

Weather Merit Badge Program at Huntley Meadows Park

Important information about how to prepare for a merit badge program at Huntley Meadows Park.

Merit badges are also supposed to be done with the buddy system. *We highly recommend that you attend the program with your scout especially if he does not have a buddy*; the chances of your scout completing all the work for the badge, during the allotted time, increases dramatically when he is properly motivated. There is never a fee for adults and you are sure to learn something. Also our policy is that the program will not proceed if there are not 2 or more adults present for the program especially those containing hikes. We will attempt to enlist adult volunteers from our center but this is not always possible so *prepare for the possibility that you may have to stay for the program and not just drop off your scout*. This will allow the instructor to concentrate more fully on the difficult task of imparting all the required information and assisting the boys individually if necessary, while other adults keep the atmosphere calm and productive.

These programs are 3-5 hours long be sure to pack a snack and water for your scout and that he is dressed appropriately for being outdoors for some or all of the program time. Merit Badges are in general not designed to be completed in an afternoon therefore in order to complete the badge there is some work the scouts need to do outside of the workshop. We call this prework. We suggest this is done prior to the badge program date but we realize this is not always practical or possible, in these cases we will if requested sign partial cards and accept the assignments after the program of ask that your bring/ send back all the work and the card in order to sign off on the blue card all at once.

Please bring to class:

- Worksheet <http://meritbadge.org/wiki/index.php/Weather>
- Prework
- Blue card, pencil and clipboard
- Snack/drink
- Appropriate clothing to go outside to observe the weather

The following is what we will be doing during the chemistry badge if it is in **RED** it is prework!

1. Define meteorology. Explain what weather is and what climate is. Discuss how the weather affects farmers, sailors, aviators, and the outdoor construction industry. Tell why weather forecasts are important to each of these groups.
2. Name five dangerous weather-related conditions. Give the safety rules for each when outdoors and explain the difference between a severe weather watch and a warning. **Discuss the safety rules with your family, be prepared to briefly recap this discussion with instructor.**
3. Explain the difference between high and low pressure systems in the atmosphere. Tell which is related to good and to poor weather. Draw cross sections of a cold front and a warm front, showing the location and movements of the cold and warm air, the frontal slope, the location and types of clouds associated with each type of front, and the location of precipitation.
4. Tell what causes wind, why it rains, and how lightning and hail are formed.
5. Identify and describe clouds in the low, middle, and upper levels of the atmosphere. Relate these to specific types of weather.
6. Draw a diagram of the water cycle and label its major processes. Explain the water cycle to your counselor.

7. Identify some human activities that can alter the environment, and describe how they affect the climate and people.
8. Describe how the tilt of Earth's axis helps determine the climate of a region near the equator, near the poles, and across the area in between.
9. Do ONE of the following:
 - a. Make one of the following instruments: wind vane, anemometer, rain gauge, hygrometer. Keep a daily weather log for one week using information from this instrument as well as from other sources such as local radio and television stations, NOAA Weather Radio All Hazards, and Internet sources (with your parent's permission). Record the following information at the same time every day: wind direction and speed, temperature, precipitation, and types of clouds. Be sure to make a note of any morning dew or frost. In the log, also list the weather forecasts from radio or television at the same time each day and show how the weather really turned out.
 - b. Visit a National Weather Service office or talk with a local radio or television weathercaster, private meteorologist, local agricultural extension service officer, or university meteorology instructor. Find out what type of weather is most dangerous or damaging to your community. Determine how severe weather and flood warnings reach the homes in your community.
10. Do ONE of the following: (**Scout may give presentation during program, however, all research and props must be ready before program starts and talk must last FIVE minutes, under five minutes will not qualify**)
 - a. Give a talk of at least five minutes to a group (such as your unit or a Cub Scout pack) explaining the outdoor safety rules in the event of lightning, flash floods, and tornadoes. Before your talk, share your outline with your counselor for approval.
 - b. Read several articles about acid rain and give a prepared talk of at least five minutes to a group (such as your unit or a Cub Scout pack) about the articles. Before your talk, share your outline with your counselor for approval.
11. Find out about a weather-related career opportunity that interests you. Discuss with and explain to your counselor what training and education are required for such a position, and the responsibilities required of such a position.