- **Indiana, U.S., or World Geology.** Teach other about one Indiana, U.S. or World Geology topic.
- **Career Exploration.** Prepare a display that explains your interview with someone who needs an understanding of geology to do their job.

Level Independent Study (Grades 9 -12)

- **Advanced Topic** – learn all you can about a geology topic and present it on a poster. Include a short manuscript, pictures, graphs, and list the works cited to describe what you did and what you learned. Title your poster "Advanced Geology- Independent Study."
- **Mentoring** – Exhibit a poster that shows how you mentored a younger 4-H member. Include your planning, the time you spent, the challenges and advantages of mentoring, and how the experience might be useful in your life. Photographs and other documentation are encouraged. Resources must be from educational or government ethics. Title your poster "Advanced Geology – Mentor."

## Hay

Judging - Thursday, July 2, at 3pm at the Fairgrounds; Home and Family Arts Building.
No State Fair Exhibit

***Please also refer to the Policies and Procedures beginning on page 2 and the General Project Rules on page 20.***

*Exhibit Requirements:* Exhibit should be contained in a box, bag, tote, etc. Exhibit one section of new hay; mixed or pure that falls into the following categories:

- Alfalfa Hay
- Grass Hay
- Mixed Hay

## Plant Science

Judging - Thursday, July 2, at 3pm at the Fairgrounds; Home and Family Arts Building.

***Please also refer to the Policies and Procedures beginning on page 2 and the General Project Rules on page 20.***

What's in it for me?
The Plant Science project introduces youth to the world of plants and soils through fun hands-on experiences. The project is divided into two divisions:

- Plant Science I
- Plant Science II

What can I learn?
You can learn about the different parts of the plants, flowers, plant growth, seed germination, soil types and soil formation. Advanced students learn about the differences between different types of plants and their needs. They also have the opportunity to practice several different methods of reproducing and growing plants.

Requirements
**LEVEL: Division 1**
Project Completion Recommendations:

1. Complete at least five of the experiments outlined in the manual. The experiments include:
    a. How plant stems carry water.
    b. Different parts of a plant.

c. Why plants need flowers.
d. How weather affects plant growth.
e. How light affects plant growth.
f. How seeds germinate.
g. How deep to plant seeds.
h. Direction in which plants grow.
i. How plants multiply.
j. How plants move from place to place.
k. What soil is. How soil is formed.
l. How we use soil.
m. Different ways to grow

2. Keep records of what you do.

Requirements
**LEVEL: Division 2**
Project Completion Recommendations:

1. See project manual

## Soil and Water Science

Judging - Tuesday, June 30, at 1pm at the Extension Office; Auditorium.
1 Champion from each level to State Fair

***Please also refer to the Policies and Procedures beginning on page 2 and the General Project Rules on page 20.***

Create an exhibit that shows the public what you learned in the soil and water science project this year. Please see the Kosciusko County General Project rules for information on poster exhibits. Notebook exhibits must be displayed in a standard three ring binder. Choose one of the options listed below, appropriate for your grade in school. Use an appropriate exhibit title.

**Level 1**

- A poster related to an activity from the level 1 manual
- A poster and/or notebook of a soil or water related science experiment appropriate for grades 3-5

**Level 2**

- A poster related to an activity from the level 2 manual
- A poster and/or notebook of a soil or water related science experiment appropriate for grades 6-8

**Level 3**

- A poster related to an activity from the level 3 manual
- A poster and/or notebook of a soil or water related science experiment appropriate for grades 9-12
- Independent Study - Learn all you can about a soil and/or water topic, program, facility, project, etc. and present it on a poster or in a notebook. Include a short manuscript, pictures, graphs, and list the works cited to describe what you did and what you learned. Title your poster or notebook, "Advanced Soil and Water Science - Independent Study"
- Mentoring - Exhibit a poster or notebook that shows how you mentored a younger 4-H member. Include your planning, the time you spent, the challenges and advantages of mentoring, and how the experience might be useful in your life. Photographs and other documentation are encouraged. Title your poster, "Advanced Soil and Water Science - Mentor."