EDUCATION AND/OR ENTERTAINMENT
Archaeology and Prehistory in the Public Schools

by Charles E. Blanchard
Blanchard and Associates, Coventry, Connecticut

Successful entertainment may be measured on many levels, but most of it boils down to "feeling good." The entertainer feels good about the subject being introduced. The audience feels good about being introduced to the subject. As entertainment, archaeology is a natural.

Successful education is measured, ultimately, by behavior change, brought about as a result of the engendering of real understanding of the subject being introduced. As education, archaeology is a very tough nut.

Here is the kernel of the problem. Archaeology has for years been misintroduced as a treasure-hunting, collecting, object oriented entertainment. As a result, the public has become so object oriented and its misconceptions about the real business of archaeology are now so twisted by this object orientation, that deprogramming and behavior change teaching are now necessary. Ideally, some level of deprogramming ought to precede any responsible, concerted prehistoric education program.

When one is dealing with children, and with children’s teachers who have no background in real archaeology, this becomes very complicated. Children love to dig. It’s a natural activity for them. They just love to dig... anywhere. Their teachers reckon to tap that energy and give them an "archaeology project." Because that’s what archaeologists (legitimizing the activities of an over-extended childhood) do, isn’t it? Don’t they dig for old things?

The last two or three years have seen the publication of a number of very responsibly designed "sandbox dig" or "dig-in-a-bag" archaeology project kits. Some of them even get down to soil stratification and discoloration, and begin to discuss not only artifact context, but also the microcontext of organic matter, etc. Alas, though these kits have been inspired and introduced by archaeologists, the discipline involved begins to break down as soon as the archaeologist leaves. At a couple of removes from the original introduction, the lessons, though practiced by rote, degenerate into pot-hunting training.
Such projects, furthermore, even when they are perfectly and professionally administered, rarely go on for more than a week or two; then they are all over. The kids have had their eyes sharpened, their site recognition abilities raised, but with no continuing education or guidance provided, nor any supervised outlet for their digging energy. The result is usually an increased incidence of cultural resource disturbance local to the teaching area.

The problem lies with the fact that the actual lesson was "entertainment;" Indians, digging, pseudo-science, time travel, dirty knees, hands-on, etc., are all great hooks for keeping children occupied and enthusiastic.

The proper lesson, the one that needs to be taught, is nondisturbance of the resource, nondisturbance of the context and microcontext. "Education" would have begun to change the children's normal behavior, and would have begun to convince the children from a social point of view why they must not dig indiscriminately. And that requires a lot more creativity and thoughtfulness than merely capitalizing on their rooting energy.

There are some very well thought-out "waste basket" and "trash can" lessons which do a good job of teaching strata, and contextual-inference thinking, and these avoid "digging," per se, but they all have resource disturbance as their implicit and logical end. No matter what they may say, they are pushing contradictory goals and thus promoting, or at least perpetuating, wrong behavior. And this is just one type of teaching lesson that needs to be reviewed for entertainment as opposed to education value. There are a lot of very slick, expensively printed kits and concepts out there in increasing numbers that do not adequately address this fundamental concern.

What to do?

An approach to the design of local, state, and national education programs in prehistory and archaeology, a guiding architecture which can help to avoid the resource-destructive pitfalls that abound out there in the real world, needs to be developed. That architecture can be separated into three related phases: Teaching what we know, teaching how we know, and understanding why.

First, and most essential: Get the whole story out. Establish accurate, consistent parallel geologic, ecologic, and human time lines from the Paleo Indian period through "Contact" for each region for which one has responsibility. Make sure that this interdisciplinary timeline is well-represented and clearly understood, and that people are not mixing dinosaurs and Mayans and their own private notions of "Egyptian settlement of the Americas" with coastal, and mountain and plains cultural adaptations, and cave men.

