

Scott McConaghy

Fire: the positives, negatives, and human impacts on the environment

SOLs: Life Science (3) Benchmark 4, Science in Personal and Environmental Perspectives (6) Benchmark 4

- Introduction
 - Introduce PINEMAP
 - what it promotes
 - what I learned this summer
 - What comes to mind when you hear the word 'wildfire'?
 - Make a list on the board without commenting on ideas
- Discussion of fire today
 - news segments and newspaper articles about devastating fire events
 - fire is a relevant topic in the world today
- Interdependence of organisms and their interaction with the physical environment (SOL #1)
 - carbon cycle
 - how carbon moves/transfers throughout the earth
 - principally, how fire cycles carbon
 - how carbon affects the atmosphere positively and negatively
 - fire's effect on biodiversity of plant species
 - importance of biodiversity in an ecosystem
 - how fire promotes biodiversity
 - regulates dominating plant species
 - seed dispersal of serotinous species
 - fire-tornado simulator display of opening a cone for seed dispersal
 - more biodiversity allows for more organisms in the ecosystem that are dependent upon certain species
 - fire resistance and intolerance
 - some plant species are more resistant or intolerant to fires
 - display tree samples and acorns
 - emphasize bark thickness for fire tolerance
 - thicker, more tolerant; thinner, less tolerant
- Effect of natural and human-influenced hazards (SOL #2)
 - fires are a natural event
 - lightning strikes
 - fires can be induced by humans
 - negligence

- fires can be suppressed by humans
 - potentially serious consequences
 - litter build-up on the forest floor
 - high-intensity, devastating fires
- Conclusion
 - discuss how the earth and all living aspects benefits from properly managed fires
 - revisit the list developed at beginning of talk and address the ideas that were put forth