



Weather Merit Badge Workbook

SCOUTMASTER BUCKY

Scouts participating in a Scoutmaster Bucky merit badge opportunity, whether online or in person, should consider using the Weather merit badge pamphlet for discovery and knowledge, along with the class preparation pages for clarifications, insights, and expectations.

<https://scoutmasterbucky.com/merit-badges/weather/weather-pamphlet.pdf>

<https://scoutmasterbucky.com/merit-badges/weather/weather-cpp.pdf>

REQUIREMENT 10 REQUIRES COUNSELOR APPROVAL.

REQUIREMENT 1: Define meteorology.

Notes:

REQUIREMENT 1: Explain what weather is.

Notes:

REQUIREMENT 1: Explain what climate is.

Notes:



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REQUIREMENT 1: Discuss how the weather affects farmers, sailors, aviators, and the outdoor construction industry. Tell why weather forecasts are important to each of these groups.

FARMERS:

How weather affects this group of people:

How weather forecasts are important to this group of people:

SAILORS:

How weather affects this group of people:

How weather forecasts are important to this group of people:



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AVIATORS:

How weather affects this group of people:

How weather forecasts are important to this group of people:

CONSTRUCTION INDUSTRY:

How weather affects this group of people:

How weather forecasts are important to this group of people:



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REQUIREMENT 2: Name five dangerous weather-related conditions. Give The safety rules for each when outdoors.

DANGEROUS WEATHER CONDITION #1:

Name:

Safety Rules when Outdoors:

DANGEROUS WEATHER CONDITION #2:

Name:

Safety Rules when Outdoors:

DANGEROUS WEATHER CONDITION #3:

Name:

Safety Rules when Outdoors:



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DANGEROUS WEATHER CONDITION #4:

Name:

Safety Rules when Outdoors:

DANGEROUS WEATHER CONDITION #5:

Name:

Safety Rules when Outdoors:

REQUIREMENT 2: Explain the difference between a severe weather watch and a warning. Discuss the safety rules with your family.

Notes:



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REQUIREMENT 3: Explain the difference between high and low pressure systems in the atmosphere. Tell which is related to good and to poor weather.

Notes:

REQUIREMENT 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 each type of front, and the location of precipitation.

Consider using the [Weather Merit Badge Pamphlet](#) for preparation assistance

This requirement must be reviewed with your merit badge counselor.

BE PREPARED!



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REQUIREMENT 4: Tell what causes wind.

Notes:

REQUIREMENT 4: Tell why it rains.

Notes:

REQUIREMENT 4: Tell how lightning is formed.

Notes:

REQUIREMENT 4: Tell how hail is formed.

Notes:



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

LOW LEVEL ATMOSPHERE CLOUDS:

Identify and Describe:

Weather these type of clouds are related with:

MIDDLE LEVEL ATMOSPHERE CLOUDS:

Identify and Describe:

Weather these type of clouds are related with:



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UPPER LEVEL ATMOSPHERE CLOUDS:

Identify and Describe:

Weather these type of clouds are related with:

REQUIREMENT 6:

Draw a diagram of the water cycle and label its major processes. Explain the water cycle to your counselor.





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Draw Your Diagram Here:



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REQUIREMENT 7: Identify some human activities that can alter the environment, and describe how they affect the climate and people.

Notes:

REQUIREMENT 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.

Notes:



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DO ONE OF THE FOLLOWING (9A or 9B) FOR REQUIREMENT 9

REQUIREMENT 9a: Make one of the following instruments: wind vane, anemometer, rain gauge, hygrometer.

Consider using the [Weather Merit Badge Pamphlet](#) for preparation assistance
Be sure to bring your instrument with you to share with your merit badge counselor

This requirement must be reviewed with your merit badge counselor.

BE PREPARED!

REQUIREMENT 9a: 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 or guardian'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.

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Be sure to bring your logs with you to share with your merit badge counselor

This requirement must be reviewed with your merit badge counselor.