Teach, in other words, what we know. If this is not done early, it constitutes the failure to answer a primary need for basic knowledge. Americans barely understand that anything happened on this continent before 1620 A.D. There is a tremendous knowledge gap to fill, and if it is not filled, then everything that follows will be listened to imperfectly and acted upon imperfectly. Integrated, regionally specific natural and cultural history must be clear in order to demonstrate human impact on environment and to generate an understanding of how interdependent upon one another people and their surroundings have been, and continue to be.

This can be done very effectively with low-technology, low-cost materials like charts, written scripts, maps, etc. Visual aids are helpful, but they are relatively expensive and difficult to keep current. Prehistory, amazingly enough, is a rapidly breaking story. Teacher and other personnel training comes importantly to the fore here, because all of one's staff ought to have the same information.

When this is well under way, it is reasonable to begin to teach how we know. That entails presenting the real work of archaeology, not as treasure hunting, and collecting, and (always) digging, but as a skilled, orderly forensic science which can solve the puzzles of the past. Here is where the long process of attitude and behavior change begins. Here is where emphasis on the undisturbed context of artifacts, microcontext of soils, ecofact recognition, etc., begins to make sense against the background of the unfolding story of Humankind in the Americas.

New, "time detective" heroes and career role models must be created and promoted for children and adults. Nondisturbance of cultural resources must be shown to be the only acceptable behavior. The environmental
education people are 10 to 15 years ahead in this regard, and pages should be taken from their book. Educational alliances should be formed with them. After all, what remains of the pristine environment often contains what remains of the undisturbed cultural resource. A very careful orchestration of teacher preparation, classroom activities, zooarchaeological and archaeobotanical demonstrations, study kits, propaganda videos, and field trips with destinations selected to reinforce "time sleuthing," rather than object seeking will be essential to this phase.

These first two architectural structures are referred to as phases, realizing that teaching "what" and "how" are bound to overlap one another in practice. The third phase, "understanding why," ought to grow out of phases one and two of a successful public education program in prehistory and archaeology, if they have been properly presented. Until people know the story of the continent's long prehistoric heritage, and how it is coming to be told, they cannot understand why the nonrenewable remains of that inheritance require protection and preservation.

When phases one and two are well taught, pride in shared ownership of cultural resources and a natural protective attitude toward them will follow. Exciting new knowledge of the world beneath one's feet does that. If you doubt it, consider the work of the environmental movement. Litter reduction, recycling, and pollution control measures are all manifestations of behavior change brought about by successful education and protectiveness growing out of expanded knowledge of the fragile nature of the environment.

National history (since 1620, at least) has been reasonably well taught with the result that one does not see the systematic looting of colonial and 19th Century burials around the country the way one sees on-going looting of aboriginal burials, almost as a rural American god-given right, all the way from Florida to Alaska.

The nation's prehistoric sites and shrines deserve the same reverence afforded its historic ones, and this understanding on the part of the public is the key to the creation of effective public stewardship. That is the behavior change being sought. That is what protection and preservation through education means.

Meanwhile, it seems clear that virtually all of the difficulties, from looting to lack of continued education funding, lie rooted in the essential problem of the narrowness of the knowledge base in prehistoric education and archaeology, and that a broadened knowledge base is the solution to that essential problem. Thus, each of us who is a part of that narrow knowledge base is involved in the task of public education to one degree or another, whether we like it or not.

There is a practical use, therefore, for the distinction made between archaeology as entertainment, and archaeology as a motivator of behavior change. That difference ought to be very much on the minds of state and national educators and cultural resource administrators. Somewhere between the two concepts lies the ultimate success or sad failure of the risky effort to open the world of archaeology and prehistoric research to the general public and illuminate those missing 12,000 years of our continental prehistory before Columbus misnamed the people who lived that history "Indians."

ARCHAEOLOGICAL PARKS, by Mary Kwas, Chucalissa Archeological Museum

Beginning with this issue the "Archaeology and Public Education" newsletter is introducing a new column devoted to the activities of archaeological parks (AP). Because archaeological parks serve as year-round centers for public education, it is important that archaeologists incorporate these sites into their overall public education efforts. Before that can be accomplished, however, it is necessary to understand what an archaeological park is.

