Theme: Canadian Fire Weather Index (FWI) system & Other Fire Weather Metrics
(See the Online Schedule for Week 5 for links)

A. FWI MOISTURE CODES (FFMC, DMC & DC)   (fb11)
1. Explain the response times, and types/sizes of fuels, associated with the three different moisture codes: FFMC, DMC, and DC.
2. Compare and contrast the different weather variables that are used to compute FFMC, DMC, and DC.
3. What are typical "very high" values of FFMC, DMC, and DC.
4. Using https://firesmoke.ca/forecasts/fireweather/current/ and zooming into south central British Columbia, do screen captures of the FFMC, DMC, and DC (please include the legends in your screen captures).

B. BUILD-UP INDEX (BUI) and INITIAL SPREAD INDEX (ISI)   (fb14)
1. What weather factors influence the BUI?
2. What weather factors influence the ISI?
3. What is the utility (usefulness) of the BUI?
4. What is the utility of the ISI?
5. What range of BUI values is considered to be "very high"?
6. What range of ISI values is considered to be "very high"?
7. Using https://firesmoke.ca/forecasts/fireweather/current/ and zooming into south central British Columbia, do screen captures of the BUI and ISI (please include the legends in your screen captures).

C. FIRE WEATHER INDEX (FWI) and DAILY SEVERITY RATING (DSR)   (fb15)
1. What two indices are used to calculate the FWI?
2. What fire weather observations are needed to calculate FWI?
3. What is the difference between FWI and DSR, and what do they tell you about the fire?
4. What is a typical range of FWI values that span from weak low-intensity fires to extremely intense fire behavior?
5. Using https://firesmoke.ca/forecasts/fireweather/current/ and zooming into south central British Columbia, do a screen capture of the FWI (please include the legends in your screen captures).
6. Using https://cwfis.cfs.nrcan.gc.ca/maps/fw and zooming in to south-central British Columbia, do a screen capture of the DSR.

D. OTHER FIRE WEATHER METRICS   (fb16)
1. Define the Vapour-Pressure Deficit (VPD). What variables are used in its calculation? Explain the practical interpretation of its values.
2. Define the Hot Dry Windy Index (HDWI). What variables are used in its calculation? Explain the practical interpretation of its values.
3. Define the Crossover index (CI). What variables are used in its calculation? Explain the practical interpretation of its values.
4. Define the Haines Index (VPD). What variables are used in its calculation? Explain the practical interpretation of its values.

E. FIRE BEHAVIOR PREDICTION (FBP) SYSTEM – OVERVIEW   (fb17)
1. What is the purpose of the FBP?
2. What are the 5 main types of inputs to the FBP?
3. What are the 4 primary outputs?
4. Using Bryam's equation, what fire intensity (kW/m) for a fire line that is advancing at 0.3 m/s through a forest with fuel mass of w = 15 kg/m^2 ? Assume a specific heat of combustion of H = 18,000 kJ / kg.