



# WEATHER

## The 2012 Spring PowWow Official Merit Badge Worksheet

Scout's Name

Instructor's Name

Scout's Address

City

State

Zip

### Instructions

- 1) The Scout is to review the merit badge book before the first week of PowWow.
- 2) Bring this work sheet, paper, and pencil or pen each week.
- 3) **Bring a Merit Badge blue card with you on the second week.**

### Requirement Instructions\*

- 1) Requirements 8 and 9 should be completed **either before the PowWow or as homework** between the two sessions of PowWow.
- 2) Requirements 1, 2, 3, 4, 5, 10 should be completed during the two sessions of PowWow.
- 3) Requirements 6 will be started at the first session of PowWow and should be completed as **homework** between the two sessions of PowWow.

**\*Due to possible time constraints at the PowWow, certain requirements that were originally planned to be completed in class may need to be completed as homework. Please LISTEN to ALL INSTRUCTIONS in class to be aware of any changes.**

### Requirement 1

**Initial**

Define Meteorology:

How does the weather affect farmers? Why are weather forecasts important to farmers?

How does the weather affect sailors? Why are weather forecasts important to sailors?

How does the weather affect aviators? Why are weather forecasts important to aviators?

How does the weather affect the outdoor construction industry? Why are weather forecasts important to the outdoor construction industry?

## Requirement 2

**Initial**

Name five dangerous weather-related conditions and give the safety rules for each when outdoors.

Condition: Safety Rules:

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Condition: Safety Rules:

Explain the difference between a severe weather watch and a warning:

Discuss the safety rules with your family and briefly describe what you taught your family:

## Requirement 3

**Initial**

Use another piece of paper to draw cross sections of a cold front and a warm front. Show the following on your diagram:

Location of cold and warm air.

Movements of the cold and warm air.

Frontal Slope.

Location of clouds.

Type of cloud associated with the front.

Location of rain.

What is the difference between high and low pressure systems in the atmosphere?

What pressure type is related to good weather?

What pressure type is related to bad weather?

## Requirement 4

**Initial**

What causes wind?

Why does it rain?

How is lightning formed?

How is hail formed?

**Requirement 5**

**Initial**

What type of clouds would you find in the low levels of the atmosphere? What kind of weather is related to these types of clouds?

What type of clouds would you find in the middle levels of the atmosphere? What kind of weather is related to these types of clouds?

What type of clouds would you find in the high levels of the atmosphere? What kind of weather is related to these types of clouds?

**Requirement 6**

**Initial**

On another piece of paper draw a diagram of the water cycle. Label all of its major processes. Attach the diagram to this worksheet and show it to your counselor.

Explain the water cycle:

**Requirement 7**

**Initial**

What is acid rain?

Identify some human activities that pollute the atmosphere and the effects the pollution can have on people:

Pollution causing activity: Effect:

Pollution causing activity: Effect:

Pollution causing activity: Effect:

Pollution causing activity: Effect:

Pollution causing activity: Effect:

**Requirement 8**

**Initial**

You have been given two options for this requirement. Select and complete ONE of them.

*Option 1:*

Make one of the following instruments and show it to your counselor:

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 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. Also list the weather forecasts from radio or television at the same time each day and show how the weather really turned out.

*Option 2:*

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.

Who/What did you visit?

Give a brief description of your visit:

What type of weather is most dangerous or damaging to your community?

How do severe weather and flood warnings reach the homes in your community?

**Requirement 9**

**Initial**

You have been given two options for this requirement. Select and complete ONE of them.

*Option 1:*

Speak for five minutes or more to your unit explaining the camping safety rules in the event of lightning, flash floods, and tornadoes. Before you speak, show your speech outline to your counselor for approval.

*Option 2:*

Read several articles about acid rain and give a prepared speech of five minutes or more to your unit. Before you speak, show your speech outline to your counselor for approval.

**Requirement 10**

**Initial**

Find out about a weather-related career opportunity that interests you. What did you choose?

What training and education are required for such a position?

What are the responsibilities of this position?

**Merit badge worksheets will not be accepted at the Council Office in place of the official Merit Badge Application Card. Those who do not complete all the requirements should take their partially completed merit badge worksheet and their official application card to their local merit badge counselors for completion.**