



Weather

Merit Badge Workbook

This workbook is not required but is designed to help you with this merit badge. No one can add or subtract from the Boy Scout Requirements #33215. Use page backs & add pages as needed. Please send comments to: craig@craiglincoln.com. Requirements revised: 1999, Workbook updated: January 2004.

Scout's Name: _____ Unit: _____

Counselor's Name: _____ Counselor's Ph #: _____

1) Define meteorology. _____

Explain how the weather affects farmers, _____

sailors, _____

aviators, _____

and the outdoors construction industry. _____

Tell why weather forecasts are important to each of these groups:

farmers, _____

sailors, _____

aviators, _____

and the outdoors construction industry. _____

2) Name five dangerous weather-related conditions. Give the safety rules for each when outdoors

1) _____

Safety Rules: _____

2) _____

Safety Rules: _____

3) _____

Safety Rules: _____

4) _____

Safety Rules: _____

5) _____

Safety Rules: _____

and explain the difference between a severe weather watch and a warning. Discuss the safety rules with your family.

Warning: _____

Watch: _____

3) 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 the front, and the location of rain.

Tell the differences between a cold front and a warm front. _____

4) Tell what causes wind, _____

why it rains, _____

and how lightning and hail are formed. _____

Explain the difference between high- and low-pressure systems in the atmosphere _____

and tell which is related to good _____
and poor weather. _____

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

Low Atmosphere Clouds: _____

Type of weather: _____

Middle Atmosphere Clouds: _____

Type of weather: _____

Upper Atmosphere Clouds: _____

Type 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 _____

 as well as 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. The following information should be recorded 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.

| Information | 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 | | | | | | | |

- OR -

B) Visit a National Weather Service office or talk with a local radio or television weathercaster, private meteorologist, local agricultural Extension service office, 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 sever weather and flood warnings reach the homes in your community. _____

9) Do ONE of the following:

A) Give a talk of more than 5 minutes to your unit explaining the camping safety rules in the event of

lightning, _____

flash floods, _____

and tornadoes. _____

Before your talk, show your outline to your counselor for approval. *(Attach other pages as needed.)*

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. *(Attach other pages as needed.)*
