Climate / Tree Ring Exercise

Climate/Tree Ring Lesson Plan - 45-60 min total

Watch 'Science Nation - Lord of the Tree Rings' video
(transition from tree ring to climate, 3 min)
http://www.youtube.com/watch?v=FAOYkx8En
Gc&feature=related

Have students read 'Tree Rings Have a Story to Tell'
and discuss (5 - 10 min)

Observations about tree ring photo in reading:
- Tree was not initially killed by fires
- Scars formed to protect living cells
- Oldest fire noted is 1652, but tree was much older
- Historically, this ring tells a story about growing conditions in the location where it grew for over 250 years

Distribute 'Ten Year Records of Monthly Average Temperatures and Precipitation in Central Colorado' (or have students view online) and 'Climate Worksheet' to each.

Have students complete the worksheet in class (15-20 min)
NOTE: NASA is the source for Climate Records[i]
- Only ten years of monthly averages are included, climatologists use 30 years for analysis
- Data has been converted from Kelvin and mm to Fahrenheit and inches

View the 'Interactive Worksheet', and as class, fill in scores for each year on one copy (5 min)

Bring up https://spark.ucar.edu/longcontent/tree-ring-interactive: 'Interactive classroom exercise on tree ring development'

Begin creating the website tree ring with their data (student verbal input), beginning with the oldest year and going forward. (10 min)

When done, click "View Specimen" for view of simulated tree cookie based on real climate data. This can be repeated with "imaginary" verbal data to compare cool/dry to warm/wet and other variations.

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[i] NASA climatology/tree ring page http://mynasadata.larc.nasa.gov/preview_lesson.php?&passid=95