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Garden Weather Station Class Outline Thanksgiving Point Gardens Mini Expo

Larry A. Sagers
Utah State University

Garden Weather Station Class Outline
Thanksgiving Point Gardens Mini Expo

I. Goals of this class are:
   A. List design questions for deployment of a garden weather station
   B. Survey garden weather station hardware
   C. Demonstrate the capabilities of a garden weather station.
   D. Introduce weather station internet resources

II. As you design your garden weather station there are some questions you need to ask yourself.
   A. What weather and weather related elements do I want to measure? This will build the list of sensors required.
   B. Do I want to record weather data? If so how? What reports do I want available for the data?
   C. Do I want to publish my data for others to use? If so what services do I want to use to do this?
   D. How much money and time am I willing to spend setting up and maintaining a weather station?
   E. Is there another source of weather data close enough to my garden to meet my needs?

III. Weather elements to measure - Use Garden Weather Station Checklist to collect requirements.

IV. Survey of classes of weather station hardware.
   A. Min/Max Thermometer
   B. Electronic Min/Max Thermometer with additional sensors
   C. Simple weather stations without data logging
   D. Weather stations with data logging

V. Weather Station hardware for the consumer market
   A. Davis Instruments
   B. Oregon Scientific
   C. LaCrosse Technology
   D. Honeywell
   E. One Wire Weather

VI. Software
   A. Data logger vs. Serial Port
   B. How is the data stored by the software? – Proprietary file format – database etc.. Is the data available to other programs.
   C. Options to publish on the web
   D. Options to publish data to NOAA, Wunderground etc
   E. Software that comes with your station
   F. Ambient Weather – Virtual Weather Station
   G. Open Source

VII. Demonstration of my weather station

VIII. Is there already a weather station near by?
   A. Utah Mesonet demonstration
   B. Wunderground demonstration

C. National Weather Service

Internet Resources
My weather station http://wx.uvci.com
Citizens Weather Observer Program: http://www.wxqa.com/
My data on CWOP: http://www.findu.com/cgi-bin/wxpage.cgi?call=CW4117&last=24
Wunderground.com: http://www.wunderground.com/
My data on Wunderground.com:
http://www.wunderground.com/weatherstation/WXDailyHistory.asp?ID=KUTLINDO1
Utah Mesonet: http://www.wrh.noaa.gov/slc/current/meso.slv.php

Weather Station Vendors
Davis Instruments: http://www.davisnet.com/
Oregon Scientific: http://www2.oregonscientific.com/
LaCrosse Technology: http://www.lacrossetechnology.com/
One Wire Weather – This is do it yourself. Here are some links to get you started.
http://www.hobby-boards.com/catalog/main_page.php
http://www.maxim-ic.com/products/ibutton/solutions/search.cfm?Action=DD&id=129
http://www.ibuttonlink.com/
http://e.webring.com/hub?ring=1wireweatherstat

Software
Many weather stations with communication ability come with software. Here are some others.
Ambient Weather: http://www.ambientweather.com/
Weather Display: http://www.weather-display.com/index.php
Wview (open source for Linux/Unix) http://www.wviewweather.com/
One Wire Weather (OWW also open source) http://oww.sourceforge.net/