REU Sites Program: Interdisciplinary Investigations at New Philadelphia

A) Overview
Brief description of objectives
This proposed NSF-REU sites program will help enhance undergraduate education in scientific methods and analyses in an ongoing long-term project at New Philadelphia. New Philadelphia, in Pike County, Illinois stood on Illinois’ western frontier from 1836 until its final demise in the early twentieth century. The primary goals of the project are to 1) understand the town’s founding and development as an integrated town; 2) explore and contrast dietary patterns between different households of different ethnic backgrounds by examining faunal and botanical remains; 3) to reconstruct the townscape and town lot uses of different households from different ethnic backgrounds using botanical data and archaeological landscape features; 4) elucidate the different consumer choices residents of different ethnic backgrounds made on a frontier situation and understand how household choices changed with the increased connection to distant markets and changing perceptions of racism.

The project uses typical archaeological field methods to recover archaeological material culture and archaeobiological remains. The analysis of these data will create a hands-on mentoring process for students in an interdisciplinary setting. Ultimately, these different data sets will be integrated and the students will gain an understanding of the importance of scientific interdisciplinary research as they examine the growth and development of the town. This research will elucidate how individual members and families of this integrated community made choices to create their immediate environment, diet, agricultural practices, and consumer choices.

The New Philadelphia story is both compelling and unique. Many studies in historical archaeology that concentrate on African-American issues have often been about plantation life and the pre-emancipation era. The history of New Philadelphia is very different. It is a chronicle of racial uplift and it is about the success of an African-American family and their ability to survive and prosper in a racist society. In 1836, a freed African-American, Frank McWorter acquired 42 acres of land in the sparsely populated area of Pike County, Illinois, situated in the rolling hills bounded by the Illinois and Mississippi rivers. He incorporated a town, subdivided the property, and sold lots. McWorter then used some of this revenue to purchase the freedom of family members. He encouraged other African Americans as well as those of European descent to move to the town and create a racially integrated community. New Philadelphia serves as a rare example of an integrated early farming community on the nation’s Midwestern frontier (Walker 1983).

The town’s population reached its peak of 200 people after the Civil War, a size comparable to many Pike County communities today. However, by the end of the century racial and corporate politics of America’s gilded age resulted in the death knell for the settlement: the railroad company routed the line around the town. Many of New Philadelphia’s residents moved away and, by the early 20th century, only a few families remained (Walker 1983).
Today, most of the original 42 acres have been returned to agricultural use. Only a few scattered house foundations are visible in the plowed fields. In the summer of 2002 Vibert White, then from the University of Illinois-Springfield (now affiliated with Central Florida University [CFU]) initiated a long-term research project for the entire town of New Philadelphia. The University of Maryland (UM) has gathered census data, deeds, and other primary and secondary sources. A collaborative project between the UM, Illinois State Museum (ISM), University of Illinois-Springfield (UI-S), and the New Philadelphia Association (NPA) helped to initiate an archaeological pedestrian survey in 2002 and 2003. This work revealed that much of the material history of New Philadelphia still exists in discrete concentrations associated with known house lots. UM is the host institution, the University of Illinois –Urbana-Champaign (UI-UC), ISM and NPA will be cooperating with the project.

Targeted student participants
Upper division undergraduates interested in the articulation between the history and scientific archaeology will be recruited for this program. So far the project has developed an impressive relationship between the cooperating institutions and the local community (UM, ISM, UI-UC, UI-S and NPA). Volunteer participation has been overwhelming and there appears to be a strong need for a rigorous program in scientific archaeology in this region of the country. Because New Philadelphia is about racial uplift, this REU project should attract minority students and historically black colleges will be targeted. Also, because this project is located in one of the poorest regions of Illinois, it is difficult for undergraduates to receive this type of training. Therefore, regional colleges and universities will also be targeted since many of these places are institutions where research programs are limited. Women are also considered part of this underrepresented group and they will be encouraged to apply to the program. Our goal over the three-year period is to have the majority of the REU undergraduates be students from these categories. Most of the students will be from outside of the University of Maryland and they will be selected through a competitive basis.

