In this project, youth engage in exploring the outdoor world by learning names and classifications. Youth will understand the essentials of studying nature: stop, observe, discover, how to correlate findings and more.

- Increase awareness and appreciation of nature and its structure.
- Explore human interdependence with the natural world.
- Gain knowledge of environmental and ecological concepts.
- Identify how humans impact the environment.
- Improve problem-solving and advocacy skills; take action that assumes responsibility of the environment.

### Starting Out
**Beginner**

- Introduce key concepts: Food Chain/Web, Habitat, Species, Adaptation.
- Explore the water cycle model in nature.
- Develop safety requirements: poison oak, poisonous critters, and remain with group.
- Create a wildlife map to show food, water, cover and space for two species of mammals.

### Learning More
**Intermediate**

- Study key concepts: Aquatic Ecosystems, Carrying Capacity, Succession, Migration.
- Construct models that demonstrate the carbon and nitrogen cycle.
- Connect the premise of interdependence in the context of natural and human communities.
- Create a wildlife habitat map to manage 4 or 5 urban wildlife species.

### Exploring Depth
**Advanced**

- Probe strategic aspects of key concepts: Arrangement and Fragmentation, Edge, Species, Richness and Biodiversity, Wildlife Management.
- Explore personal and collective environmental ethics.
- Research and produce an action plan that develops a moderate-sized habitat improvement project within the local area.

The activities above are ideas to inspire further project development. This is not a complete list.

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### 4-H THRIVE

#### Help Youth:

**Light Their Spark**

A spark is something youth are passionate about; it really fires them up and gives them joy and energy. Help youth find how this project.

**Flex Their Brain**

The brain grows stronger when we try new things and master new skills. Encourage youth effort and persistence to help them reach higher levels of success.

**Reach Their Goals**

Help youth use the GPS system to achieve their goals.

- **Goal Selection:** Choose one meaningful, realistic and demanding goal.
- **Pursue Strategies:** Create a step-by-step plan to make daily choices that support your goal.
- **Shift Gears:** Change strategies if you’re having difficulties reaching your goal. Seek help from others. What are youth going to do when things get in their way?

**Reflect**

Ask project members how they can use their passion for this project to be more confident, competent and caring. Discuss ways they can use their skills to make a contribution in the community, improve their character or establish connections.
Expand Your Experiences!

Science, Technology, Engineering, and Mathematics

- Construct and install birdhouses for specific birds. Collect on specific criteria.
- Form small groups or committees to prepare reports detailing conservation needs of an area. Outline a plan of action for improving the area or restoring a natural cycle.
- Set up a water quality monitoring program on a local stream.

Healthy Living

- Create an interpretive natural trail. Find a location, design the trail, contact appropriate authorities, fund raise, make posts, install. Enjoy.
- Identify “point source” and ‘non-point source” pollution and the effects on water quality, humans, and wildlife.

Citizenship

- Work with community groups to restore habitat for endangered or threatened species.
- Remove invasive species, i.e., caper spurge at Bodega Marine Lab.
- Plant wildlife cover or food in an abandoned creek or pasture area in a key wintering area.
- Learn about environmental laws and create a project focusing on political action.

Leadership

- Be a park steward. Volunteer at Bird/Wildlife/Songbird/Marin Mammal Rescue centers.
- Write a proposal asking that a vacant lot be turned into a playground/native plant garden/kids’ vegetable garden. Follow up, and build the playground/garden etc.
- Become an active leader who models positive environmental behavior.

Connections & Events | Curriculum | 4-H Record Book
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**Presentation Days** – Share what you’ve learned with others through a presentation.
**Field Days** – At these events, 4-H members may participate in a variety of contests related to their project area.
**County & State Fair** - Enter your animal(s) and show the judge what you have learned!
Contact your county 4-H office to determine additional opportunities available.

- Council for Environmental Education: Project WILD - [www.dfg.ca.gov/projectwild](http://www.dfg.ca.gov/projectwild)
- The Nature of Teaching, Purdue University - [www.ag.purdue.edu/extension/nature/Pages/default.aspx](http://www.ag.purdue.edu/extension/nature/Pages/default.aspx)
- Miller, Bob et al. Forest Ecosystem: A Science Based Multi-Disciplinary Instructional Unit for Grades 5-6.

4-H Record Books give members an opportunity to record events and reflect on their experiences. For each project, members document their experiences, learning and development.

4-H Record Books also teach members record management skills and encourage them to set goals and develop a plan to meet those goals.

To access the 4-H Record Book online, visit [http://ucanr.edu/orb/](http://ucanr.edu/orb/)

Resources

- CA Department of Fish and Game - [www.dfg.ca.gov](http://www.dfg.ca.gov)
- Project Butterfly WINGS: A Winning Investigative Network for Great Science - [www.flmnh.uf.edu/education/cise/wings.htm](http://www.flmnh.uf.edu/education/cise/wings.htm)
- The Forest Foundation - [www.calforestfoundation.org/](http://www.calforestfoundation.org/)
- There’s No New Water! - [www.4-h.org/resource-library/curriculum/4-h-theres-no-new-water/](http://www.4-h.org/resource-library/curriculum/4-h-theres-no-new-water/)
- USDA Forest Service - [www.fs.fed.us/](http://www.fs.fed.us/)