An archaeological park is an archaeological site that has been preserved and made accessible for public visitation. Probably the best known archaeological parks are the mound sites of the eastern U.S., such as Cahokia, and the pueblo ruins of the Southwest.

Archaeological parks are managed by a variety of different agencies and exhibit a wide range of public
Agencies managing AP's include Federal, state, and municipal governments, as well as occasional private groups. They fall under various departments, such as museums, parks and recreation, and universities.

Development of an AP for the public may range from an unattended and uninterpreted park site to a complex facility with a museum, research center, and regular educational activities. Staffing, as well, may range from nominal caretakers to archaeologists and museum professionals.

No matter what else an AP may be, to the public it is very definitely a tourist attraction, one that brings in individuals from all walks of life and educational backgrounds and encompasses all ages. AP's also may be the only places that can regularly attract artifact collectors, opening a door to communication that might otherwise never be reached.

In many instances, public education efforts have been on-going at archaeological parks for years on a daily basis. Educators serving these facilities face the unique problems and opportunities of maintaining a year-round educational program that must offer activities for adults and children alike, and keep audiences returning for more.

One of the problems facing archaeological parks is the lack of recognition by archaeologists that these sites practice public education on a daily basis. Archaeological parks hold a unique place in public education precisely because of their daily contact with the general public. Archaeologists committed to public education must begin to recognize and utilize archaeological parks as the year-round centers of public education that they are.

As a step to alleviate the lack of recognition, this column will serve to disseminate information about the activities and developments in progress at archaeological parks, but it can't be done without your help!

Directors, educators, and archaeologists working with archaeological parks may send announcements and short articles about upcoming events or recent past activities, including but not limited to: festivals, craft classes, archaeology weekends, special exhibits, scout programs, school programs, etc. Also, I would like information on new facilities, changes in exhibits, personnel changes, volunteer activities, whatever you have.

I will compile the information you send for this column. Those of you working at archaeological parks, this is your opportunity to sing your own praises. Let me hear from you.

Announcements and articles may be sent to:

Mary L. Kwas  
Curator of Education  
Chucalissa Archaeological Museum  
1987 Indian Village Drive  
Memphis, Tennessee 38109

If you have any questions, call me at (901) 785-3160, Tuesday - Saturday.

Outreach Program Promotes Public Education in Archaeology for All Ages, by Cameron Quimbach, Archaeological Communications

Archaeological Communications is a private outreach program created to promote North American archaeology through public awareness and education. Originally created to enrich precollegiate curricula, Archaeological Communications, a private consulting firm, has expanded to teach people of all ages about North American prehistory and archaeology. We now provide teacher and adult workshops throughout the Midwest.

Through our efforts, we have found that adults are just as interested in learning about the past as their children are. Archaeological Communications is fulfilling that need by presenting interactive, hands-on seminars to state parks, public libraries, archaeology societies, museums, and anyone who wants to learn about the past.

Past workshops have been presented for the gifted and talented program at the Unified Public School District in Antigo, Wisconsin, at Van Meter State Park in Miami, Missouri, and at Angel Mounds Historic Site in Evansville, Indiana. Fall workshops are scheduled with the Lower White River Archaeological Society in Spencer, Indiana, Angel Mounds Historic Site in
Evansville, Indiana, and at Wolcott Mills Metropark in Washington, Michigan.

For further information on student programs or adult workshops, contact Mr. Cameron Quimbach or Ms. Katherine Kappus, c/o Archaeological Communications, 5267 Guilford Avenue, Indianapolis, Indiana 46220, (317) 925-6986.

**what's new**

**The Feds Lend a Hand**

A debt of gratitude is owed to the Bureau of Land Management (BLM) and the U.S. Fish and Wildlife Service (FWS). These two agencies assisted the Public Education Committee by reproducing and mailing Volume 1, Number 4 of the NEWSLETTER. In addition, they have agreed to provide this assistance over the long haul.

