4-H
Natural Resource Club
Indiana 4-H

4-H is the youth education program of the Purdue University Cooperative Extension Service. 4-H is the only federal youth-serving organization and is administered by the Secretary of Agriculture, though Land Grant universities.

**Indiana 4-H Mission**: to provide real-life educational opportunities that develop young people who positively impact their community and world

**Indiana 4-H Vision**: Indiana 4-H Youth Development strives to be the premier, community-based program empowering young people to reach their full potential

**Key Aspects of the 4-H Program:**
- Focus on youth development
- Subject matter from the land-grant university
- Informal programming - emphasizing experiential learning
- Youth, parents, and families learning together
- Use a variety of delivery methods
- Volunteers extend our programs far beyond what staff could do

Indiana 4-H Natural Resource projects: [www.four-h.purdue.edu/natural_resources/](http://www.four-h.purdue.edu/natural_resources/)

Indiana 4-H project website: [www.four-h.purdue.edu/projects/](http://www.four-h.purdue.edu/projects/)

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4-H is an informal educational program for youth in grades 3-12. Youth choose the programs that they want to participate in, their level of participation, and how long they want to continue with the program. It is especially important, therefore, to understand youth development stages and experiential learning in order to engage youth at every meeting. Older 4-H members can be a big help with your club and gain leadership skills from helping to plan and deliver programs. Younger 4-H members appreciate learning from older 4-H members.

National 4-H
4-H is part of the Families, Youth, and Communities partnership between The National Institute of Food and Agriculture (www.nifa.usda.gov/) and the Land Grant University System.

Indiana 4-H
The 4-H Extension Program Leader guides the Indiana 4-H program working with Purdue University campus and county-based staff.

Mission: to provide real-life educational opportunities that develop young people who positively impact their community and world
Vision: Indiana 4-H Youth Development strives to be the premier, community-based program empowering young people to reach their full potential

4-H Values
- Volunteers who are the people who create programs, meet local needs, deliver quality educational programs, and develop adult and teen leadership
- Education and youth involvement in the learning process, development of practical skills and abilities, and application of learned skills to other situations
- Interactions of 4-H members with peers, parents, and other caring adults
- Partnerships with community groups
4-H Natural Resource Club Kit

The 4-H Natural Resource Club Kit is designed to assist 4-H volunteers interested in introducing youth to the world around them through the study of different natural resource topics, rather than through any one 4-H project. Eight 4-H project areas are included:

- Beekeeping
- Entomology
- Forestry
- Geology
- Soil and Water Conservation
- Sportfishing
- Weather
- Wildlife

Each section includes:

- An introduction to the project and curriculum
- Invited speaker suggestions
- Resources and other opportunities in 4-H
- Selected activities and answers or facilitation help
Experiential Learning

The 4-H curriculum is developed to provide experiential learning experiences. Experiential learning is a process that allows youth to first learn by doing, before being told or shown how, and then to process the experience to gain a more complete understanding. Activities are designed so youth experience a learning activity, share what they did, process what they did (discuss, analyze, reflect), generalize what they learned (to test the 4-H members comprehension and appreciation of the activity), and then think about how they can apply what they learned to other situations (generalize).

The Experiential Learning Model helps youth gain the most from their activities by encouraging them to:

- Do an activity before being told or shown (experience)
- Describe their experience and reaction (share)
- Discuss what was most important about that they did (process)
- Relate the life skill practiced to their own everyday experiences (generalize)
- Share how they will use the life skill and project skill in other parts of their life (apply)

The advantages of using the experiential learning process include:

- The adult can quickly assess the student’s knowledge of the subject
- The student builds on past experience of knowledge
- The adult functions as a coach rather than a teacher
- Mentors may use a variety of methods to involve youth in the experience
- The youth relate the experience to their own lives and experiences
- Youth with many different learning styles can be successful
- Discussions can move from the concrete to the abstract and analytical, which is particularly beneficial for middle and high school students
- Youth are stimulated to learn through discovery and to draw meaning from the experience
- Youth can work together, share information, provide explanations, and evaluate themselves and others
- Youth take responsibility for their own learning
Youth Development Stages

