October 19, 2015

Finishing up Unit 11

The hydrologic cycle, hydrosphere, precipitation, runoff, groundwater, and water use. Evapotranspiration, potential and actual evapotranspiration, clouds, condensation, and condensation nuclei, example of weekend rain. Basic cloud types – stratus, cumulus, cirrus, and height modifiers such as altostratus and cirrostratus, and nimbostratus, cumulonimbus for rain clouds. Precipitation, formation mechanisms including the ice-crystal (or Bergeron) effect and collision coalescence, forms of precipitation, rain, snow, sleet, freezing rain, hail, The concept of the water balance, global variations in the water balance.

Unit 12

Air masses, source regions, maritime tropical, continental tropical, maritime polar, continental polar, continental arctic, maritime equatorial, movements of air masses. Lifting mechanisms; convergent-lifting precipitation, ITCZ, frontal precipitation – fronts, warm fronts, cold fronts; convectional precipitation, air-mass thunderstorms; orographic precipitation, rain shadow effect.

Unit 13 (Only doing a portion of the unit)

Two Weather examples: Hurricanes and Midlatitude Cyclones. Easterly waves, tropical depression/storm/cyclone, Hurricanes. Polar jet stream, cyclogenesis, Weather sequence in a midlatitude cyclone (p. 164).

Unit 14

Climate, climate normal, climate classification (and pros and cons). Koppen climate classification system, Major Koppen groups [First Letter]: A (Tropical), B (Dry), C (Mild Mid-latitude), D (Severe Mid-Latitude), E (Polar), H (Highland). [Second Letter]: f, m, w (Tropical modifiers), s, w, f (C & D modifiers)T, F (Polar modifiers), S, W (Dry modifiers), concept of the hypothetical continent