

# ECS TOOL DAY

## Sketch Exercise #7

### Measuring Parameters of Thermal Comfort (Kestrel Weather Meter, Bioclimatic Chart)

There are four environmental variables that determine our physical thermal comfort: air temperature, solar radiation, relative humidity and wind speed. Other variables such as clothing and metabolism are personal variables, which will not be estimated in this exercise.



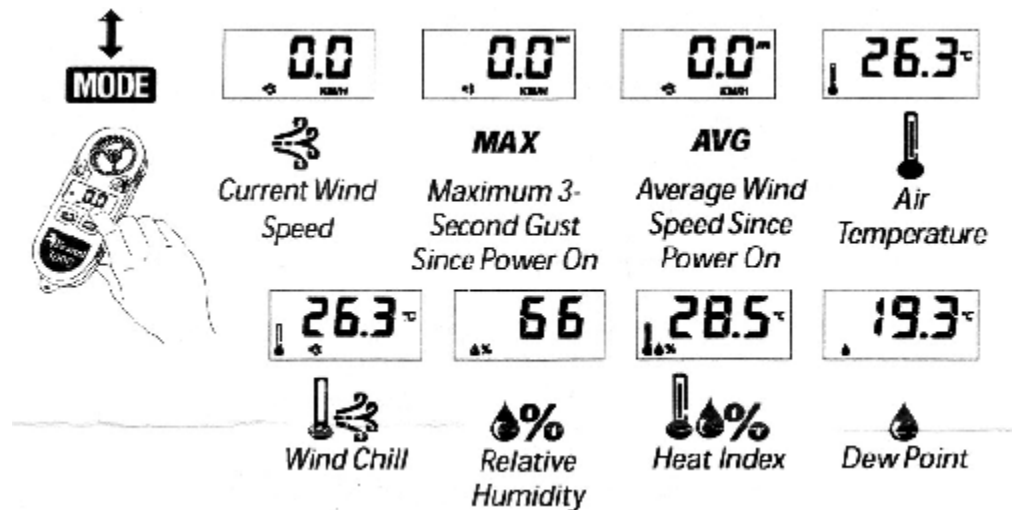
Your instrument of choice for this exercise is the Kestrel 3000 Weather Meter.

#### Your Challenge:

Determine whether an outdoor space meets the criteria for human thermal comfort.

#### Do this:

- Go outdoors and in 3 different areas try to find varied sun, shade, and wind exposures. In the chart below, record your sense of thermal comfort and the presence (or not) of solar radiation in each spot.
- Use the Kestrel to measure dry bulb air temperature, relative humidity, and wind velocity in each spot. Record your measurements in the chart below.



Mode chart for the Kestrel 3000 Weather Meter.

LOCATION			
Comfort (Y/N)			
Solar Radiation (Y/N)			
Dry Bulb Air Temp (°F)			
RH (%)			
Wind Speed (mph)			

3. Plot your measurements on a Bioclimatic Chart.

Do you agree with the chart's comfort assessments? If not, explain.