Beginning with this issue, the Corps of Engineers, Federal Highway Administration, Forest Service, Minerals Management Service, and Soil Conservation Service will be joining the BLM and FWS in this very important effort.

The Committee would like to spread the responsibility around. If your agency would be willing to tackle a portion of the mailing, please contact Ed Friedman, whose address and phone number appear on page 1.

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**TWO WORKSHOPS SLATED FOR 1992 SAA'S**

**Stewardship: A Hands On Experience:**

A Workshop for Archaeologists, Pre-College Teachers, and Youth Group Leaders

Stewardship, preparing our youth to become stewards and actively involving them in community projects, is the focus of this workshop. Shelley Smith, developer of Intrigue of the Past, BLM Utah, and Joyce Williams, co-leader of Educational Field School at the Southern Illinois University - Edwardsville, will present activities applicable for the classroom or informal educational settings. Each program's activities expand the topic of stewardship resulting in a sequential learning packet for each participant.

**Strategies For Effective Communications**

A Workshop for Archaeologists

Communicating with the "many general publics" about the findings and concerns of archaeology is crucial for the well being of the discipline. Archaeologists need to extend themselves to and communicate with the "many publics," using the language and culture of each individual audience. Archaeologists, to achieve this goal, must assess the audience's needs, focus the message, and determine how to evaluate the interaction.

If you are interested in assisting in developing these workshops, contact: Nan McNutt, P.O. Box 295, Petersburg, Alaska 99833, phone (907) 772-4809, FAX (907) 772-3184 (identify by Nan McNutt’s name).

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Seeking a Few Good People for the Network

The concept of a North American network for the public education effort is vital for assuring that programs are carried on and network links exist where they really work—at the grass roots level. Now the network plan is off the drawing board and under new leadership. Phyllis Messenger has agreed to take over the coordination function for the network and will be the point of contact. She can be reached at the University of Minnesota, in the Institute of International Studies, 214 Social Sciences Building, 267 19th Avenue South, Minneapolis, Minnesota 55455. Her telephone number is (612) 624-6527, FAX (612) 626-2242.

As of this writing, the following individuals have signed on to represent their respective state/province/territory:

Shawn Haley            Alberta
Delmer Sandburg        California
Susan Collins          Colorado
William Kikuchi        Hawaii
Mona Wright            Idaho
Cameron Quimbach       Indiana
Gwynn Henderson        Kentucky
Dorothy Krass          Massachusetts
Sandra Roe             Minnesota
Sheila Lewis and Jo Miles-Seely Mississippi
Carol Diaz-Granados    Missouri
Daniel Pagano, Jo-Ann Mclean and Leslie Eisenberg New York
Alan Tonetti and Martha Otto Ohio
Peter Peregrine and Phillip Neusius Pennsylvania
Bill Fawcett and Sue Linder-Linsley Texas
Linda Whitman          Wisconsin

If you have volunteered and your name does not appear on this list, please let Phyllis know. With the transition, we might have misplaced a letter, sorry!

Sixteen states/provinces is a fine starting point, but it needs to grow. As you can readily see, we still need representation in a number of states, provinces, and territories. If you want to get involved with the Network, please contact Phyllis.

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The Education Resource Forum Hits the Road

With leadership from KC Smith, the Intersociety Work Group includes representatives from SAA, Society for Historical Archaeology, American Anthropological Association, American Institute of Archaeology, and American Society for Conservation Archaeology, is making plans to take the Education Resource Forum to the annual meeting of the National Conference of Social Studies Teachers. These meetings are scheduled for November 22 - 25, 1991, in Washington, D.C.

Funding for this effort will be shared jointly by the public education committees of the Society for American Archaeology and the Society for Historical Archaeology. It is hoped that members of the respective societies will volunteer to staff the booth. If you can spare the time, please contact Louise Akerson at 6601 Bellevue Drive, Columbia, Maryland 21046, or call at (301) 396-3156.

