NATIONAL YOUTH SPORTS PROGRAM

Math/Science Final Report

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SECTION NO. I -- ADMINISTRATION AND ORGANIZATION

The National Youth Sports Program (NYSP) is a partnership of the National Collegiate Athletic Association (NCAA), the Department of Health and Human Services (HHS), Administration for Children and Families, and 172 colleges and universities nationwide. For 24 years, NYSP has brought opportunities for sports instruction and education activities to youth in the communities where these colleges and universities are part. In 1992, the NYSP summer program served more than 70,000 boys and girls between the ages of 10 and 16. Participating projects were located in 151 cities and 44 states across the nation.

The central focus of NYSP is sports instruction and physical activity as a means of promoting health, positive social interaction, discipline and self-esteem. Local NYSP projects have allowed colleges and universities to extend the resources of the university to better serve their local communities and to extend the resources of the university to disadvantaged youth. Higher education and the NCAA have maintained the fundamental commitment that physical and athletic development are an integral component of the full development of the individual through education. This understanding has provided an enduring bridge to the community through NYSP.

As NYSP has matured, physical activity and sports instruction have provided a core focus for providing additional information and experiential opportunities for participating youth. These enrichment activities include nutrition, disease prevention and personal health; career opportunities, higher education, and job responsibilities, and drug education. NYSP dedicates staff, resources and a designated amount of the program structure to these education areas.

In Fall 1992, the Department of Energy (DOE) and the NCAA executed a Memorandum of Understanding (MOU). The purpose of the MOU was to implement a cooperative effort between the DOE and the NCAA to modify NYSP by adding a mathematics/science component. The DOE and the NCAA share common interests and needs relative to providing students with the opportunity to participate in hands-on, real-life uses for science and math, and to foster positive lifestyles for low-income youth.

The current situation facing the nation's science education system has been documented in critical reports and assessments beginning with A Nation at Risk in 1983. These studies have documented the mediocre achievements of U.S. students in mathematics and science at all levels and noted that the nation's ability to remain scientifically and technologically preeminent will depend on the quality and quantity of people in the workforce.

The DOE, specifically the Office of Environmental Restoration and Waste Management, and the Office of Energy Research, granted approval to use funds to enhance the education component. The Federal funds were used to conduct mathematics and science education components on a limited pilot basis at 16 colleges and universities. The implementation of the 16-site project offered the NCAA and DOE an opportunity to assess the effectiveness of teaching disadvantaged youth about mathematics and science in small, hands-on activities. The following objectives for the math/science project were designed:

1. To increase economically disadvantaged youths' understanding and awareness of career opportunities that exist in math and/or science;
2. To motivate economically disadvantaged youth to pursue careers in math and/or science by involving them in practical and simple programming that includes hands-on experiences in small groups;
3. To develop analytical and critical thinking skills of economically disadvantaged youth, and
4. To develop an intensive math/science enrichment program that can be implemented and utilized in similar situations to motivate other at-risk youth.

The NYSP format is time-tested to reduce barriers that may hinder program administration and to ensure participation. Such barriers may include requiring participants to arrange their own transportation, irregular and inconvenient scheduling, complicated enrollment procedures and activities that produce stress for enrollees.

The NYSP experience has proven that teaching disadvantaged youth requires a realistic approach. For example, children prefer to be engaged in activities; simple didactic presentations are not effective. Athletics programs, combined with education programs, can link various approaches to developing social skills, enhancing problem-solving techniques, improving concentration and promoting self-esteem. The math/science professionals created a highly-structured format for the math/science education component complete with unit and lesson plans; close participant supervision, and well-trained staff. The curricula also was devised to consider different developmental levels of participants and, most importantly, sought to make learning and achieving interesting and fun. The math/science curricula also was carried over into other components of NYSP and became a "real-life" example for youth, not just a classroom activity.

NYSP has become a regular and anticipated part of the summer activities for youth of disadvantaged communities across the nation. In many communities NYSP projects have strong ties to schools, civic groups and other sources of community support. The strong program tradition also makes NYSP popular with parents. In all, NYSP provides a strong environment for development and delivery of effective teaching efforts. Throughout its history, NYSP has been available to provide a fully-structured program that included sports-skill instruction and enrichment components. The DOE grant allowed NYSP to seek means of strengthening the educational contribution to economically disadvantaged youth and has the potential to introduce more youths to the math/science experience.

