



Weather

Merit Badge Workbook

This workbook can help you but you still need to read the merit badge pamphlet.

The work space provided for each requirement should be used by the Scout to make notes for discussing the item with his counselor, not for providing the full and complete answers. Each Scout must do each requirement.

No one may add or subtract from the official requirements found in **Boy Scout Requirements** (Pub. 33216 – SKU 34765).

The requirements were last issued or revised in 2007 • This workbook was updated in June 2012.

Scout's Name: _____ Unit: _____

Counselor's Name: _____ Counselor's Phone No.: _____

<http://www.USScouts.Org> • <http://www.MeritBadge.Org>

Please submit errors, omissions, comments or suggestions about this **workbook** to: Workbooks@USScouts.Org
Comments or suggestions for changes to the **requirements** for the **merit badge** should be sent to: Merit.Badge@Scouting.Org

1. Define meteorology. _____

Explain what weather is and what climate is.

Weather: _____

Climate: _____

Discuss how the weather affects farmers, sailors, aviators, and the outdoor construction industry.

Farmers: _____

Sailors: _____

Aviators: _____

Outdoor construction: _____

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.

Condition	Safety Rules
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____

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.

Cold Front	Warm Font
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4. Tell what causes wind, why it rains, and how lightning and hail are formed. _____

What causes wind: _____

Why does it rain: _____

How lightning is formed: _____

How hail is formed: _____

5. Identify and describe clouds in the low, middle, and upper levels of the atmosphere. _____

Low: _____

Middle: _____

High: _____

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, or hygrometer.

Keep a daily weather log for 1 week using information from this instrument as well as from other sources such as local radio and television stations or 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.

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Time							
Wind Speed							
Direction							
Temperature							
Precipitation							
Cloud Types							
Dew or Frost							
Forecasted							
Actual							

- 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.

Date: _____ Location: _____ Person's name: _____

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 5 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 more than 5 minutes about the articles to your unit. Before your talk, show your outline to 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.

Training: _____

Education: _____

Responsibilities: _____

Requirement resources can be found here:
http://www.meritbadge.org/wiki/index.php/Weather#Requirement_resources

Important excerpts from the [‘Guide To Advancement’](#), No. 33088:

Effective January 1, 2012, the ‘Guide to Advancement’ (which replaced the publication ‘Advancement Committee Policies and Procedures’) is now the *official* Boy Scouts of America source on advancement policies and procedures.

- **[Inside front cover, and 5.0.1.4] — Unauthorized Changes to Advancement Program**
No council, committee, district, unit, or individual has the authority to add to, or subtract from, advancement requirements.
(There are limited exceptions relating only to youth members with disabilities. For details see section 10, “Advancement for Members With Special Needs”.)
- **[Inside front cover, and 7.0.1.1] — The [‘Guide to Safe Scouting’](#) Applies**
Policies and procedures outlined in the ‘Guide to Safe Scouting’, No. 34416, apply to all BSA activities, including those related to advancement and Eagle Scout service projects. [Note: Always reference the online version, which is updated quarterly.]
- **[7.0.3.1] — The Buddy System and Certifying Completion**
Youth members must not meet one-on-one with adults. Sessions with counselors must take place where others can view the interaction, or the Scout must have a buddy: a friend, parent, guardian, brother, sister, or other relative —or better yet, another Scout working on the same badge— along with him attending the session. When the Scout meets with the counselor, he should bring any required projects. If these cannot be transported, he should present evidence, such as photographs or adult certification. His unit leader, for example, might state that a satisfactory bridge or tower has been built for the Pioneering merit badge, or that meals were prepared for Cooking. If there are questions that requirements were met, a counselor may confirm with adults involved. Once satisfied, the counselor signs the blue card using the date upon which the Scout completed the requirements, or in the case of partials, initials the individual requirements passed.
- **[7.0.3.2] — Group Instruction**
It is acceptable—and sometimes desirable—for merit badges to be taught in group settings. This often occurs at camp and merit badge midways or similar events. Interactive group discussions can support learning. The method can also be attractive to “guest experts” assisting registered and approved counselors. Slide shows, skits, demonstrations, panels, and various other techniques can also be employed, but as any teacher can attest, not everyone will learn all the material.

There must be attention to each individual’s projects and his fulfillment of *all* requirements. We must know that every Scout — actually and *personally*— completed them. If, for example, a requirement uses words like “show,” “demonstrate,” or “discuss,” then every Scout must do that. It is unacceptable to award badges on the basis of sitting in classrooms *watching* demonstrations, or remaining silent during discussions. Because of the importance of individual attention in the merit badge plan, group instruction should be limited to those scenarios where the benefits are compelling.
- **[7.0.3.3] — Partial Completions**
Scouts need not pass all requirements with one counselor. The Application for Merit Badge has a place to record what has been finished — a “partial.” In the center section on the reverse of the blue card, the counselor initials for each requirement passed. In the case of a partial completion, he or she does not retain the counselor’s portion of the card. A subsequent counselor may choose not to accept partial work, but this should be rare. A Scout, if he believes he is being treated unfairly, may work with his Scoutmaster to find another counselor. An example for the use of a signed partial would be to take it to camp as proof of prerequisites. Partials have no expiration except the 18th birthday.