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Proposal to Annotate the Education Resource Forum

In an effort to get educational information out to the greatest readership possible, Ed Friedman and KC Smith have contacted Frank McManamon of the National Park Service about publishing an annotated version of the Education Resource Forum list. The Park Service has agreed to include the list in their Technical Brief series which has a readership of over six thousand. Additionally, the Park Service has consented to do a print overrun so there will be copies available for us to hand out.

April 1992, has tentatively been set as the publication date, which will coincide with the SAA meeting in Pittsburgh. To meet this goal, we will need to have copy to the Park Service by February 1, 1991.

If you have developed or know of educational materials that were not included in the Education Resource Forum list, please let Ed Friedman and KC Smith know.
The purpose of Protecting the Past is to present some of the current and ongoing work regarding archaeological resource protection in a topically organized format. This book is written for a diverse audience in an effort to reach the people who can most effectively help decrease the amount of archaeological resource crime taking place in America. This audience consists of professional and avocational archaeologists, law enforcement personnel, attorneys, judges, politicians, educators, and by far the most influential group, the public. The challenge is to coordinate and focus the efforts of these diverse groups into a national program aimed at protecting the past for the future.

The topics and articles contained in this book have been specifically selected to address a variety of archaeological resource protection issues. The authors chosen were selected because of their topical expertise and active involvement in archaeological resource protection activities. As a result, a wide variety of perspectives is presented by authors from many diverse fields, including not only archaeology and law enforcement, but law, politics, education, museology, and marketing. The papers are organized into six chapters which are designed to address specific issues. An appendix contains policy statements by professional organizations regarding the protection of archaeological sites. There is an index to facilitate use.

The "Preface" contains comments from the past president of the Society for American Archaeology (Sabloff), a United States Senator who is and had been a leader in archaeological resource protection (Domenici), and the former Department of the Interior's Assistant Secretary for Fish and Wildlife and Parks (Harriman) regarding the need to protect the nation's archaeological resources. Their comments clearly point out the extent of the problem and the need for a coordinated effort to protect the nation's archaeological resources.

The "Forward" presents a personal overview of the development of archaeological resource protection in the United States, focusing mainly on activities in the 1960's and 1970's (McGimsey). These two decades saw a tremendous increase in the number of archaeological sites impacted by large construction projects as well as the number of professionals involved in archaeology, and an increased concern for protecting archaeological resources. It was during this important period that the method and theory of cultural resource management crystallized.

The first chapter in the book is "Archaeology and the Public." The concept of archaeological resources as part of the Public Trust is discussed (Knudson) as is the much quoted but little studied public attitude regarding archaeology and archaeological site protection (Pokotylo).

The second chapter, "Archaeology and the Law," discusses the following topics: the legal structure for archaeological resource protection in the United States and its basis in the principles of Federalism (Fowler); the development of historic preservation law and the political and social climate in which it developed from the late 1700's up to and including passage of the Archeological and Historic Preservation Act of 1974 (Friedman); the passage of the Archaeological Resources Protection Act of 1979 and the 1988 amendments to it (Cheek); the workings of Congress and how laws including those to protect archaeological
sites are made (Neumann); the development of state and tribal laws and public education programs to protect archaeological sites (Rogers and Grant); and the cooperative efforts between archaeologists, law enforcement personnel, and attorneys necessary to successfully protect archaeological resources (Hutt).

The types of archaeological data lost when sites are looted and the effect this has on interpreting the past (Nickens), and the extent and magnitude of the looting problem on Federal, Indian, and private lands (King, McAllister) are discussed in the chapter on "Archaeological Site Destruction."

The chapter on "Protecting Archaeological Sites through Education" contains articles on: saving sites through education (Lerner); involving the media in site protection (Milanich); community involvement in Florida and how it has increased public awareness and appreciation for archaeological resources resulting in increased site protection (Bense); writing archaeology for the public and the benefits for site protection (Auel); implementing anthropology and archaeology into precollege classrooms to instill the preservation ethic in the next generation (Rogge); a city wide archaeology program in Canada and how it has increased public awareness and appreciation for archaeological resources (Smardz); a national model for teaching conservation archaeology to children (McNutt); including archaeology in the existing school curriculum and the positive effect on site protection in Louisiana (Hawkins); the archaeologist as global educator teaching respect for other cultures, past and present (Messenger and Enloe); the use of marketing techniques to understand the problem of looting and effectively target archaeological resource protection programs (Shields); how avocational archaeology groups are assisting in protecting the past (Davis); details of a conference series on presenting the past to the public (Wells); the role of museums in protecting the past (Brose); sources of information on educational aspects of archaeological projects and information on prosecuted archaeological looting cases (Knoll); and sources of available training in archaeological resource protection (Waldbauer).

Examples of successful programs are discussed in the chapter entitled "Archaeological Site Protection Programs." Articles include: an example of a very successful Bureau of Land Management program to protect archaeological sites in Oregon (Schalk); efforts by American Indians to protect archaeological sites (Anyon); a National Park Service archaeological site monitoring program in Kentucky and Tennessee (Des Jean); the use of signs to inform the public about archaeological resource protection and the need to protect sites (Jameson and Kodack); how sites can be protected at the local level (Kearns and Kirkorian); protecting sites by involving the public in site protection efforts (Hoffman); the Federal Government's efforts to protect the nation's archaeological resources (McManamon); Society for American Archaeology efforts to protect the past (Reinburg); the results and recommendation of the Society for American Archaeology Anti-looting workshop (Judge); and how the Archaeological Conservancy is saving sites (Michel).

The final chapter, "The Future of Protecting the Past," outlines what has been done, what is being done, and what remains to be done if archaeological resources are to be preserved for future generations (Keel).

To order this important book, write CRC Press, Inc., at 2000 Corporate Boulevard, N.W., Boca Raton, Florida 33431. The catalogue number is TP8877EMJ.

DEADLINES & DUE DATES

To ensure your spot in the next issue of the NEWSLETTER, we need your material by November 1, 1991. Your submittals keep the readers informed. Send them to Ed Friedman, Bureau of Reclamation, P.O. Box 25007, D-5530, Denver, Colorado 80225-0007.
THE WORD IS SPREADING

It was reported in the last issue of the NEWSLETTER (Vol. 1 No. 4) that our readership reached 1,047. I am pleased to note that this issue will be going to 1,600 individuals.

Due to this unexpected (but wonderful!) growth in readership, we are no longer able to include the updates of the mailing list. If you are interested in receiving the Public Education Committee's mailing list, please contact Ed Friedman, 303-236-0926, or FTS 776-9026.

If we need to change your listing in the NEWSLETTER, please call or write Ed Friedman.

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Teaching About Cultural Encounters--Or How Do We Commemorate the Quincentennial?, by Phyllis Messenger, Director of Outreach, Institute of International Studies, University of Minnesota

The hoopla and public interest over the 500th anniversary of Christopher Columbus's first voyage to the Western Hemisphere will no doubt crescendo over the months leading to October 12, 1992. Those of us connected with archaeology and public education have at hand a mega-teachable moment. Archaeology has long played a major role in shaping our understanding of the indigenous cultures that inhabited the Americas, as well as the period of contact and conquest, and the colonial era that followed.

But how do we approach this topic, so shaped by stories from our childhood ("In 14 hundred and 92, Columbus sailed . . ."), yet now so fraught with ambivalence over the Euro-centric implications of even the language we have always used to describe it. Of special concern is making sure teachers have access to the kind of materials and support they need to present the stories of discovery, encounter, and exchange from the viewpoints of various participants. As one curriculum director put it recently when asked how his school planned to address the Quincentennial, "That’s such a controversial issue, I wouldn’t touch it with a ten-foot pole!"

As we educators become more skilled at acknowledging and celebrating our cultural pluralism, we do feel uncomfortable with the old stereotypes. We want to give better coverage to the Native American side of the story, both pre- and post-Columbus. We want to inject some reality into the Columbus-as-Hero myth and put his "discovery" in a more global context. We want to enrich the understanding of our hemisphere’s long past, just as Charles Blanchard so eloquently stated in the lead article of this newsletter.