BE PREPARED!

Notes:



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DAY #1:

Day, Date, and Time	Wind Direction and Speed	Temperature	Precipitation	Types of Clouds	Morning Dew / Frost

Measurements from your instrument:

WEATHER FORECAST #1 DAY 1:

Source (radio, television, internet, other: including station name or call letters) and time of report:

Weather forecast:

WEATHER FORECAST #2 DAY 1:

Source (radio, television, internet, other: including station name or call letters) and time of report:

Weather forecast:



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DAY #2:

Day, Date, and Time	Wind Direction and Speed	Temperature	Precipitation	Types of Clouds	Morning Dew / Frost

Measurements from your instrument:

WEATHER FORECAST #1 DAY 2:

Source (radio, television, internet, other: including station name or call letters) and time of report:

Weather forecast:

WEATHER FORECAST #2 DAY 2:

Source (radio, television, internet, other: including station name or call letters) and time of report:

Weather forecast:



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DAY #3:

Day, Date, and Time	Wind Direction and Speed	Temperature	Precipitation	Types of Clouds	Morning Dew / Frost

Measurements from your instrument:

WEATHER FORECAST #1 DAY 3:

Source (radio, television, internet, other: including station name or call letters) and time of report:

Weather forecast:

WEATHER FORECAST #2 DAY 3:

Source (radio, television, internet, other: including station name or call letters) and time of report:

Weather forecast:



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DAY #4:

Day, Date, and Time	Wind Direction and Speed	Temperature	Precipitation	Types of Clouds	Morning Dew / Frost

Measurements from your instrument:

WEATHER FORECAST #1 DAY 4:

Source (radio, television, internet, other: including station name or call letters) and time of report:

Weather forecast:

WEATHER FORECAST #2 DAY 4:

Source (radio, television, internet, other: including station name or call letters) and time of report:

Weather forecast:



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DAY #5:

Day, Date, and Time	Wind Direction and Speed	Temperature	Precipitation	Types of Clouds	Morning Dew / Frost

Measurements from your instrument:

WEATHER FORECAST #1 DAY 5:

Source (radio, television, internet, other: including station name or call letters) and time of report:

Weather forecast:

WEATHER FORECAST #2 DAY 5:

Source (radio, television, internet, other: including station name or call letters) and time of report:

Weather forecast:



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DAY #6:

Day, Date, and Time	Wind Direction and Speed	Temperature	Precipitation	Types of Clouds	Morning Dew / Frost

Measurements from your instrument:

WEATHER FORECAST #1 DAY 6:

Source (radio, television, internet, other: including station name or call letters) and time of report:

Weather forecast:

WEATHER FORECAST #2 DAY 6:

Source (radio, television, internet, other: including station name or call letters) and time of report:

Weather forecast:



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DAY #7:

Day, Date, and Time	Wind Direction and Speed	Temperature	Precipitation	Types of Clouds	Morning Dew / Frost

Measurements from your instrument:

WEATHER FORECAST #1 DAY 7:

Source (radio, television, internet, other: including station name or call letters) and time of report:

Weather forecast:

WEATHER FORECAST #2 DAY 7:

Source (radio, television, internet, other: including station name or call letters) and time of report:

Weather forecast:



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REQUIREMENT 9b: 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.

National Weather Service Office or Local Professional you visited or spoke with:

Date and Location of Visit:

REQUIREMENT 9b: Find out what type of weather is most dangerous or damaging to your community.

Notes:

REQUIREMENT 9b: Determine how severe weather and flood warnings reach the homes in your community.

Notes:



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REQUIREMENT 10:

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.

Outline:

COUNSELOR APPROVAL: IS REQUIRED.

Counselor's Name

Phone or Email

Counselor's Signature

Date

☐

approved

Group you will speak to:

Date and Location of Presentation:



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REQUIREMENT 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.

Selected Weather-Related Career Opportunity:

Training Requirements:

Education Requirements:

Responsibility Requirements: