



16 U.S.C. 707  
**4-H CLOVERBUD  
SNAPSHOT 4H1731**

# 4-H Science Project

## (Physical and Biological Combined)

### WHAT'S IT ALL ABOUT?

Science can be defined as the study of the world around us; a thread that runs through all aspects of our lives. Science is the theory that lies behind all 4-H projects. There are a wide variety of science topics that can be studied including animal science, environmental science, plant science, physical science and biological science, just to name a few. 4-H projects connect youth to science through experiential, inquiry-based science learning. Scientific practices can be applied in a wide variety of projects such as rocketry, foods, animal and livestock projects, natural resources, horticulture, photography and much more!

### THE BIG PICTURE

#### Starting Out:

- » Identify how using the five senses can be used in science.
- » Explore the scientific process by learning the following words: question, hypothesis, experiment, observation, analysis and conclusion.
- » Discover what an experiment is and how it is used in science.
- » Discuss how important it is to try new experiments in science and revise experiments to try different concepts.

#### Learning More:

- » Experiment with states of matter. Identify liquids, solids and gases.
- » Determine how to best record the results of science experiments (draw pictures, create charts, show progressive changes through flip books, etc.).
- » Describe to someone else what was done and the steps to the conclusion.
- » Observe what happens during the experiment. Also, observe how others react to the experiment.

#### Expanding Horizons:

- » Identify a challenge at home or in the community that would best be resolved by implementing the scientific process. Explore the steps of the scientific process, record the results and share the conclusion with others.
- » Study weather and identify clouds. Study landforms and replicate landforms with modeling clay.
- » Visit a planetarium, zoo, hospital, greenhouse, wastewater treatment plant or other locations in your community where science occurs.
- » Job shadow or interview professionals in a field of work where science is used.



### HOW CAN PARENTS SUPPORT CLOVERBUD PROJECTS?

Parents play an important role in helping their children find out what they like and don't like. As a parent, you can be supportive and encourage your child to try new things. Be there to help them figure out the answer when they have questions. Don't just answer the question for them, but help them know where to go to find the answer. The important part of a cloverbud project is not the outcome, but the

experience children have while participating. It's OK if your child ends up not liking their current project, but they should finish it and try something else. Remember, cloverbuds are at an age where they can explore lots of different topics to try and find the ones they really want to focus on in the future.



# 4-H Cloverbud Science Project



## CURRICULA & RESOURCES

### Michigan 4-H Curricula

<http://4h.msue.msu.edu/>

- » Inquiring Minds Want to Know: Science for Young Children Activities: [http://msue.anr.msu.edu/resources/inquiring\\_minds\\_want\\_to\\_know\\_science\\_activities\\_for\\_young\\_minds](http://msue.anr.msu.edu/resources/inquiring_minds_want_to_know_science_activities_for_young_minds)

### National 4-H Curricula

<http://4-h.org/parents/curriculum/>

- » Aerospace
- » Computers
- » Electricity
- » General Science
- » Geospatial
- » Robotics
- » Small Engines
- » Wind Energy

### Other Resources

- » Abrams Planetarium: <http://www.pa.msu.edu/abrams/>
- » Colorado State University Extension: Chemistry

in the Kitchen: <http://www.colorado4h.org/stem/connections/stem-connections-chemistry-kitchen.pdf>

- » Colorado State University Extension: K-12 School Enrichment/After School Program Activity Sheets: [http://www.colorado4h.org/k12/activity\\_sheets/activity.php](http://www.colorado4h.org/k12/activity_sheets/activity.php)

- » Purdue University Extension: Geology Helper's Guide: <http://www.extension.purdue.edu/extmedia/4H/4-H-988-W.pdf>

- » Science Buddies: Science and Sports: <http://www.sciencebuddies.org/science-fair-projects/Intro-Sports-Science.shtml>

- » Science Kids – Fun Science and Technology for Kids! <http://www.sciencekids.co.nz/projects.html>

- » PBS Kids <http://pbskids.org/>

## FOCUS ON SCIENCE

### Science

- » Take photographs of nature, weather or animals and insects.
- » Experiment with recipes and foods.
- » Design and create a robot.
- » Design and build your own greenhouse.

### Communication

- » Present a science experiment to someone else.
- » Prepare a presentation about a science experiment using the scientific process words.

### Citizenship & Leadership

- » Work with other young people to create a solution to a science issue at home, school or in the community.

### Life Skills

- » Keep records of your project
- » Explore careers in science.



## HOW CAN YOU GET INVOLVED?

- » Contact your local Michigan State University (MSU) Extension office for workshops, activities and events.
- » Attend the MSU Science Festival.
- » Participate in science exhibits at the fair to show what you have learned throughout the year.

## QUESTIONS TO THINK ABOUT:

- » What was your favorite part of this activity/project?
- » What do you know now that you did not know before?
- » What do you want to explore more/next?

Adapted with permission from The Iowa 4-H Hot Sheets by Iowa State University Extension, 2011, Iowa 4-H Project Hot Sheet. Retrieved from <http://www.extension.iastate.edu/4h/projects/>

MSU is an affirmative-action, equal-opportunity employer. Michigan State University Extension programs and materials are open to all without regard to race, color, national origin, gender, gender identity, religion, age, height, weight, disability, political beliefs, sexual orientation, marital status, family status or veteran status. Issued in furtherance of MSU Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Jeffrey W. Dwyer, Director, MSU Extension, East Lansing, MI 48824. This information is for educational purposes only. Reference to commercial products or trade names does not imply endorsement by MSU Extension or bias against those not mentioned. The name "4-H" and the emblem consisting of a four-leaf clover with stem and the "H" on each leaflet are protected under Title 18 U.S.C. 707. (4H1731 1P-WEB-1:2017-BH) Produced by ANR Creative.