Intellectual focus
Through the scientific analysis of archaeologically retrieved data, students in the REU program will discover that it is important to understand that ethnic boundaries in any community are fluid and it is necessary to see how these boundaries have been transformed over time (McGuire 1982:161; Rodman 1992). In a place like New Philadelphia that developed as an interracial town, defining these boundaries becomes increasing difficult since it appears to be a small community whereby neighbors intermarried and residents supported and traded with each other. However, it is probable that some form of local hierarchy based on race did occur. Placing future archaeological work within the context of the changing meaning of race is essential for knowing how groups in this community became racially identified and how racial conflicts shape American society (see Omi and Winant 1994).

Most studies in African-Americans archaeology and material culture have dealt with the pre-emancipation era (Epperson 1999; Ferguson 1992; Kelso 1986; Upton 1988; Vlach
1993). An archaeological study of New Philadelphia will allow students in the REU program the opportunity to examine the development of a pre-emancipation era community that continued to exist into the twentieth century. New Philadelphia provides a unique case study since it survived as an integrated community for about a century. Anthropologist Mary Douglas (Douglas and Isherwood 1979) notes that on a periphery, such as a frontier situation, differences and deviation from the norm are acceptable. But once those frontier situations become part of the core or semi-periphery area, material culture and behavior becomes standardized. The same may be true for the frontier situation of New Philadelphia. The town developed as an integrated town from the 1830s, a situation that was not the norm in the core eastern establishment. But when the Illinois frontier closed, racism, a phenomenon found throughout antebellum America, set its limits to the town’s growth. Race probably influenced the social and economic interactions between residents within the community as well as with residents outside of the town. It would be important for students to examine the archaeologically retrieved data and the social history of the town and look for variability in the archaeological record and see how the material culture may have changed as racism influenced the development and everyday lives of the inhabitants of New Philadelphia.

Understanding the role of consumerism and consumer behavior in an inter-racial community will be a key issue for this study. Several scholars have examined how ideals of consumerism filtered into rural and frontier communities (Purser 1992; Schlereth 1989; McMurry 1988). Consumption practices varied across regional boundaries as well as through ethnic, class, and gendered groups. Mullins (1999) shows how an urban black community chose to participate in consumer society as a way to avoid local racism and confront class inequalities. An analysis of rural consumption by REU students in a place like New Philadelphia will reveal the complexities of how mass-produced and mass advertised products infiltrated this rural community and it will show how consumption patterns shifted as the concept of racism changed.

Organizational structure

Organizational structure
Using GIS, the archaeology team laid historic maps over the current landscape in order to determine the boundaries of the project area for the archaeological survey (Beasley and Gwaltney 2003). Prior to the archaeological survey, members and students from UM performed a background history of the place, developing a general context for the development the New Philadelphia research project. This initiative has helped develop a social history of the entire town, from 1836 through the 1940s. Deed research and census data provide a good sense of the town’s population that consisted of craftsmen, farmers, and laborers. We can state with certainty that the occupants of each lot are known and we are aware of the resident’s ethnic and occupational backgrounds, as well as other related social information.

Since we know the ethnic and social backgrounds of the occupants of each town lot it will be possible to do scientific research of the town’s different occupants by concentrating our research efforts on specific town lots. This lot specific research will allow us to create a comparison of the archaeobiology and material culture remains of the different households. Therefore, our goal is to divide the students into teams. Each team
will be responsible for helping to develop a research design, retrieving archaeological data (material culture and archaeobiology data), cleaning and cataloging the materials (when appropriate), data entry, and analyzing artifacts and archaeobiological materials from one town lot.

Therefore, all of the student teams will be responsible for the data retrieval and analysis of their specific lot. Student teams will work closely in a mentorship situation with ISM and UM staff in order to acquire the necessary skills to perform scientific research. Each student will “specialize” in one form of analysis and they will report on their findings at the end of the course. This information will allow students to work as a team to reconstruct the landscape and lifeways of residents of this historic town.

