**Curriculum Development**

**GOAL**

Communicate science effectively to those learning in informal settings (outside the formal classroom)

**MAJOR COMPONENTS**

- Curriculum Development Team
  - Planning – audience, goals, objectives
    - Logic Model
    - Scope & Sequence
  - Writing – template, experiential learning
    - Edits and Reviews
    - Pilot Test
    - Revisions
      - Design & Layout
      - Web Accessibility
      - Printing & Marketing

**Weather & Climate Science Curriculum**

**LEVEL 1:** Activities focus on basic weather terms and concepts and helps students understand the difference between weather and climate.

- Weather terms and Earth’s Surfaces
  - Air and H2O
  - Comparing Climates
    - Weather Processes
    - Weather – or – Climate?

**LEVEL 2:** More complex weather topics and understanding climate. Also, making and using weather instruments.

- Clouds
  - Earth Processes
    - Greenhouse Effect
    - Tornadoes and Hurricanes
    - Weather Topics
    - Weather Instruments

**LEVEL 3:** Delves deeper into weather and climate science concepts.

**WEATHER**

- CoCoRaHS
  - Weather Station Model
  - Weather Systems
  - Windchill and Heat Index

**CLIMATE**

- Climate and Climographs
  - Energy
  - Investigating Climate Change

**Context:** Youth outreach & engagement in workshops and club settings, service learning projects, mentoring and classroom enrichment.

**Facilitator’s Guides** (one/youth manual) include:

- Note To Facilitator & overview of curriculum
- Learning Goals and Life Skills addresses
- The Experiential Learning Model
- Youth Development Stages
- Youth Manual Suggestions and Answers
  - The Big Picture – background information and why the topic is important
  - Facilitating the Activity – suggestions for working with youth doing the activities
  - Essential Questions – a discussion of possible answers to the experiential learning questions in the youth manuals
  - Next Generation Science Standards
  - Success Indicator – how the educator will know if youth understand essential ideas

For more information: Natalie Carroll, Professor, Purdue University, ncarroll@purdue.edu

The online manuals are available for download by youth and adults online at Purdue Extension’s The Education Store, www.edustore.purdue.edu. Enter “Soil and Water Science” or “Weather and Climate Science” in the Store Search box. Note: Level 1 is also available in print for each curriculum.