

WEATHERRATS CURRICULUM FOCUS FOR PILOT YEAR 2005-2006

TECHNOLOGY/ENGINEERING

- Design process, building and designing instruments, using technology.
- How do instruments work? Instrument performance and characteristics.
- Technology as a tool, instrumentation design, quality assurance and quality control.
- How and why do we measure?
- Energy, building sustainable societies.

LOCAL

- Weather where you are...biometeorology.
- Decision-making: Do I need my jacket today? Should I put the cat out?
- Impact of weather on ecosystems and individual behavior.
- Morning weather report (communications) (extra-curricular).
- Impacts on human health (SAD, SARS), airborne contaminants.

GLOBAL

- River of Air (how things tie to together globally, comparing weather and climate and their impacts on different economies, cultures, diversity, etc.).
- Global Climate Change (natural and human).
- Stewardship.

HAZARDS AND HUMAN IMPACTS (SOCIOLOGY)

- Hurricanes, tornadoes, floods, winter storms, heat, lightning, drought.
- Warning and response issues, disaster preparation and mitigation, resistance, risk assessment.
- Forecasting and impacts on human decision-making, (i.e. energy consumption and conservation, evacuations, economic development, outdoor weddings, folklore, Farmer's Almanac, calling snow days).

INFORMATION TECHNOLOGY (IT)

- Data storage, archival, communication, web portal design.

Components of each section:

- ✓ Life issues: Relationships, interactions, "harmony", diversity, under-represented groups, implications/reflections/solutions.
- ✓ Educational Philosophy. Why are we doing this? PURPOSE!!!!
- ✓ Policy and involvement in local, state and federal government (activism).
- ✓ Basic weather concepts, radiation, seasons, variables, patterns, "cause and effect".
- ✓ Inquiry, scientific method.
- ✓ Mathematics, statistics, observing, recording, analysis, tools, peer interaction/communication.
- ✓ Community involvement, mentorship, partnership (CASA scientists, NWS, NOAA, etc.).
- ✓ Student application and use of IT (graphic design, spreadsheets, presentations, word processing, etc.).