Over the next several issues, we invite you to share how you or others are addressing these issues in education. How are you using archaeology in this context, and what, if any, are unmet needs? Not least of all, we want to consider how this teachable moment can be used to increase public awareness of the importance of preserving our cultural heritage resources. Contact Phyllis Messenger, Institute of International Studies, 214 Social Sciences, 267 19th Avenue South, Minneapolis, Minnesota 55455, phone (612) 624-6527, FAX (612) 626-2242.

One curriculum development and dissemination project currently underway is the Quincentennial Education Project of the Central America Resource Center in Minneapolis. A goal of the project is to bring multicultural sensitivity to the "genesis story" of the modern Americas. The project is a cooperative effort of many Minnesota organizations, such as the Earth Survival School. The project’s advisory committee created guidelines to assess historical accuracy, multicultural sensitivity, and suitability of materials on the 1492 history most often used in schools. This information is available for educators in packets that also include lesson plans, bibliographies, and background materials. Separate packets for grades K-6 and 7-12 are available for $5 each. A packet for teachers on national History Day 1992, whose theme is "Discovery, Encounter and Exchange in History: the Seeds of Change," including articles for students' projects, is $15. Contact the Quincentennial Education Project, Central America Resource Center, 317 17th Avenue, Southeast, Minneapolis, Minnesota 55414, phone (612) 627-9445.
THE SHOOT-OUT, by Carol Ellick, Statistical Research, Inc.

(This lesson is geared to fourth grade and higher)

The most important tool on an archaeological survey is a compass. Becoming proficient in its use takes a little practice. (See Newsletter Issue No. 4, "For The Classroom," for the basis of the lesson.) For the best results, I recommend using Silva basic liquid filled compasses. The least expensive liquid filled compass is under $10.00. Compasses without liquid are much more difficult to use, and the cheap ones tend to be less accurate and unable to take minor abuse. You will need one per child. Since these lessons work best as small group activities, you will not need to come up with one for every student in the class.

Begin the compass lessons with a classroom orientation to compass parts (see attached drawing, page 13). Some of the words might fit in nicely with the spelling words the week before the outside lesson. Copy off enough hand-outs of compass pans so that each student has his or her own work sheet. Compasses can be passed out to small groups of children so they can identify and compare the diagram to the real thing. There may be some minor differences. The direction that the North arrow is pointing may vary from compass to compass. This phenomenon is caused by the amount of metal in the building. For this reason, experimentation will need to take place outside.

Once outside, have each student hold the compass flat in his or her hands, pointing straight ahead, at about chest level. The children and the compasses should move as units, so that their bodies will always be headed in the direction that the compasses are pointing. The rotating ring should be rotated so that the compass needles move as they do. The next step is to find North. Students line up in a straight line and face their bodies so that the compasses and needles point North. Once oriented, each child can look straight ahead to see at what his or her needle is pointing. To walk a bearing, the student would walk toward the object, glancing from the object to the compass, making sure that he or she stayed on track. To walk South, have each student turn around, dial the rotating ring to South, so that the arrow points at 180°. The 180° mark will line up with the center line on the base plate of the compass. Have the student walk back, trying to keep the North arrow inside of the direction of travel arrow. This process can be repeated in all directions or to specific degrees until children are comfortable with the equipment.

THE SHOOT-OUT

Materials:
Scrap paper and pencil for each child
Compass for each child

Pair students up and scatter the pairs around you. Students stand back to back. On the word go, students take ten paces, turn and shoot the bearing of their partners by rotating the directional dial so that it matches over the north arrow. The bearing is read by looking at the number that is in line with the center line on the face plate of the compass. The number of degrees is written down on the scrap paper along with students’ names and the names of their partners.

Back inside, after all students have had a chance to take a bearing, draw a circle on the board and roughly mark off degrees by 5° increments. A list of opposite bearings is also helpful to write out, i.e. 360°-180°, 5°-185°, etc. Each student checks his/her own accuracy by seeing how close the recorded number is to being exactly 180° opposite his/her partner’s.

