Climate Change Collection Scorecard

Date: 2/18/05
Reviewer: Carrie Morrill
Name of resource: The climate time machine activity: Using fossil pollen to study climate change
Sponsoring Organization: UCAR and Maine Dept of Ed
URL: http://mainegov-images.informe.org/dep/air/education/pollenactivity.pdf, also http://www.ucar.edu/learn/1_2_2_10t.htm
Site Homepage: http://www.maine.gov/dep/air/education/ap101climatech.htm, also http://www.ucar.edu/learn
RESOURCE WITHIN A SITE? Y / N
FOUND THROUGH DLESE? Y / N
IF SO, WHICH COLLECTIONS? DLESE Community Collection, CRS Annotated Collection

RECOMMENDATION YES YES WITH RESERVATIONS NO
STARS 1 2 3 4 5 (LAME TO STELLAR)

NARRATIVE In this exercise, students use fossil pollen (represented by paper dots) to reconstruct climate in Washington and/or Colorado since the last glacial period. Students can compare their results with published results of scientists. Both sites contain similar versions of this activity.

INTENDED USE
___ REFERENCE
___ COMPUTER ACTIVITY
X NON-COMPUTER ACTIVITY

EDUCATOR OR LEARNER OR BOTH IF FOR LEARNER, EVIDENCE ITS BEEN TESTED? Y / N
BEGINNER OR ADVANCED OR BOTH

Easily Printed? Y / N

BUGS & TECHNICAL DIFFICULTIES (PROBLEMATIC TO ROBUST)
1 2 3 4

SCIENTIFIC ACCURACY (NATIONAL ENQUIRER TO NATIONAL GEOGRAPHIC)
1 2 3 4

EVIDENCE IT HAS BEEN REVIEWED FOR ACCURACY? Y / N

COMMENTS: Some of the background information at the UCAR site is incorrect. Annual layers in lake sediments are more rare than implied. Core length and sampling intervals stated are examples only; the cores I've worked on have been less than 1 meter long and sampled at 0.5 cm intervals. The question "Why are scientists who study climate change interested in past climate?" misses the major reasons we do paleoclimate research: to document the full range of natural climate variability, understand how the climate system works, and place current and future climate change in a longer-term context.

PEDAGOGICAL INFORMATION
___ REFERENCE ONLY
X TEACHER GUIDE
X MATERIALS LIST
X ASSESSMENT STRATEGIES
X TIMEFRAME PROVIDED
X STANDARDS ALIGNMENT

PROMOTES STUDENT LEARNING (WEAK TO STRONG)
1 2 3 4

COMMENTS: Exercise is interesting and interactive.

APPROPRIATE/EFFECTIVE MULTIMEDIA DESIGN (WEAK TO STRONG)
1 2 3 4

VISUAL APPEAL (WEAK TO STRONG)
1 2 3 4

TEACHING TIPS: Each of the two sites has added to the original EPA exercise in useful ways. The UCAR site has data from a second lake, in Colorado. The Maine site has a neat way of getting students to plot their data in a more quantitative way, useful data sheets and handouts (available at site homepage) and a tie-in to CO2 variations.
RECOMMENDATIONS FOR DEVELOPER: Improve accuracy of background information at UCAR site.