Classroom Technology Reviews

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The Development of Plants: (1) Simple Photosynthetic Organisms—from Algae to Ferns, (2) Seed Plants—Gymnosperms and Angiosperms and **(3) How Plants Are Classified.** 1999. Clearvue/eav (6465 North Avondale Ave., Chicago, IL 60631-1996, 800-253-2788, FAX 800-444-9855, www.clearvue.com). Three Hybrid CDs. Purchase $75 each. CD.

System Requirements

Macintosh
- 68040 processor or later
- 12 MB RAM
- System 7.5 or later
- 256-color monitor
- 2X CD-ROM drive

Windows
- 486DX/66MHz processor or better
- 8 MB RAM
- 256-color monitor
- sound card
- 2X CD-ROM drive

Video files in this set of CDs did not play on my computer with the included version of the playback program, but did play with the latest version of the program from the Internet. There are more substantial reasons than the inclusion of a beta version of the video playback program that will probably lead you to look elsewhere for computer-based botany lessons.

The program resembles a filmstrip with audio and written text beneath the pictures. Yes, there are some other features that might be valuable, for example a customizable quiz and a glossary. There is even a grade book program that you can install on your hard drive. However, with the exception of the quiz opportunity, the program does not actively involve students. In addition to actively involving the student, a good program should engagingly present the appropriate content. Details of plant reproduction, with the accompanying vocabulary, seem misplaced in junior high school.

Although excellent photos appear throughout the programs, many photos and diagrams fail for a variety of reasons. Some pictures include far more than the material meant to be illustrated or are not closely related to the topic of discussion; for example, New Zealand flax plant is labeled "lignin," a cushion of moss gametophytes is labeled "rhizoids," and liverwort archegoniophores are shown for a discussion of archegonia and antheridia. Some pictures seem to be misplaced or incorrectly identified; for example, liverwort archegoniophores are shown during presentation of information about horsetail gametophytes, liverwort gemmae cups are shown during a discussion of sexual reproduction in ferns, and a member of the Division Chlorophyta is identified as cyanobacteria. Other failures include no clear image of the topic (dinoflagellates) and incorrect representation of structures in diagram (female reproductive structures in flowering plants). It is not difficult to find many similar problems in the content of this set.

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Habitats: Realm of the Tiger. 1998. Exxon Corporation, Irving, Texas. Two 50-minute videos, overhead transparencies, teaching aids, and teacher's guide. Purchase $40.00.

Exxon Corporation in cooperation with the National Geographic society has produced a complete package of educational materials centers about tigers and how tigers relate to the larger view of endangered species, environmental concerns, wildlife preservation, and human/animal coexistence. The material is aimed at middle school students, grades 5 through 9, but with careful selection could provide activities for both younger and older audiences. The package is complete containing two National Geographic videos (Land of the Tiger and Tigers in the Snow), a collection of 40 color transparencies, teachers guide, posters, activity sheets, flash cards, and trivia information. One video deals with tigers in India and the other with Serbian tigers. In addition there are maps showing habitat ranges and the depletion of these ranges over the past century. The material is excellent and the videos informative with the superb photography characteristic of the National Geographic Society. The transparencies, too, are colorful and sharp. Each comes with a brief explanation detailing what is represented. The teachers guide, approximately 100 pages, is divided into 10 separate areas: classification, biomes, habitats, populations, adaptations, predator/prey, life cycles, scientific inquiry, conservation, and reflection. The guide leaves nothing to chance. Each lesson contains appropriate background information, stated objectives, an activity time line (materials, pre-preparation, procedures, handouts, questions), assessment considerations, and references.

Each activity is targeted for specific sections in the videos, for specific transparencies, and for activity sheets and other handout materials. Master copies of these materials on quality stock are provided for duplication. Incorporated within the activities are group assignments, class discussions,

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outdoor activities, suggestions for field trips, and the use of external resource people. The posters, too, illustrate important aspects of the various lessons.