**Time table**

This REU project is proposed for 10 weeks, and it will be divided into three stages.

1) Introduction to the field methodology (Week 1).

The first week will be divided between the Illinois State Museum’s Research and Collections Center (RCC) in Springfield and the New Philadelphia site near Barry. At the RCC students will receive a project orientation and introduction to laboratory techniques and historical materials culture. On the first day Drs. Vibert White (CFU), Paul Shackel (UM), Terrance Martin (ISM), and Christopher Fennell (UI-UC) will greet the students and provide an introduction to the project. White will provide an overview of the history of the site and Shackel will provide an overview of the archaeology work that has been completed. He will discuss field methodology and site sampling strategies. Students will receive a tour of the Research and Collections Center (RCC) laboratory and collection storage facilities from Martin.

The orientation session will also include presentations from several ISM professionals and collaborating participants. Dr. Bonnie W. Styles, ISM Associate Director for Science and Education, will present an overview of the Illinois State Museum—its history and programs in education and research. Dr. Michael D. Wiant, ISM Curator of Anthropology and Acting Director of the Dickson Mounds Museum, will discuss the extensive archaeological research that has been carried out on prehistoric Indians in Illinois and in the Illinois River valley. Dr. Erich K. Schroeder, ISM Associate Curator of Information Technologies, will share his research on frontier settlement and demography in Illinois and demonstrate how he integrated nineteenth-century Land Office Records with the Geographic Information System. Mr. J. Terry Ransom, civil rights officer for the Illinois Department of Transportation and co-founder of the Illinois Underground Railroad Association, will introduce REU students to research on the Underground Railroad in Illinois.

REU students will also receive an orientation to historical research, and they will spend a day acquiring primary and secondary resources in order to develop a sense of the history of Illinois, New Philadelphia, and how historical information is acquired. Independent Springfield historian Claire Fuller Martin will accompany REU students to the State
Archives and the State Historical Society Library and guide them in the use of documentary resources.

At the end of the orientation, students will be divided into teams, and they will discuss which town lot they will excavate and analyze. Staff members will discuss the importance of research designs, and each team will develop a research design for their specific unit of study.

Field work at the New Philadelphia site will begin during the first week. Dr. Michael L. Hargrave (U. S. Army Construction Engineering Research Laboratory [CERL] at the University of Illinois at Urbana-Champaign) will conduct a geophysical survey of specific lots at the New Philadelphia site. Utilizing magnetic field gradient survey and electrical resistivity, Dr. Hargrave will demonstrate first hand to the REU students how a noninvasive subsurface approach can help field investigations be more efficient in the discovery of buried architectural structural remains, refuse pits, and fence lines (see Hargrave 2002; Hargrave et al. 2002). Subsurface anomalies will then be considered for ground testing by the field school students and the techniques evaluated for their successful application at the New Philadelphia site.

2) Excavation at New Philadelphia (Week 2-5)
IN 2002 and 2003 UM and ISM conducted a pedestrian survey of New Philadelphia sponsored by UI-S and NPA. Archaeologists identified discrete concentrations of artifacts within specific town lots. The historical research performed over the past two years indicates how the town was settled and who owned an occupied each town lot. Combining these two sets of data provides a focus for the geophysical survey and electrical resistivity survey mentioned above. All of these data will be the foundation for student team excavations. Students will work in teams of three and each team will excavate within a specific town lot under the supervision of Shackel and Fennel and field assistants.

3) Laboratory work at the ISM-RCC (Weeks 6-10)
Each team will be responsible for the cleaning, labeling, identification, and computer entry of the materials acquired from their own town lot excavation. After this initial processing has been completed, students will then work as a team to analyze artifactual, archaeozoological, and archaeobotanical materials that they recovered. Each student will be responsible for presenting his or her research as part of a symposium at the end of the tenth week.