At this point in the lesson, it is a good time to begin an introduction on the protractor. To avoid confusion, try using protractors that only number off clockwise and are a complete circle. If these are unavailable, black out the numbers that will not be used. The next lesson will incorporate the protractor.

These lessons take some concentrated time, and it may take a week or more to cover the material, depending on how you are able to break up the day.
NEWSLETTER QUESTIONNAIRE

After one year of publication, the newsletter is ready for a review by its readers. The public education committee would like to know: what you read, what you find useful, and what you would like to see more of.

Please answer each question by checking the most appropriate answer. We look forward to hearing from you and hope to be able to better meet your needs and interests. Please return by November 1, 1991.

1. Do you read the newsletter?
   _____ The whole thing _____ Parts of it _____ Not at all

2. How often should the newsletter be published?
   _____ Quarterly, as it currently is
   _____ Twice a year
   _____ Three times a year
   _____ More often than it currently is

3. Is the general layout easy to follow?
   _____ Yes _____ No
   If no, how would you suggest changing it?

4. Do you read the cover story on the front page?
   _____ Yes _____ No _____ Sometimes
   What else would catch your interest on the front page?

5. Indicate your choice for the frequency of publication on the following columns

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<th>Every Issue</th>
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</table>

6. Have you read or used the columns?

<table>
<thead>
<tr>
<th>Column</th>
<th>I read it</th>
<th>Use the information</th>
<th>Don't read</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calendar of Events</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>Subcommittee Update</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>Comings and Goings</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>New Publications</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>What's New</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>Of Special Interest</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>Lesson for the Classroom</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
<tr>
<td>Mailing List</td>
<td>_____</td>
<td>_____</td>
<td>_____</td>
</tr>
</tbody>
</table>

7. How have you used the information in the columns?
8. Would you like to see more information on:
   
   | Public education programs |   | Yes | No |
   | Workshop                |   |     |    |

9. Would you attend an education workshop in your area:
   
<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>for archaeologists</td>
<td></td>
</tr>
<tr>
<td>for teachers</td>
<td></td>
</tr>
</tbody>
</table>

10. Would you be interested in:
    
    | Yes | No |
    |-----|----|
    | Joining a subcommittee task force? |    |    |
    | Writing an article for the newsletter? |    |    |

11. If you answered yes to question 14, please include your address here.

12. Are you a/an:
    
    | Yes | No |
    |-----|----|
    | Professional archaeologist |    |    |
    | Avocational archaeologist |    |    |
    | Archaeological educator |    |    |
    | Elementary school teacher |    |    |
    | Middle school teacher |    |    |
    | High school teacher |    |    |
    | College professor |    |    |
    | Other _______________________ |    |    |

13. If you are a teacher, what subjects do you teach?

14. Do you currently integrate archaeology in your classroom curriculum?
    
    | Yes | No |
    |-----|----|
    | If yes, what subjects are integrated? |    |    |

15. Have you tried any of the classroom lessons from the newsletter?
    
    | Yes | No |
    |-----|----|
    | Story in a bag |    |    |
    | Context |    |    |
    | Alternatives to taking it home |    |    |
    | Survey |    |    |

16. Have you shared the newsletter with colleagues or friends? (This is greatly appreciated as it helps spread the news.)
    
    | All | Part | None |
    |-----|-----|------|

17. Do you wish to continue receiving the newsletter?
    
    | Yes | No |
    |-----|----|

THANK YOU for taking the time to fill out the questionnaire. Additional comments can be made in the margins or on a separate sheet of paper. Please return by November 1, 1991, to: Carol J. Ellick, Statistical Research, P.O. Box 318656, Tucson, Arizona 85751.
COMPASS PARTS

NAME ___________________ DATE ___________________

Base Plate

Directional Arrow (Moves with Rotating Ring)

North Arrow (Magnetic)

Rotating Ring