General Responsibilities

The NCAA, through The National Youth Sports Program Fund as grantee, has coordinated and administered NYSP on a national basis for 24 years. The National Youth Sports Program Fund subgrants appropriate funding to selected institutions of higher education that, in turn, provides necessary qualified personnel, including specialists, facilities, materials and services, required to implement NYSP.

The National Youth Sports Program Fund establishes, administers, conducts and maintains the program in accordance with special grant conditions. The guidelines for the operation of NYSP are attached as Supplement No. 1.

The NCAA prints materials for distribution to local project staff. The materials assist with interpretation of guidelines and subgrant requirements, provides a list of procedures necessary to complete before the operation of a project, reminds project administrators of reporting obligations, records inventory, allows for reporting and recommending innovative project practices, and serves as a medium for exchange of present practices and current ideas about NYSP.

History

The NCAA has submitted information regarding its dealings with the participating institutions according to the schedule outlined by the Administration for Children and Families and the DOE for 1992. During the past year, the NCAA compiled financial reports, progress review reports and other required reports in accordance with 1992 special grant conditions.

Funding decisions

The NYSP committee and the NCAA national office staff solicited NYSP-participating institutions to apply for the math/science project. The NYSP committee is responsible for overseeing NYSP and consists of five representatives from active members of the Association (including two positions allocated for men, two for women and one unallocated) and an appropriate number of ex-officio members representing the Federal government. (See Supplement No. 2.)

The selection of individuals to be ex-officio representatives has been based upon expressed interest in, and/or assistance to, the program. Members of the committee advise the NYSP national director and other staff with regard to the following topics:

1. Program planning and development;
2. Approval of applications for participation;
3. Major grant modifications, and
4. Program training and technical assistance.

Presently, one individual represents the U.S. Department of Agriculture, two individuals represent HHS and one individual represents a Community Action Agency. These individuals are ex-officio members of the committee and serve in an advisory capacity only; they do not participate in decisions involved with the administration of the grant. The two representatives from HHS come from the Administration for Children and Families, and the President's Council on Physical Fitness and Sports.

The NCAA received applications for participating in the math/science program from 31 projects. The committee reviewed NCAA staff recommendations and made modifications where appropriate, thus finalizing actual funding levels for each of the 16 sites selected. Institutional representatives were notified of the final decision and were required to attend the preprogram workshop. (See Supplement No. 3.)

Schedule

The math/science guidelines authorized a minimum of 10 contact sessions that were required to be hands-on activities in small groups. Projects were able to organize the sessions by including the program within the existing structure of NYSP; conducting the math/science component before or after the regular NYSP schedule, or operating on non-NYSP scheduled days (such as Saturdays). Also, the addition of the math/science component afforded NYSP participants access to laboratories and classrooms previously inaccessible.

The math/science project presented organizers with new scheduling challenges. The breakdown of actual final schedules can be reviewed in Supplement No. 4.

In addition, the math/science grant required all NYSP program participants be provided a minimum of three hours of education activities in math and science concentrations. This required the math/science staff to integrate math/science components with existing education features such as health and nutrition; careers and higher education, and drug education. (See Supplement No. 5.)

Staffing

The NYSP guidelines specify several staff positions and criteria for qualification. Following is a listing of project personnel titles and responsibilities:

1. Auxiliary staff. Auxiliary staff positions include an activity director, math/science specialist; liaison officer; medical coordinator; drug-and-alcohol-prevention specialist and enrichment coordinator. These required positions hold specific defined responsibilities. (See Supplement No. 6.)
2. Instructional staff. Professional staff must have attained a college degree and provide instruction to participants in their areas of expertise.
3. Project aides provide assistance to the instructional staff. Typically these are college students.
4. Support staff provide non-instructional services necessary to support the program (e.g. clerical, maintenance, security).

All math/science staff are qualified per guidelines. NYSP guidelines indicate a desired student-to-staff ratio of 15:1 for math/science instruction.

NYSP staff identification with the participants is exceptional. The camaraderie between staff and participants and the personal investment of staff on behalf of the youth pays dividends in many ways, including acceptance and support of the program by parents and community members. As William Jordan, Sr., an NYSP parent from Buffalo, New York, stated:

At first I thought the program was just an ordinary camp. But after hearing so much from my daughter, I am now impressed.

The most prominent pool of staff members that work with NYSP come from college or university departments directly involved in the administration of NYSP; typically athletic or physical education departments. Occasionally other departments administer NYSP, which is the exception rather than rule. A second pool of staff comes from university departments interested in the program, such as the education department.