The time at the RCC will be divided between artifact processing and analyses, on the one hand, and scheduled exhibit tours and guest lectures. Tours of the State Museum will emphasize permanent exhibits that were designed by curators in Decorative and Industrial Arts (At Home in the Heartland), Anthropology (Peoples of the Past), and the Natural Science sections (Changes: Dynamic Illinois Environments). These tours will emphasize the interdisciplinary nature of modern museum exhibit design and provide students with information on the cultural and natural history of the region. At other times, ISM professionals and collaborating participants will provide an overview of their
respective fields of study. When the students come to the ISM-RCC after the field work, many of these professionals will mentor students as the students analyze materials from the excavations. The professionals’ expertise will provide an interdisciplinary focus for the field school along with personal guidance and instruction during the second five weeks of the project. The following overviews will be presented:

Dr. Eric C. Grimm, ISM Curator and Chair of Botany, Head of the Quaternary Studies Program, will discuss climate changes in Illinois and the Midwest, how microscopic fossils are used to understand the past, and the implications of these findings for the Global Warming debate. Dr. Jeffrey J. Saunders, ISM Curator and Chair of Geology, or Dr. Jessica M. Theodor, ISM Assistant Curator of Geology, will review Pleistocene fauna in Illinois and the Midwest, Ice Age extinctions, and the implications of paleontological research for our understanding of the first human inhabitants of the New World. Dr. Robert E. Warren, ISM Curator of Anthropology, will talk about zoogeographic and cultural implications of freshwater mussels in Illinois and the Midwest and how shells from archaeological and geological sites can be viewed as paleoenvironmental indicators. Ms. Dawn E. Cobb, ISM Research Associate in Human Osteology, will present a lecture on human osteology and how human remains reveal details about past lifeways. Ms. Marjorie B. Schroeder, ISM Research Associate in the Landscape History Program, will direct students on the analysis of plant remains from archaeological sites. Dr. Terrance J. Martin, ISM Curator and Chair of Anthropology, will direct students in analyzing the animal remains from the New Philadelphia site. Martin will also emphasize the curation of archaeological collections and ethical considerations of collections management.

**Instructional commitment**

UM, ISM, UI, and NPA have already made extensive institutional and organizational commitments to the project. Vibert While, while a faculty member at ISM began this research initiative of the New Philadelphia project. He will continue to provide general oversight to the project. Shackel will provide overall coordination of the field project and will help in the development of student research projects. Fennell will provide oversight in all aspects of the project. This work will be done collaboratively with ISM staff members. Terrance Martin will assist with the field work component, coordinate laboratory activities at the ISM-RCC, supervise students in identifying and analyzing animal remains from New Philadelphia in the zooarchaeology laboratory, and introduce REU students to systematic museum collections and the ethics of archaeological collections management. Marjorie Schroeder will supervise students in the processing by flotation of standard volume soil samples from cultural features at the New Philadelphia site and the identification and interpretation of recovered plant remains. Robert Warren will assist students in identifying any freshwater mussel shells that may be encountered during the excavations. Although prehistoric materials are not the focus of the research at New Philadelphia, Michael Wiant will help students evaluate isolated prehistoric artifacts or intact prehistoric features that may be encountered. The collective expertise of the ISM’s interdisciplinary staff provides a unique and special quality in that they strive to augment the institution’s leadership on issues of diversity, cultural differences, environmental and social sustainability, and other social and environmental issues.
NPA – The NPA has worked extensively with the landowners of the property and they have received permission to perform archaeological work on the property. They have also been instrumental in the past coordinating needed logistical support for the project. They provided a field tent and sanitary facilities for fieldwork participants. They have agreed to help coordinate these activities for the REU project. Students will stay at a lodge outside of Barry, Illinois about 4 miles from the site where they will receive lodging and three meals a day. Students will receive room and board at UI-S while stationed at the ISM.

B) Nature of Student Activities
This archaeology project serves as an excellent opportunity for students to participate in many aspects of a scientific research program. Students will be divided into teams and they will work collaboratively on an assigned town lot in New Philadelphia. Prior to excavations, students should create a research design and they will learn about the different sampling strategies used in archaeology. It is important that the students recognize that different forms of data retrieval are suited for different questions.

Fieldwork and data retrieval
Our initial archaeological survey work along with GIS overlays has identified several areas with discrete archeological deposits. This information along with the collection of deed and census data provides the research team with a good idea about the general settlement of the site. A geophysical survey and electrical resistivity performed by Hargrave and the students will also provide additional data. During the four weeks of field work students will consider these data while they prepare a site for excavation, learn archeological excavation methods, excavate according to stratigraphy (when necessary), describe site sediments, collect archaeobotanical samples, perform note taking, take accurate measurements, creating scale drawings, learn field photography, and do mapping with a laser transit.

The fieldwork will be done using engineers scale since it is the most commonly used form of measurement in historical archaeology. The work will proceed in two steps. First, a form of sampling using 5ft x 5ft excavation units will be used to retrieve data from the town lot. Once we get a good sense about feature locations and artifact densities, students will proceed with a large block excavation using 5ft x 5ft excavation units. Since the area is mostly plowed, and cultural stratigraphy does not exist in plow zone, we expect these excavations to proceed quicker than those performed at sites with stratigraphy. Each team should be able to excavate between 10-15 5ft x 5ft excavation units. Features will be bisected and excavated according to stratigraphy, and the systematic collection of sediment samples for flotation will be performed in order to retrieve archaeobiological data.

Lab work and analysis
The laboratory work and analysis will be performed at ISM with museum staff members serving as mentors. As soon as students enter the lab, each team will be asked to revisit their research designs and see if they need to modify any of their research questions
based on the materials collected or could not collect in the field. Each team will clean, label, and identify archaeologically retrieved data. This process will be followed by data entry. Students will also learn curation documentation standards and stabilization procedures for archaeobiological specimens. Mentors will show students how to process soil samples through a flotation device in order to recover archaeobotanical remains, small-scale animal remains, and very small artifacts such as glass beads. The plant remains will be sorted and identified under the direction of Marjorie Schroeder. Terrance Martin will assist REU students with the identification of animal remains and demonstrate various ways of categorizing anatomical elements as cultural entities (skeletal portions and butchering units), recognizing natural modifications (e.g., carnivore and rodent-gnawing) and cultural modifications (burning, sawed or chopped margins, and knife-cuts), and quantifying faunal assemblages in terms of specimen counts, minimum numbers of individuals, and biomass. Teams will also analyze ceramic and bottle glass in order to obtain a vessel count for another type of supporting data for food consumption. Each team member will become proficient in one form of analysis (faunal, macrofloral, material culture) and this work will be the basis for his or her final presentation.

While it is necessary that students participate in the initial data processing phases of the project it is also important that they participate in the higher-level analysis of the study in order to gain a well-rounded experience in the scientific archeological data analyses. At all times mentors will be involved in the project in order to ensure that all work meets professional standards.

The development of collegial relationships and interactions is an important part of the project. For almost 10 weeks (except for a few days during orientation) students will work together in a collaborative fashion, using scientific methods to develop a research design, collect data, and analyze it. While we want to encourage a sense of team work, mentors will always be present showing students how to develop methods, analyze data, and think about the results of their work. We believe that the proposed plan will ensure the development of student-faculty interaction and student-student communication.

Presentation of information
At the end of the course student teams will make a public presentation of their results. ISM staff, members of the local archaeology community and the local press will be invited to a ½ day symposium to listen to and discuss the results presented by each team member. The presentation will allow for the dissemination of new information as well as group assessment and critique of the work. This presentation will introduce students to public speaking and it will help them develop skills to communicate scientific results to a public audience. After this presentation and discussion, student teams will assess evaluations and create a strategy on how to best present this work to other audiences. Avenues of subsequent presentations could be a WEB page, a poster session at a professional meeting, or a research paper at a professional meeting. Mentors will be available through the following year and they will be able to assist students while they think about and enhance their final presentations.
Other student activities
During the course students will visit several historic sites and museums in order to acquire a better understanding of the historical context of New Philadelphia. While working at New Philadelphia students will visit two sites. One site is Nauvoo, an early Mormon settlement (1839-1845) on the Mississippi River. Nauvoo is situated about 90 miles north of New Philadelphia. The second site is Hannibal. While Hannibal is associated with the life of Mark Twain, the city’s historic exhibits also address some of the issues of daily life in a mid-nineteenth century river town. Hannibal lies about 23 west of New Philadelphia.

There is also a strong connection between Pike County and Abraham Lincoln since he practiced law in the county courthouse. While the students are working at the ISM in Springfield they will visit Lincoln’s New Salem State Historic Site, 20 miles north of the city. New Salem is an outdoors museum that provides interpretations of daily life on the Illinois frontier and it is a place where Lincoln once lived. While all of these places interpret life in the context of the Illinois frontier, they also furnish examples of how historic places interpret the past to the public. An examination and comparison of these methods will contribute to the student’s understanding of interpreting the past to a wider audience.

Dickson Mounds Museum near Lewistown and the Cahokia Mounds State Historic Site near Collinsville are devoted to the late prehistoric American Indian Mississippian culture. Exhibits devoted to the Lewis and Clark Expedition are accessible to REU students at the Lewis and Clark Interpretive Center in Hartford, Illinois, (near the location of their initial encampment at Camp River Dubois) and at the Museum of Westward Expansion located beneath the Gateway Arch in St. Louis (operated by the National Park Service). Also in St. Louis is the Old Courthouse, the oldest National Park Service area created because of its association with African-American heritage through the Dread Scott Trial. The site also includes other exhibits celebrating the contributions of African Americans to the development of St. Louis.

c) The Research Environment
For Shackel, the teacher/student experience must go beyond the classroom in order to make the student’s learning experience enjoyable and profitable. Research opportunities allow for the development, growth, and professionalization of undergraduates. Undergraduates have been a big part of the UM archaeology research program. Shackel has taught several fieldschools, and several dozen students have worked with him on various projects with a cooperative agreement with the National Park Service, National Capital Region. Many students have used data from these projects to present papers and posters at local and national professional meetings, and some have published articles in society newsletters and journals.

Fennell has extensive teaching experience with undergraduate courses in the subjects of anthropology and archaeology, including an intensive field school in historical archaeology, and courses in cultural anthropology. Fennell’s research expertise includes
theories and methods for regional analysis of rural settlement patterns and related issues of social and economic developments over time, studies in African diasporas in North America, and archaeological and historical analysis of African-American history. He has been the project director for archaeological excavations of rural farmstead site in Virginia, and a church and school house in the town of Harpers Ferry, West Virginia. Fennell is also the creator and editor of the Plymouth Colony Archive Project, a public history internet project recognized as an “outstanding” resource by the National Endowment for the Humanities, in which he has edited and published articles authored by numerous undergraduate students.

The ISM staff features 15 individuals with Ph.D.s, 20 with masters degrees, and 14 with bachelor degrees. Of the 24 state-funded curatorial staff in art and science, 81% have Ph.D.s or masters degrees. Many art and science section staff members serve as adjunct professors at area colleges and universities. Curators and administrative staff are members of professional organizations and are active as officers, committee members, and presenters at professional meetings. Staff present lectures, workshops, and special programs and are often invited to be speakers by universities, museums, and professional organizations in the U.S. and abroad. They also participate in state and local civic organizations pertaining to their areas of expertise. Terrance Martin (as an adjunct professor at UI-S) has taught courses on North American prehistory and North American Indians for the last ten years. He has also supervised more than twenty museum interns from the UI-S Applied Study Training program as well as Illinois College in Jacksonville, he served as mentor for two senior thesis projects by anthropology students from Illinois State University, and he has been on masters thesis committees for students at Southern Illinois University–Carbondale and at Western Michigan University. He regularly conducts zooarchaeology workshops for archaeology field schools including those sponsored by Illinois State University, University of Notre Dame, Western Michigan University, the Michigan State University Museum, the Chippewa Nature Center (Midland, Michigan), and the National Estate-Museum of Military History and Nature “Kulikovo Field” in Tula, Russia. Martin has presented research papers co-authored with undergraduate and masters students at the Midwest Archaeological Conference (1998, 2002, and 2003) and the Annual Conference on Historical and Underwater Archaeology (2004).

