divided into their groups. Each group will have their own bird and destination.

Have students pull from the note cards that will tell them what group they are in. As a group, their assignment will be to work together to draw with chalk their bird's migration route. They are encouraged to use words and illustrations of anything they believe their bird will see while it migrates to its destination. Encourage them to be creative and think about any landmarks they could pass or any potential obstacles.

To increase difficulty- There is substantial room for a research component within this session. To start the lesson, students could choose a bird and seek to understand their migration patterns through research. The chalk drawing portion might be eliminated, or they could include more specific details in their drawing that relates to that geographical location.

### Reflection

Have each group present their maps to each other. Does the migration route make sense geographically? Is there anything that could be added in terms of landmarks and potential obstacles?

Name \_\_\_\_\_

### All About Migration!

1. What I think migration is:
  
  
  
  
  
  
  
  
  
  
2. Why do some birds in Ohio have to migrate?
  
  
  
  
  
  
  
  
  
  
3. Why might a bird that can best survive in warm weather migrate out of Ohio?  
When would they do this and where might they go?
  
  
  
  
  
  
  
  
  
  
4. If I were a bird migrating, what could I see on my journey? Make a list:

## Session 6 – Bird Search

### Overview

This session will give students a chance to bird watch and record their observations.

Birds are highly active in the mornings, so, if possible, this would be a good session to do with students in the morning.

### Skill

Report findings through conducting a bird watch.

### Background

The instructor should get students prepared for birdwatching by giving them an important tip: Move very slowly and quietly! Birds have good hearing and eyesight, so quick movements or loud talking will scare birds away. If they want to make observations in this activity, they must follow this rule.

Discuss how students can learn to identify birds. Use the visual guides to help students understand what characteristics are and have them give a few examples of characteristics. Characteristics can include color on the external parts of birds, behavior, voice/song/calls, shape of external parts of birds, overall size, and habitat.

Also include:

- “There are more than 9,200 species of birds in the world and of those, there are more than 150 that can be commonly seen in Ohio. To identify varied species of birds, you must be familiar with the distinct characteristics of birds. These characteristics are habitat, size, shape of the head and beak, behavior, color patterns, and their voice or songs and calls.” - Page 11 of Ohio Birds

If more information on this topic is needed, please visit *Ohio Birds* page 11.

### Materials and Preparation

Students will need: Birdwatching observation worksheet, a pencil, and their eyes (Binoculars if possible).

Instructor will need to find an appropriate location for the students to complete their birdwatching. For the most effective bird watching experience for students, print out pictures of the birds or use Ohio Division of Wildlife Field Guides that are on their checklist, so that students can have a visual to refer to.

### Activity

For the first 10 minutes the instructor will host a short lesson about learning to identify birds. The instructor should give every student a bird watching observation worksheet. The purpose for this worksheet is to give students a sense of birds or characteristics of birds to look for. They are encouraged to work individually for this portion of the lesson. Next, take students to an area where they are likely to see a variety of birds. They should bring their bird watching observation worksheet to take notes and check anything they see off their checklist.

### Reflection

Allow students to grab a partner and complete the last of bird watching with a friend. If there are specific characteristics or birds that students want to find, they have a higher chance of finding it with another set of eyes looking! As a whole group, the instructor should ask a few students to share some of their findings. Ask students to reflect on the characteristics that stood out to them the most during their birdwatching.

Name \_\_\_\_\_

## Bird Checklist

Bird's Nest: Yes No

Describe:

Common Bird's to look for: Did you find them?

Canada Goose: Yes No

American Robin: Yes No

Mallard Duck: Yes No

Cardinal: Yes No

Red-tailed Hawk: Yes No

Blue Jay: Yes No

Red-winged Blackbird: Yes No

American Goldfinch: Yes No

Turkey Vulture: Yes No

Extra Notes/Observations (this includes any colors, sizes of birds, descriptions, unfamiliar types, etc.):

Characteristics used to identify birds are...

What characteristics stood out the most while birdwatching?



