



WEATHER

Merit Badge Requirements OKPIK 2008 – The Tecumseh District Winter Adventure

It will help to bring your Scout Handbook and a troop copy of the Merit Badge Pamphlet

Attendance at Okpik or taking any part of this Merit Badge will not assure earning it while at Okpik. You will need to complete all requirements as defined. If it says “explain,” you will need to verbally explain. If it says “do” then you shall do as required. “Show” means to satisfactorily demonstrate the skill. “Describe” can be in written or verbal form.

Pre-requisites – 2, 6, 10 - bring written report and drawings to camp.

Post-requisite – 9 a or b can be done after OKPIK or before WITH PRIOR APPROVAL of your material from your Counselor.

Requirements 3, 7 - should be studied and completed PRIOR TO OKIPIK but will also be presented at camp. If you do not do these requirements in advance, you will not have time to also do the Wilderness Survival Merit Badge.

Requirements 8 and 9 can be done with your Troop Leader prior to OKPIK.

Requirement 8a can be done prior to OKPIK, but not needed.

Requirements 1, 4, 5, 8b, will be all also done at OKPIK.

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.
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. Define acid rain. Identify which human activities pollute the atmosphere and the effects such pollution can have on people.
8. 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, 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.
9. Do ONE of the following:
 - 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.
10. 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.

Requirement 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.

_____ Completed ____/____/____ Counselor _____

Requirement 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.

- 1. _____
 - 2. _____
 - 3. _____
 - 4. _____
 - 5. _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____

Demonstrate to your counselor that you know these conditions.

These can be found in the merit badge book. Completed ____/____/____ Counselor _____

Requirement 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.

These can be found in the merit badge book. Completed ____/____/____ Counselor _____

Requirement 4

Tell what causes wind, why it rains, and how lightning and hail are formed.

These can be found in the merit badge book. Completed ____/____/____ Counselor _____

Requirement 5

Identify and describe clouds in the low, middle, and upper levels of the atmosphere. Relate these to specific types of weather.

_____ Completed ____/____/____ Counselor _____

Scout name _____

Troop _____

Requirement 6

Draw a diagram of the water cycle and label its major processes. Explain the water cycle to your counselor.
(bring with you on a separate sheet or draw here)

_____ Completed ____/____/____ Counselor _____

Requirement 7

Define acid rain. Identify which human activities pollute the atmosphere and the effects such pollution can have on people.

These can be found in the merit badge book. Completed ____/____/____ Counselor _____

Requirement 8 (8b will be done at OKPIK)

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, 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.

_____ Completed ____/____/____ Leader or Counselor _____

Requirement 9

Do ONE of the following:

- 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.

_____ Completed ____/____/____ Leader or Counselor _____

Requirement 10

How would you protect yourself from: (Can be filled out in advance of OKPIK)

Insects: _____

Reptiles: _____

Bears: _____

_____ Completed ____/____/____ Counselor _____

Requirement 11

List 3 effective ways that you can treat water found in the outdoors to prepare it for drinking. Demonstrate them to your counselor.

- 1) _____
- 2) _____
- 3) _____

_____ Completed ____/____/____ Counselor _____

