

# 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](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

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

TEACHER GUIDE

MATERIALS LIST

ASSESSMENT STRATEGIES

TIMEFRAME PROVIDED

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.*