

Reading Guide for October 6

from Henson, *Rough Guide to Weather*

Chapter 1. The ingredients

p. 30. *Taking the weather's pulse.* This introduction outlines the progression of weather measurements from purely qualitative to quantitative. You don't need to remember anything specific from it.

pp. 30–34. “*Blowin' in the wind.*” This describes the instruments that have been used to measure properties of the air. Of more importance than the specific apparatus mentioned here are the variables measured.

p. 33 Box “*Humidity: it's all relative.*” This explains two useful scales for describing the amount of water vapor in air: **relative humidity** and **dew point**. Try to make sure you understand what each of these means.

pp. 34–37. “*Up, up and away.*” The first half of this section describes weather observations taken from above the Earth's surface. The second describes active sensing, including radar and lidar. None of this information is terribly crucial, except for the box on page 36.

p. 36 Box “*How to read a weather map.*” We will be looking a lot at weather maps, so familiarize yourself with this. It is pretty straightforward, except for the part about **isobars**. It describes how winds behave along isobars, but does not explain why. Just try to picture what it is describing.

pp. 43–44. *Climate Zones.* This introduction cautions about the uncertainties inherent in trying to define and classify climate. Read it through once.

pp. 44–45. “*From pole to tropic.*” Very brief overview of climate variation with latitude. Read it through once.

pp. 45–47. “*More to the picture.*” This first describes the phenomenon of **continentality**: the influence of land on climate. Look carefully at the maps on p. 46 to get an idea of global average temperature patterns throughout the year.

- Why do the biggest seasonal temperature swings occur in the Northern rather than the Southern hemisphere?

Another reason for this is given in the description of ocean currents in the paragraph breaking across pp. 46–47.

- Why do western Europe and western Canada experience warmer winters than inland locations at the same latitude?

Mountains and inland bodies of water also affect climate in predictable ways.

pp. 47–49. “*Climate and the land.*” Read this through once. We will spend time exploring the Koppen climate classification scheme in more detail in class.

p. 48. Box “*If warm air rises, why is Everest so cold?*” Read this, but don’t worry if it is confusing. We will explore it in class.