The videos reflect different areas pertaining to tigers and the efforts of humans to study and conserve the tiger population. Land of the Tiger presents Indian tigers located in two ecologically different regions and how these variations affect the tiger as it hunts and reproduces. Tigers in the Snow focuses more on man's attempt to study tigers and the efforts being made to preserve them in their natural habitat.

The material offers numerous suggestions for additional activities. Listed both as an integral part of the assignments and as a resource for further study are numerous Internet Web sites. One site in particular (www.5tiger.org) is an integral part of the Habitat: Realm of the Tiger program. Ordering information for the unit is also available at this site.

Depending upon the direction sought this package can serve as a starting point for discussion of animal behavior, animal study, conservation, ecology, sociology, population dynamics, and mathematics. Included in the package are charts from the National Science Teachers Association, the National Council of Teachers of Mathematics, and the National Council of Teachers of Geography indicating for each lesson the goals considered essential for successful teaching. Many of the activities fit more than one of these objectives.

The material draws attention to the Save the Tiger Fund established by Exxon and the National Fish and Wildlife Foundation in 1995. The fund has contributed greatly in assisting with the study and preservation of tigers throughout the world. The fund is currently active and seeks support of all interested in the well being of tigers.

The material contained within this package is complete and of high quality. A teacher can select any or all of the activities for class presentation and direct the presentation to a particular area of interest. Some of the material, coloring and game playing, is perhaps best suited to younger students. Other activities and the videos can be challenging to older students, including high school students. Of concern, perhaps, in the videos is a discussion, albeit tasteful, of male/female mating. Regarding the tiger's search for food, no actual kill is shown but the dragging of carcasses and the tearing of flesh from dead animals is clearly depicted and may not be appropriate for the younger student.

In summary the package is excellent, offering a multitude of ideas upon which to develop a variety of topics.

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Classical Animal Tracks, Wildlife Footage and Classic Rock-n-Roll. Environmental Media Corporation. (1102 11th St., Port Royal, SC 29935-2304; *http://wws.envmedia.com*; (800) 368-3382). A collection of 29 different short segments on VHS Video. Retail $89.95.

This video is a collection of short, well edited clips of different animals set to carefully chosen, upbeat classic rock selections. It is intended for fourth grade audiences and older. It is equally appropriate for the educational entertainment of high school and adult groups.

Each clip features one of the 29 different wild animals: penguin, wildebeest, mute swan, alligator, meerkat, tiger, hummingbird, albatross, ant, chimpanzee, kangaroo, elephant, squirrel, hippo, frogs and toads, bat, seal, giraffe, owl, hare, macaw, flamingo, whale, polar bear, lion, otter, coral, vulture, and red deer. As the animal clip runs and the music plays, short written phrases present educational information about the animals portrayed. Many of the phrases are anthropomorphic and some are difficult for children and non-native English speakers to quickly and entirely comprehend. The video is still useful because phrases are not needed to appreciate and enjoy the colorful, diverse, and beautifully edited animal video footage.

Since no consistent themes are perused within or between clips, the instructor has the freedom and task of devising effective lessons or activities. Unlike most narrated videos, the unique, general nature of this product allows it to be used for teaching a wide range of topics by a creative biology teacher. Footage on many ecology and natural history topics can be found.

A small, black and white, text only, 60-page Teaching Guide is included with the video. A three-page Introduction provides a suggested listing of AAAS science benchmarks that the video can be used to cover. Additionally, each video selection is described in the Teaching Guide. Each description includes the animal's common and scientific name; the song and artist performing; the animal's Phylum, Class, Order and Family; the written phrases appearing on the video; brief natural history trivia complementing each of the phrases; and a short bibliography.

Overall, the video is a good general resource for exploring topics such as animal diversity, classification, ecology, and animal behavior. Fourth graders through adults will enjoy the high quality video and upbeat music. This video can be used to enhance a lesson with live footage but does not provide enough information to be useful as a complete lesson. Though the facts are more trivia than a balanced natural history account, the Teaching Guide aids in navigation of the video and is a fine starting point for further research.

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