Weather Merit Badge

OC BSA Council Online MB Program

Welcome to the Weather Merit badge course. This course will be held online through face to face Zoom sessions as well as completed through independent homework. Please read this syllabus in its entirety. You must virtually sign off that you have read this document on Google Classroom before you start this course.

**Prerequisites**

* Must be between ages: 11- 17

**Google Classroom code:**

**Materials needed:**

* Digital or hard copy of the Weather Merit Badge workbook (MBWB): <http://usscouts.org/mb/worksheets/Weather.pdf>
* You are expected to take notes, fill out descriptions and explanations while instruction is going on. **At the end of this course you must turn in your MBWB to receive credit for the Weather Merit Badge.** 
  + **All written or drawn work must be included either in or with your MBWB to receive credit**
* You may either turn in your online document as a PDF or Document **OR** take clear pictures of your hard copy.
* Pen/pencil **OR** the capability to type notes online. **Handwriting must be legible to receive credit.**
* A camera or phone with the capability to take photos in order to satisfy certain requirements.
* **Recommended**:

**Note for partial completement:** Requirement 9 will not be fully covered in this class. Counselor will approve the outline, but talk must be planned for later.

**Pre-Requirements and Research:**

* Look over the syllabus and requirements
* Make sure to do any prior research needed
* Have your MBWB – we will be working out of this and you will turn this in at the end

Be familiar with Requirement 1 before the first lesson

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.

**Schedule:**

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| --- | --- | --- | --- |
|  | **Date** | **Start Time** | **Description** |
| **Session 1**  **ZOOM** | - | -(1.5 hours) | Overview/ Introduction – introduce ourselves and the merit badge  Requirement 1   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.   Go over Requirement 9 (do at any point but due one Session 3)   1. 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 All Hazards, 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.    * We will discuss what each instrument is and ways scouts can make them at home    * Plan week of weather log for scouts    * Both instrument making instructions and weather log can be found in the Weather Merit Badge handbook |
| **Session 1 HW** | - | -(1-2 hours) | Requirements 2   1. Write out five dangerous weather-related conditions and 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.   Requirement 6   1. Draw a diagram of the water cycle and label its major processes. Be prepared to explain the water cycle to your counselor.   Start Requirement 9  Review 3, 4, and 8 to prepare   * Please go over requirements 3 and 4 to prepare for the next in-class lesson |
| **Session 2**  **Zoom** | - | -(1-1.5 hours) | Requirement 3   1. Scouts will explain the difference between high- and low-pressure systems in the atmosphere. Tell which is related to good and to poor weather. 2. In class, scouts will 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.   Requirement 4   1. Scouts will discuss what causes wind, why it rains, and how lightning and hail are formed.   Requirement 8   1. In class, scouts will 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.   Review Requirements 2 and 6   * Go over homework assignments * Have discussions about a few of the topics * BE PREPARED TO SHARE!   Go over Requirement 10   1. Prepare 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.  * scouts plan on what they will discuss * Get topic approval from counselor |
| **Session 2 HW** |  | -(2-3) | Requirement 5   1. Written: Identify and describe (in full sentences( clouds in the low, middle, and upper levels of the atmosphere. Relate all types of clouds to specific types of weather.   Requirement 7   1. Written: Identify some human activities that can alter the environment and describe how they affect the climate and people.   Start work on Requirement 10  Continue work on Requirement 9 |
| **Session 3 ZOOM** |  | -(1-1.5 hours) | Review requirements 5 and 7   * Go over homework assignments * Have discussions about a few of the topics * BE PREPARED TO SHARE!   Review Requirement 9   * Checking in to see how weather logs are going * Let counselor know if more time is needed, and a partial completion will occur |
| **Session 3 HW** |  | -(2-3 hours) | Requirement 11   1. 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 10 - send outline to counselor day before next zoom meeting  Requirement 9 – send weather logs and picture of instrument to counselor day before next zoom meeting |
| **Session 4**  **ZOOM** |  | -(1-1.5 hour) | Requirement 9 - will give more time if needed, but scouts will receive **partial completion** if necessary   * Send in weather logs the day before this session * Be prepared to share your findings and data   Review Requirement 11  Counselor will approve outlines for Req. 10   * Send in outline to counselor the day before this session * Counselor will approve during session * Plan for when scouts will present on their own   Wrap up |