The ISM owns one laser transit/total station and if no fieldwork is being performed they will loan the equipment to the REU project. However, if an ISM project is underway the REU project will need to rent this equipment. Otherwise, screens, flotation machine, shovels, and other routine archaeological equipment that will be required for excavations will be provided by ISM. Laboratory space for washing and analyzing the excavated materials will be available at the 97,000 ft² Research and Collections Center (ISM-RCC) in Springfield. This facility provides a state-of-the-art environment to protect the Museum’s vast collections and high quality research laboratories and offices for anthropology, botany, geology, and zoology. The RCC is a major research center and integral component of the ISM’s educational and outreach programs. It also houses a scientific library, conference rooms, and Technology Learning Center (TLC). The TLC is
used for teacher training, school programs, and public programs, and it uses technology
to connect people with the ISM’s collections.

d) Student Recruitment and Selection
This REU project will target upper division undergraduates at historically black colleges
from the region. These schools include; Chicago State University, Harris-Stowe State
College, Lincoln University – Missouri, Kentucky State University, Central State
University, Wilberforce University, Fisk University, Knoxville College, Lane College,
Lemoyne-Owen College, Tennessee State University. This REU project will also recruit
from some of the smaller under-funded colleges in the area. New Philadelphia, in west
central Illinois is situated in one of the poorest regions in Illinois, and there is very little
opportunity for local students to experience and participate in a large-scale project like
the one being proposed. These schools include places like Illinois College, MacMurray
College, Hannibal LaGrange College, and Western Illinois University. Women will be a
third group targeted for this project. Women are part of this under-represented group in
the sciences, and we will encourage them to apply to the program.

Our goal over the three-year period is to have the majority of the REU undergraduates be
students from these categories. Therefore, the majority of the students will be from
outside of the UM and they will be selected through a competitive basis. We also
understand that NSF-REU requires that students must be citizens or permanent residents
of the United States or its possessions.

e) Project Evaluation and Reporting
Materials submitted by students for evaluation include the final research project. This
project will detail the student’s team research design, data collection, analysis, and
interpretation as well as the student’s specific research project. A portion of the grade
will also include the individual’s research presentation. In addition to taking notes for
their field and laboratory observations, students will also be expected to keep a journal.
Students will keep a daily record of what they had observed during the day, and make
notations about the decision making process.

At the end of the course students will be asked to provide a quantitative and qualitative
assessment of the course. These measurements will help evaluate the success of the
project in achieving its goals. We will assess the degree to which students learn and their
views of science have been expanded.

Also, before the second and third year a follow-up survey will be mailed to students in
the spring. Questionnaires will help to evaluate the impact of the program on student
career trajectories. We will ask students for input on the course and ask them which parts
they saw most beneficial as well as which parts were confusing or not worthwhile. This
information will help us to reevaluate the course for the following year. This survey will
also try to assess the impact of the course on student careers and determine if they
continued their interests in science, or a science related field.
References Cited

Beasley, Joy and Tom Gwaltney

Douglas, Mary and Baron Isherwood

Epperson, Terrance

Ferguson, Leland

Hargrave, Michael L.

Hargrave, Michael L., Lewis E. Somers, Thomas K. Larson, Richard Shields, and John Dendy
2002  The Role of Resistivity Survey in Historic Site Assessment and Management: An Example from Fort Riley, Kansas. Historical Archaeology 36(4):89-110.

Kelso, William

McGuire, Randall H.

McMurry, S.

Mullins, Paul R.
Omi, M. and H. Winant

Purser, Margaret

Rodman, M.

Schlereth, Thomas J. (editor)
1989 Material Culture Studies in America. The Association for State and Local History, Nashville, TN.

Upton, Dell

Vlach, John M.

Walker, Juliet E. K.