Certain characteristics are common to children at each age level. Although children differ in the rate at which they develop, the order of the stages does not vary. While it is extremely important to remember that every child is unique and special, some needs and interests are universal to all children to ensure successful development. All youth need to experience success and adventure, give and receive attention, become independent, and be accepted by peers. Promoting these in your clubs will help ensure positive youth development. Please see the youth development stages sheet for more information.

Understanding the physical, mental, social, and emotional development of youth helps you work with the 4-H members in your club. No two youth develop at the same rate and transitions are often gradual. Your teaching and involvement helps 4-H club members grow and mature and makes 4-H a rewarding and fulfilling experience.

Activities at 4-H club meetings do not always work as you had planned. Sometimes youth talk among themselves rather than listening to you; sometimes no one comes to a planned field trip; and sometimes no one speaks up when you are trying to initiate discussion.

Youth of the same age can vary greatly in physical, mental, social, and emotional growth and interests. These differences are even more marked between age groups. If you are working with a broad age range, the activity may be too simple for the older youth and too difficult for the younger ones. Giving the older 4-H members leadership opportunities can be very effective!

Research has shown that there are some generalities that can help you understand how to plan activities for different age groups.

Early Elementary (Mini 4-H)
This is a very active age, so it is important to keep these children busy. They are concrete thinkers and need to understand what you want them to do and how to do it. They are generally more interested in making something than in completing a project (process is more interesting than product). Youth in this age group tend to seek adult approval and depend upon adults, although the opinions of their peers are beginning to be important. They do best in small groups with set rules and rituals. Competition is inappropriate for this age group.

Upper Elementary
This is also a very physically active age, so hands-on activities work best. Youth in the upper elementary grades are still fairly concrete thinkers (things are black/white or white/wrong), but are beginning to think logically and symbolically. Because this age group has a strong need to feel accepted, it is best for an adult to evaluate each product rather than hold competition among peers with only one winner. This age child likes to know how much they have improved over past efforts and how to improve in the future.

Middle School
Middle school youth are beginning to move to more abstract thinking. Justice and equality are important to this age. (Therefore, project judging may now be viewed in terms of what is fair, as
well as being regarded as a reflection of self-worth.) They prefer to find their own solutions, rather than to be given solutions by adults. Try to provide supervision without interference. Independence of thoughts and actions begins to emerge. Avoid comparing middle school youth with each other. Performance should be compared with past accomplishments. Junior volunteer organizations often are popular with teens toward the end of this age group, particularly if there are opportunities for developing leadership.

**High School**
Most high school-aged teens know their abilities, interests, and talents. They tend to be very concerned with themselves and their peer group. While they can understand the feelings of others, they tend to be self-absorbed, particularly in the earlier years of high school. Relationship skills are usually fairly well developed. Getting a driver’s license increases both independence and dating. Acceptance by the opposite sex is very important.

High school-aged youth begin to think about the future and make realistic plans. They enjoy career exploration and preparation. Their vocational goals influence the activities they select. Projects requiring research and creativity give teens an opportunity to demonstrate how much they have learned and what they can accomplish. Teens set goals based on their personal needs and priorities. Goals set by others are generally rejected. As teens master abstract thinking, they may try new ideas in ways that confuse adults. Teens can generally initiate and complete tasks without supervision. A leader can help by arranging new experiences in areas of interest to teens. By must be sure to allow them plenty of input. Assume the role of advisor/ coach for independence workers rather than teacher/ lecturer. Club meetings, rituals, and uniforms do not generally appeal to this group. Many teens enjoy looking back on their achievements in 4-H and appreciate special recognition for leadership activities. By the time they graduate from high school and begin college or a career, youth feel they have reached the stage of full maturity and expect to be treated as such.

**Some Final Thoughts**
These guidelines give only a brief overview of child and youth development. They are intended as a resource to help you plan you activities as a volunteer leader. The publication, *Ages and Stages of Child and Youth Development,* has more in-depth information and is available from youth county Extension Office.

You are a valuable asset to your community and to the members of your club. The guidelines for the stages of child and youth development, in combination with your special skills and interests in youth, will help you plan and carry out a successful 4-H program and make a positive impact on the lives of youth people.

*Ages and Stages of Child and Youth Development, A Guide for 4-H Leaders, NCR 292*
The Scientific Method

An organized way to think about problems and solve them.

1. **Stating the problem** – Think about what you want to learn.
2. **Forming the hypothesis** – After you choose a problem to study, describe what you think might happen.
3. **Observing and experimenting** – Observe or set up an experiment to test your hypothesis. Tally your data. You can make your own charts by hand or on the computer.
4. **Interpreting data** – Once you have collected your data you need to understand what it tells you. The data can be interpreted by comparing numbers visually or in graphic form.
5. **Drawing conclusions** – Consider how your observations and/or experiments affect your hypothesis.

Evaluating Youth Learning and Interest

- Are there changes you can make to enhance the learning experience?
- Are there ways the youth can enhance their own learning?

Remember: Youth have different levels of interest and motivation for different activities at different stages in their lives. Learning how much coaching in needed for a particular youth on a particular day can be both a challenging and a rewarding experience!
The idea of combining the study of multiple natural resource projects came from volunteer 4-H leader, Janeen Bertsche-Johnson who developed and has run the *Earthcare 4-H Club* in Elkhart County since 2005. She was kind enough to share her activities in 2010.

**Question:** What have you done to make your 4-H Club special or what special activities have you done that has sparked interest among your members?

**Answer:** Five years ago, I started the *Earthcare 4-H Club* to integrate environmental education with the 4-H program. Our club does not have traditional meetings, but does hands-on activities to increase the youth participants' knowledge of forestry, soil and water conservation, wildlife, recycling, and weather. We are also intentional about doing activities that benefit our community and the environment. The club had 8 members in its first year, and has grown to 25 participants. We welcome parents and younger siblings to join our activities, so that the older youth learn leadership. Since we began, we have had the following activities:

**Forestry:**
- leaf identification hike at Oxbow, led by a park naturalist (2005)
- participating in Arbor Day activities (including learning how to plant a tree) in Goshen (2006)
- learning how maple syrup is made and helping collect sap (2007)
- learning how to identify trees from bark and buds, and how to measure trees, led by a park naturalist (2009)

**Soil and Water Conservation:**
- soil texturing activity, led by Nancy Brown of the SWCD (2005)
- learning how to do river water quality monitoring, and canoe trip, led by the Elkhart Envirocorps (2006)
- learning how electro-fishing indicates water quality (2007)
- learning about watersheds and water pollution with Eric Kurtz of the SWCD, and marking storm drains in Goshen (2008)
- helping with the Elkhart River Watershed clean-up day and participating in learning activities (2009)

**Wildlife:**
- winter wildlife hike at River Preserve County Park, led by a park naturalist (2005)
- learning about bluebirds and building 12 bluebird houses for a local school (2006)
- program about owls with a raptor rehabilitator (2008)
- program about bats by an older member of the club, and building 5 bat houses for local environmental centers (2009)

**Recycling:**
- tour of Omnisource recycling company in Goshen (2005)
- collection of recyclables along the fair parade route (2005)
- learning about vermicomposting and making worm composting buckets (2006)
- tour of Elkhart County Landfill (2007)
- tour of the Mega Shredder facility in Elkhart (2007)
- tour of Chain Reaction bicycle recycling project in Goshen (2008)

**Weather:**
- tour of the WNDU weather station with meteorologist Cindi Clawson (2005)
- learning about tornados from a local weather spotter (2006)