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Building a Garden Weather Station

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The background of the slide features a light beige, marbled paper texture. On the left side, there are two dried, pressed plant specimens. One is a stem with a single, dark, pointed leaf extending upwards. The other is a stem with a single, dark, pointed leaf extending downwards. The text is centered on the right side of the slide.

Building a Garden Weather Station

Why?





Class Goals

- List design questions for a garden weather station
- Survey garden weather station hardware
- Demonstrate the capabilities of a garden weather station
- Introduce weather station internet resources



Design Questions

- What weather elements do I want to measure?
- Do I want to keep a record of weather data?
- Do I want to publish my data for use by others?
- How much money and time am I willing to spend building and maintaining my station?
- Is there an existing weather data source nearby?



Garden Weather Station Checklist

- Use to define criteria for what you want your weather station to do
- More Capability = More Money
- Review Garden Weather Station Checklist together



Classes Of Hardware

- Min/Max Thermometer
- Indoor Outdoor Thermometer
- Electronic thermometer with remote sensors, min/max and clock
- Simple weather stations with limited sensors and no automatic data logging
- Weather stations with a range of sensors and automatic data logging

Anatomy of a Weather Station

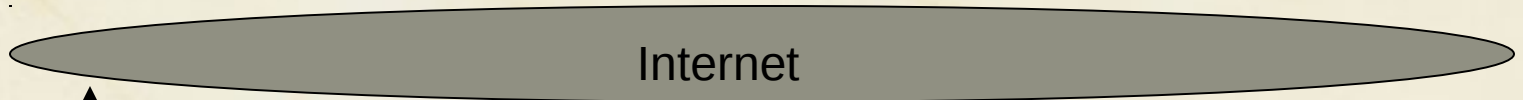
Sensors



Console



Computer with Weather Station Software




CWOP



Wunderground



Web Server



Is There Already a Weather Station Near You?

- Weather hobbyists enjoy sharing their data
- Check the Utah Mesonet or Wunderground for weather stations near you.
- Monitor your data and compare with a nearby station to see if it will meet your needs.



Personal Weather Station Manufacturers

- Davis Instruments
- Oregon Scientific
- LaCrosse Technology
- Honeywell
- One Wire

Davis Instruments

- High end near professional quality
- Data logger does not require a dedicated computer
- Wide range of add on sensors
- Support for multiple consoles



Oregon Scientific

- Inexpensive Consumer level hardware
- Limited additional sensors
- Data logging requires a dedicated computer



LaCrosse Technology

- Wide range of consumer level hardware
- Many options for additional sensors
- Data logging requires dedicated hardware*



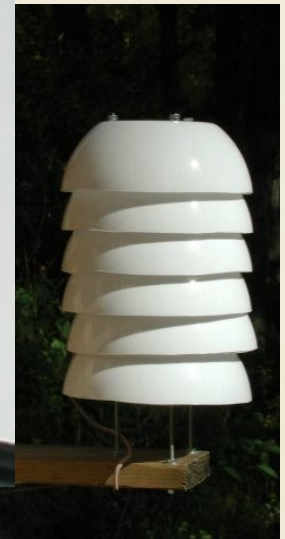
Honeywell

- Not a big name in personal weather stations
- Limited line of products



One Wire Weather

- Owner built weather stations
- Wide range of options available
- Many software packages available





My Weather Station

- Davis Vantage Pro II
- Additional Solar Radiation Sensor
- Additional Soil Moisture and Temperature Sensor with 4 inputs
- WView open source software
- Data is published to CWOP and Wunderground
- Sensors solar powered with battery backup





Internet Resources

- Utah Mesonet
- Wunderground
- National Weather Service

Internet Demonstration





Thank You For Attending

Questions?