## **Appendix #2**

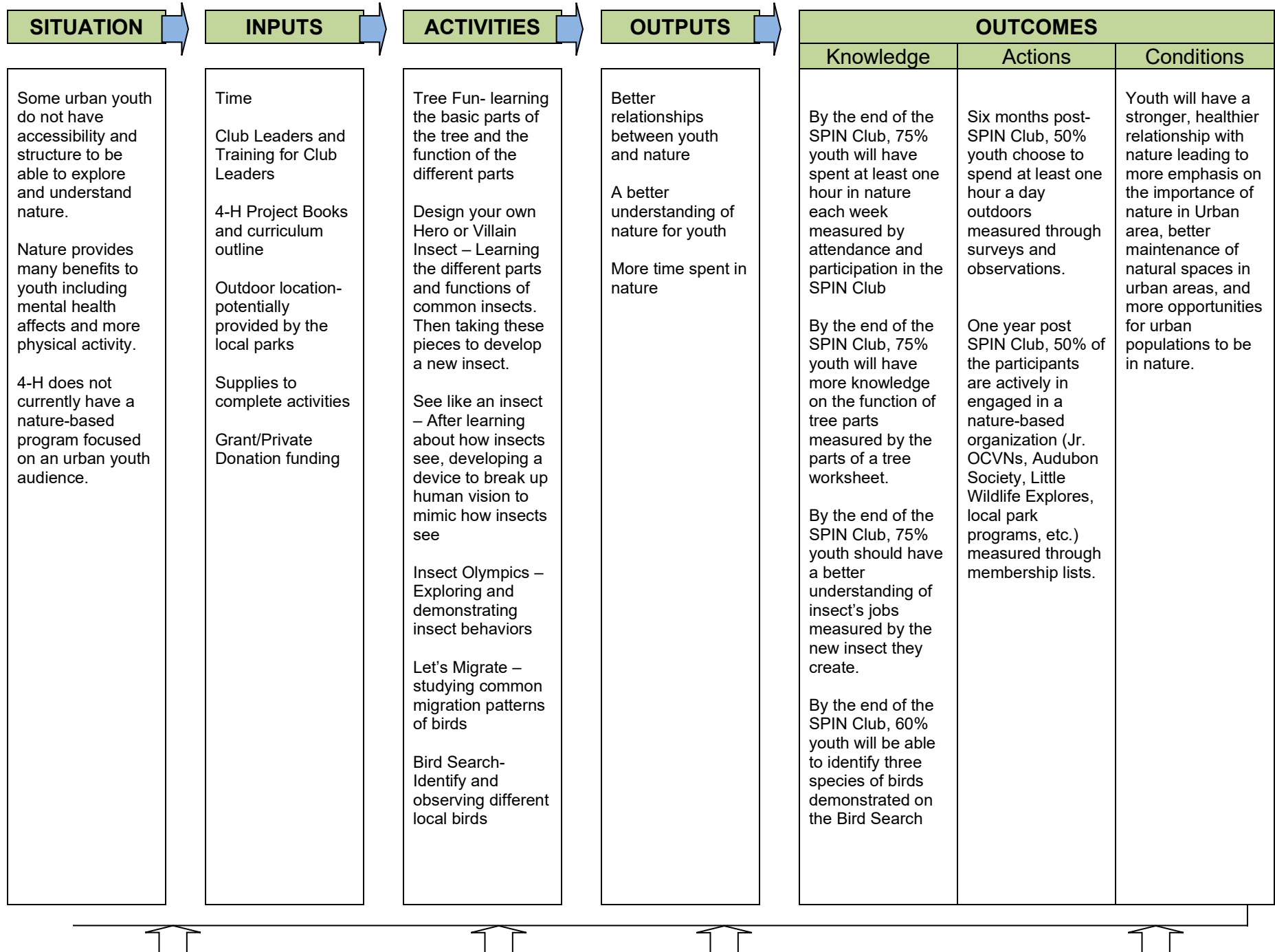
### **Nature SPIN Club! Evaluation Plan**

#### **Object of the Evaluation**

The purpose of this program is to create an opportunity for urban youth to learn and explore nature. The structure of the program will follow the structure of Ohio 4-H Special Interest clubs (SPIN clubs). An Ohio 4-H SPIN club is a short-termed club that allows the group of youth to focus on one topic collectively. SPIN clubs need to have five youth from three different families, and it must meet a minimum of six hours (*Ohio SPIN Club Charter Final.Pdf*, 2019).

Many projects such as community gardens are failing because there is not a new generation to maintain or take over the project. Youth are sometimes too unfamiliar with gardening and nature to be interested in even visiting a community garden. This program will allow youth to be exposed to nature and hopefully begin to build a relationship between the youth and nature through the facilitator guided activities. This relationship will help potentially lead to youth having a passion for the outdoors and natural world that would allow projects to thrive. Below is a logic model that breaks apart the program in greater detail.

**Program title: Nature SPIN Club!**



**ASSUMPTIONS**

Youth participating want to learn about nature

Leaders that have volunteer will maintain a healthy, safe, and inviting environment

**EXTERNAL FACTORS**

Partnerships with Parks

Weather

Illness impacting attendance

Source: The Ohio State University, Department of Agricultural Communication, Education, and Leadership 7700: Documenting Change through Evaluation and Accountability, Dr. Joy Rumble.

### Orientation of the Evaluation

The purpose of this evaluation is to examine if the structure of the SPIN club is effective within urban settings and that the SPIN club structure allows all participants to reach the outcomes. Evaluation tools will be sent out with the curriculum of the Nature SPIN Club, so that at the completion of the SPIN club's six weeks, the facilitator can send back all information to me via drop box system or mail hard copies. The evaluation data collected from across the state will be used to help re-shape the policies around Ohio 4-H SPIN clubs to improve the effectiveness of SPIN clubs overall and help to leverage more opportunities for urban youth through 4-H opportunities.

The evaluation will be a summative evaluation to ensure that the impacts on urban youth are captured and able to be reported to stakeholders, like you. Formative assessments may be added in the future to gain more information on the content of the program and not the overall structure. The forms that I will be using to collect the evaluation data will be the impact form and the customer satisfaction approach. The combination of these two methods will allow us to assess the effectiveness of the program, if the program objectives and outcomes are achieved, and to highlight any other outcomes that may not have been thought of prior to the completion of the evaluation tools.

### Audiences for the Evaluation

The groups of individuals that will use the evaluation findings include:

- Ohio 4-H SPIN Club Working Groups- A specific set of 4-H professionals that make up the SPIN Club Working group will use the data to improve statewide policy and SPIN club best practices.

- The Ohio State University Extension, 4-H Professionals- These professionals will use the findings to help determine where and how SPIN clubs are most effective in their county. They will also be able to use the data to help show their local 4-H program stakeholders' new ways to provide youth with 4-H opportunities.

#### Key Evaluation Questions and Data Management

Evaluation Question	Data Needed	Sources of Data	Data Collection and Methods	Timeline	Data Analysis	Limitations
Which parts of implementation allowed the SPIN club structure to effectively serve youth?	Functionality of curriculum and layout	Facilitator feedback on the curriculum and layout	Surveys	Session six of the SPIN club	Descriptive Analysis (Likert Scale)	Participation and Submission of data
How have short term outcomes varied across the individual SPIN clubs?	Time spent in nature by youth.  Knowledge of tree parts, insects' roles, and types of birds	Surveys  Tree Parts worksheet  Bug Creation  Bird Search	Pretest and posttest analysis      Survey   Activities Reviewed	Session 1 of the SPIN club and Day Six of the SPIN club    Session Six of the SPIN club through the 6 sessions of the SPIN club	Descriptive Analysis (Likert Scale)        Qualitative data (Individual Student work)	Participation and Submission of data

## Evaluation Instruments

The instruments used for this evaluation will be:

- Attendance Sheets which will be uploaded to a OneDrive Folder at the completion of the six-week SPIN Club.
- Student Work: Parts of a Tree which will be uploaded to a OneDrive Folder at the completion of the six-week SPIN Club.
- Student Work: Creating an Insect which will be uploaded to a OneDrive Folder at the completion of the six-week SPIN Club.
- Student Work: Bird Search which will be uploaded to a OneDrive Folder at the completion of the six-week SPIN Club.
- Survey which will be completed by the SPIN Club leader at the completion of the six-week SPIN Club. The survey is a Likert type scale survey, and can be review here: [https://osu.az1.qualtrics.com/jfe/form/SV\\_0MMw8XBCMLadTcG](https://osu.az1.qualtrics.com/jfe/form/SV_0MMw8XBCMLadTcG)

## Dissemination

The results of the evaluation will first be shared with the SPIN Club Working Group via a ZOOM meeting. The group will discuss the data, possible solutions to improve effectiveness, and ways to best use the data to create more opportunities. After this meeting, the data will be shared with 4-H professionals across the state of Ohio via a statewide zoom meeting. This information will be shown in two ways, the whole state together and each of the eighty-eight counties statistics. If no data were collected from a county, then they would not have individual county data available. County professionals will be able to contact members of the SPIN Club Working Group to discuss any county

specific questions they may have following the presentation. Each county will then be able to use the data however they see fit at a local level to benefit their programs.

#### Timeline and Resources

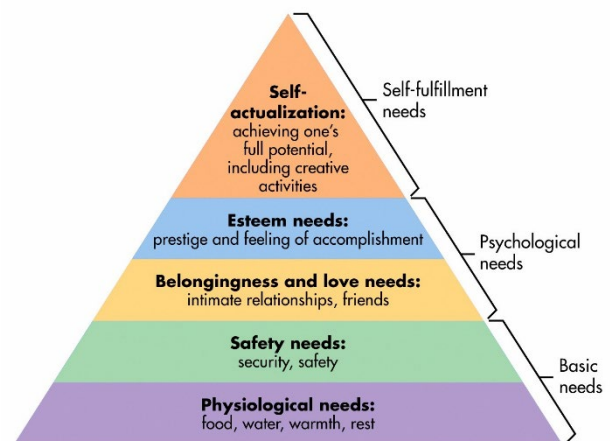
<u>Date</u>	<u>Details</u>	<u>Resources</u>
January 2023 through April 2023	Evaluation Planning and Creation Content Finalization	<ul style="list-style-type: none"> <li>- ACEL 7700</li> <li>- Microsoft Suite Tools</li> </ul>
January 8, 2024 – Statewide Hot Topics ZOOM meeting	Curriculum will be shared statewide to all 4-H Professionals	<ul style="list-style-type: none"> <li>- Zoom Meeting</li> <li>- Microsoft Teams Folder</li> </ul>
January 2024 through November 2024	SPIN clubs can happen throughout the year at any time by any 4-H professional or trained volunteer	<ul style="list-style-type: none"> <li>- SPIN club Curriculum including evaluation instructions.</li> <li>- Access to the Microsoft Teams Folder</li> </ul>
November 29, 2024	All surveys must be submitted	<ul style="list-style-type: none"> <li>- Microsoft Team Dropbox folder</li> </ul>
December 9, 2024	SPIN club Working group meets to discuss and interpret data	<ul style="list-style-type: none"> <li>- Zoom Meeting</li> <li>- Access to the Dropbox folder</li> <li>- Microsoft Excel</li> </ul>
December 20, 2024 – Statewide Updates ZOOM Meeting	Information presented to all 4-H professionals	<ul style="list-style-type: none"> <li>- Zoom Meeting</li> <li>- Microsoft PowerPoint</li> <li>- Access to final data folder</li> </ul>

## Appendix #3

### Best Practices for Working with Urban Youth

Working with urban youth can bring a new set of obstacles that educators have not encountered before. While many Extension programs can be adapted to urban settings, there are a few added factors that should be considered. This is important as the United Nations predict that by 2030, 60% of the world population will live in urban areas and 60% of that population will be youth under the age of 18 (*Global Trend in Urban Youth Development*, n.d.). It is estimated that 11.6 million children in the United States are living in poverty, which can have a major impact on youth's basic needs being met (*Child Poverty in America - Facts, Statistics*, 2022). According to Maslow's

Hierarchy of Needs Pyramid, youths' most basic needs are food, water, warmth, rest, and safety. Youth's psychological needs are friends, relationships and feeling of accomplishment (Poston, 2009). These best practices are heavily based on the needs of youth in order to prepare them to retain information from the program.



1. **Food and Water:** Programs that are being offered to youth should provide a small snack and water for youth. These items should be available to youth throughout the whole program and accessible for them to get on their own. Some youth may feel self-conscious by their situation and will not ask for these items. Many youth that live in poverty also experience food insecurities. Offering youth,



the opportunity, to take home items is also a wonderful way to help youth and begin to build that relationship of trust with youth.

2. ***Safe and Accessible Environment:*** The location of a program is particularly important. The program should be held in a decent neighborhood and be well lit if the program is in the evening. The planner should consider things such as parking accessibility and approximation to the bus route. Participants will not come or send their kids to locations that could have potential violence or drug related activity. Think “*Would I send my kid here alone?*” Some parents in urban households are working multiple jobs or have other responsibilities and are unable to accompany their youth to events.
3. ***Inclusive Environment:*** Many of the youth that attend urban programs come from diverse cultural backgrounds and different life experiences. The easiest way to create an inclusive environment for them is to use inclusive language and listen to the way they talk. For example, “mom and dad”, or “parents” are not going to be relatable to all youth, but “the adult in your life” would allow youth to pinpoint someone. By listening to the youth that attend programs, the educator gains knowledge of the community and culture they are working with to better relate the content to real life for youth being served.
4. ***Healthy Relationships:*** Youth need to feel a sense of belonging from both other youth and adults. Creating time within your program for the educator to get to know the youth, and youth to know other youth, is crucial. This could be done through a survey, attendance question, small group work, or just conversation before and after the program. Creating open dialogue throughout the lesson

allows youth to share their thoughts, feelings, and opinions and help to feel that they are active contributors throughout the lessons. This also helps the group to better understand each other's lived experiences, insight on someone else's thought process, and how they may unknowingly connect with one another.

5. **Flexibility:** Again, educators may not always know the background of the youth that attend their programs. Giving the youth flexibility with independent work and time can make a huge difference with youth and lead them to feeling that sense of accomplishment in the work. Flexibility should also be accounted for before the lesson begins by the educator. Due to COVID-19 and other issues that urban school districts face, many youths are not at the educational standards that are “normal” for that age, meaning the program should be able to be adapted to the real level of the youth. For example, groups may need to read items aloud so that youth better understand the content and vocabulary words. If you are teaching about “AI” a child reading on their own may think “artificial intelligence,” but actually the lesson is about livestock, so the meaning would be artificial insemination.

## **References**

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