

Meteorology



Meteorology

Meteorology is the study of the earth's atmosphere and especially the study of weather.

These notes cover the following topics:

1. The weather machine
2. The structure and physical characteristics of the atmosphere
3. Weather symbols
4. Global circulation
5. Air masses and air streams
6. Clouds
7. Fronts
8. Depressions & Anticyclones
9. Precipitation
10. Weather phenomena
 - (i) Fog & mist
 - (ii) Thunder & lightning
 - (iii) Tornado
 - (iv) Hurricane
 - (v) Hail
 - (vi) Frost & dew
 - (vii) Snow
 - (viii) Rain
11. Weather Forecasts and Prediction
12. Measuring the weather.

The Scout Meteorologist Badge has the following requirements (2003):

The Scout must complete these six activities.

1. Be able to explain and demonstrate how the following are measured:
 - Wind force and direction
 - Cloud type and amount
 - Temperature
 - Pressure
 - Rainfall amount
2. Keep a record of these weather conditions for at least two weeks.
3. Understand at least three different ways in which clouds are formed.
4. Know the typical weather produced in their own area by 'warm' and 'cold' air masses in summer and winter, noting the effects of land and sea. Understand the weather associated with a change of air mass at 'fronts'.
5. Know how synoptic weather maps are produced and be able to understand a simple map, with fronts and isobars, similar to those shown on television and printed in some newspapers. Relate their observations in requirement 1 to these maps.
6. Understand the effects of temperature, wind and water on the human body in cases of hypothermia and exhaustion.

This course fulfils many of the requirements of the Scout Meteorologist Badge, particularly the theory and understanding required in parts 1-5. Be selective! Many parts are more suited to older Scouts (14+). It is also particularly suitable for Explorers, Network and Leaders wishing to understand meteorology to support work in other awards, e.g. many outdoor activities, DofE programmes, and mountain and hillwalking courses.

Some pictures courtesy of the BBC Weather Centre (<http://bbc.co.uk/weather>), and Marshall Publishing Ltd, <http://www.marshallpublishing.com>