

4-H

Natural Resource

Club



Weather & Climate Science

WEATHER & CLIMATE SCIENCE

The Level 1 4-H Weather and Climate Science manual introduces basic weather words and ideas. Activities focus on understanding the signs of weather. Youth will also begin to learn the difference between weather and climate. The Level 2 manual will introduce youth to more complex weather topics including: air pressure, winds, humidity, and fronts. Level 3 delves even deeper into weather and introduces climate science concepts to help prepare youth to fully understand weather and/or study these topics at a college or university.

Indiana 4-H Weather & Climate

Science manuals

(Order from Purdue's *The Education Store*, www.edustore.purdue.edu)

- Level 1, Grades 3-5, 4-H-1023
- Level 2, Grades 6-8, 4-H-1023a
- Level 3, Grades 9-12, 4-H-1024
- Level 1, Facilitator's Guide, 4-H-1024b
- Level 2, Facilitator's Guide, 4-H-1025
- Level 3, Facilitator's Guide, 4-H-1025b

Invited Speaker Suggestions

- CoCoRaHS member (volunteer weather observers and data collectors), see www.cocorahs.org, click on "states" under the title; Indiana; and "Find Your Local Coordinator"
- Local weather watcher
- Local TV meteorologist

Resources

- Indiana 4-H Weather webpage: www.ydae.purdue.edu/natural_resources/
- NOAA Weather forecast, (enter your zipcode): www.noaa.gov/wx.html
- National Weather Service: www.nws.noaa.gov
- Community Collaborative Rain, Hail, & Snow (CoCoRaHS) Network, www.cocorahs.org/
- Window to the Universe website, www.windows2universe.org/
- Purdue
 - Earth, Atmospheric, and Planetary Sciences, www.eaps.purdue.edu
 - Longer periods of tornado activity are most likely to spawn the worst events, but they may also be more predictable
- Smithsonian National Museum of Natural History, Climate and Human Evolution, <http://humanorigins.si.edu/research/climate%20research>

Activities

The following activities are from the Indiana 4-H Weather and Climate Science manual.

| Page | Activity Suggestions | Materials Needed | Time (min.) |
|----------------------------|---|--|-------------|
| <i>Comparing Climates</i> | | | |
| 3-5 | Youth learn about temperate, desert, tropical, and tundra climates. | Pencil and dictionary or other resource, copies of pg 4 | 30 |
| <i>Country of Colors</i> | | | |
| 6-7 | Youth learn about the USDA Hardiness Zone map and the zone where they live. | Copies of pg 7, colored pencils. Internet (optional). | 30 |
| <i>Earth's Surfaces</i> | | | |
| 10-11 | Youth study the effect of color on sun's heating power and consider how this phenomenon might affect weather. | Thermometer, desk lamp, clock, construction paper, copies of pg 11 | 30 |
| <i>Invisible Air</i> | | | |
| 14-16 | Youth learn about the properties of air. | Glass jar, plastic straw, hot glue, food coloring, ice, towel | 30 |
| <i>'Tis the Season</i> | | | |
| 19-21 | Youth use their own knowledge to explore the changing seasons. | Copies of pp 19-21 and crayons | 30 |
| <i>Weather Alerts</i> | | | |
| 27-29 | Youth complete a word search to learn important weather terminology. | Copies of pg 28, pencil | 30 |
| <i>Weather or Climate?</i> | | | |
| 30-31 | Youth learn the difference between weather and climate and determine if a particular statement is about weather or climate. | Copies of pp 30 & 31, pencil | 30 |