

Weather Watch - Junior Girl Scouts Weather Merit Badge

Date: September 27th, 10am to 1pm (9am-10am set up and registration / 1pm-2pm clean up and hand out of badges/certificates)

Location: Siebel Center, UIUC

Objective: Organize activities and presentations to give junior girl scouts the opportunity to earn the weather badge

Volunteers: We would like this activity to be fun and successful – we need volunteers! There are many different opportunities for people to participate in this activity. Help is needed for:

- *Write and organize workbook***
- *Set up activities (clean up) the morning (afternoon) of the event***
- *Organize and lead presentations***
- *Help group of girls go from one activity to the other***
- *Organization of the event – registration, certificates, etc.***

Main Event: A minimum amount of requirements need to be discussed for the badge. Requirements were selected and grouped into three main areas: Weather Basics, Weather Trends and Hazardous Weather. Each area includes a ± 20 minute presentation with demonstrations followed by hands-on activities. Three rooms have been reserved for each main area and will run simultaneously, each done 3 times for 3 different groups of girl scouts. The activities and presentations in each room should last **an hour**. The topics that should be addressed per area are:

A) **Weather Basics**

- a. Explain Pressure
- b. How wind blows
- c. Temperature-Pressure-Wind Relationship
- d. Moisture and its relation to temperature
 - i. Water vapor
 - ii. Dew point temperature
 - iii. Wet bulb temperature

Activities:

- a. Use of plungers to demonstrate pressure
- b. Water bottles and piece paper to demonstrate wind
- c. Can crusher experiment to demonstrate pressure
- d. Making frost and discussion between similarities between Dew point and frost

- e. Making temperature readings of room temp., wet bulb temp, thermometer under a lamp, dew point and frost.

B) Weather Trends

- a. Show typical airmasses and talk about fronts
 - i. Water tank with cold/blue and warm/red water
- b. Relate clouds to fronts
 - i. Template with cloud types used for ATMS 100
- c. Pick which clouds to talk about and make cloud chart

Activities:

- a. Cloud Bingo/Tic-tac toe
 - a. Make them do their own board so it works as cloud chart
- b. Growing season
 - a. Maybe use 100 activity for growing season
- c. How it is affected by el Niño, la Niña, rain, etc.
- d. Global warming
- e. Maybe how other crops in other locations/countries are being affected

C) Hazardous Weather

- a. Point out all hazardous weather in Central Illinois and the prevailing seasons.
- b. Safety plan and weather safety discussion
- c. Reading weather maps
- d. Interview a Meteorologist

Activities:

- a. Tornado in a bottle
- b. Fact or myth exercise on weather safety
- c. Think of questions to ask the meteorologist

Requirements: The girl scouts are required to discuss a number of topics to earn the badge. The following topics were selected and are integrated in some form into the three areas presented above:

1. Weather Maps – Learn to read a weather map - identify places where it's raining, or places where it's hot or cold.
2. Interview a Meteorologist – Find out what kinds of equipment are used to watch and predict weather, why weather stations are useful, how the data about weather are interpreted, and how accurate weather predictions usually are.

3. Become a cloud watcher – Find out about types of clouds and the kinds of weather that usually go with them. Make a cloud chart by drawing pictures or magazine photos on a piece of paper. Label each type of cloud and use the chart to predict the weather.

4. Build a weather instrument – Find directions for building an instrument that helps you predict the weather.

5. Weather smarts – Find out about weather-related emergencies that your community might face. Create a family plan for each emergency situation that could affect your area. Then do one thing that will help your family be better prepared for a weather emergency.

6. Weather Trends – Find out more about La Niña, El Niño, global warming or ozone hole and learn how this weather trend is affecting the climate and quality of life in your part of the country or another part of the world. What if anything can you or your community do to learn to live with the changes in weather cycles.

7. Make your own weather

8. Airmasses and front demonstrations

Contacts: People interested in this activity can contact Allie Jones (aljones4@earth.uiuc.edu) or Marilé Colón Robles (mcolon2@earth.uiuc.edu).