A second source of staff recruitment for many projects are the local elementary and secondary school teachers and coaches. A majority of sites rely heavily on teachers for professional and auxiliary staff. Teachers often bring familiarity and ties to the local community that are particularly important in the program.

Other staff are composed of parents and undergraduates. Each of these staffing sources brings potential strengths to the NYSP team. University-affiliated staff bring the resources of the university and expertise in athletics or enrichment topics. Teachers bring instructional expertise and connections to the community. Parents bring a concern and closeness to the children. Undergraduates bring enthusiasm and real-life role models. Above all, however, there is a confirmed, extraordinary commitment and caring shown by many of the NYSP staff. (See Supplement No. 7.)

The creation of the math/science specialist was one component of the impact of DOE funding on NYSP. Prior to the creation of this position, the enrichment coordinator arranged for all enrichment activities. The math/science coordinator brought additional expertise and experience in education to the NYSP team and the cooperative efforts of the three enrichment specialists strengthened education sessions.

The math/science specialists were recruited from within the university and from local elementary and secondary schools. The different backgrounds of the math/science specialists brought great diversity to the programs and tended to make a difference in the way projects were planned and implemented. Robert Poth, the math/science coordinator at St. Petersburg Junior College and recipient of the 1992 Presidential Award for Excellence in Science and Mathematics Teaching commented:

Personnally, I teach so that I may have an effect on the outcome of the future through my students. This program gave me that advantage.

Community Support

NYSP projects have developed strong ties with organizations in their local communities that provide on-going support. The following supportive ties have been developed by the projects:

1. Local businesses make significant contributions of materials and supplies;
2. Enrichment activities, in the form of speakers, presentations or materials are provided;
3. Sponsoring institutions include local media to run stories on NYSP and its contributions, and
4. Sponsoring institutions have provided help beyond facilities and salary subsidies. Personnel have been involved with NYSP through administrative support, financial reporting, lending of equipment and personnel appearances.

Each program also has an active advisory board that involves local citizens in support of the program. Some projects have been very successful in involving influential members of the community (e.g. mayors, city officials, members of school boards).

Instruction in math/science made good use of community resources. Outside organizations or individuals contributed to the program and these contributions represent a valuable link to the community.

Coordinating with other education efforts in the community required explicit knowledge of school programs and purposeful efforts to complement, rather than repeat, existing efforts.

Parental Involvement

Education works best when it is supported and reinforced in the school, family and peer environments of youth. NYSP staff are very aware of the home environments faced by many NYSP children, and express the concern that they want to make a difference in changing these youth's future. This concern is testimony to the commitment of local NYSP project staff. Some projects made extraordinary efforts to involve parents by contacting as many as possible to remind them of activities or solicit their help. Building effective means of involving parents remains a significant challenge.

The following are other methods utilized to encourage parental involvement (See Supplement No. 8.):

1. Holding a registration day where parents sign up children and are orientated to the program;
2. Requiring that parents bring their participating child to a special event, and
3. Establishing a parent-advisory group to provide guidance on activities and special events.

Food Services

NCAA guidelines encourage a hot meal or snack when possible. Sixty-nine percent of the participating projects served meals; 31 percent served a snack. Many of the participants do not receive consistent, nutritional meals; many parents/guardians do not have sufficient means to provide meals. The participants look forward to the NYSP meal, both for food and the social time it affords. The meal time affords staff an opportunity to further build the confidence and rapport with NYSP children in this social setting.

Medical Services

All NYSP participants are required to have a complete physical examination before participating. (See Supplement No. 9.) The participants of the NYSP math/science program were provided with 6,963 medical examinations.

Enrichment

NYSP guidelines specify that each project shall provide a minimum of 15 hours of enrichment, including at least seven and one-half hours of drug education; three hours of instruction in nutrition, disease prevention, and personal health; and at least three hours of instruction in career opportunities, higher education and job responsibilities. The math/science requirements also included three hours of instruction in math/science for all participants in NYSP. As emphasized in one project, all of these enrichment elements contribute to the message that the participants can, and must, take personal responsibility for their lives.

SECTION II PROJECT WORKPLAN

NYSP

General Considerations. Each sugrantee will recruit, enroll and deliver NYSP program services to youth, at least 90 percent of whom meet eligibility criteria established by the U.S. Department of Health and Human Services. Participating institutions will contact their local Community Action Agency or (where such an agency does not exist or elects not to participate) a similar agency that primarily focuses on the economically disadvantaged and will actively seek assistance of that agency in recruiting project participants. The 90 percent requirement will be considered to be met if the program participants are recruited or referred by the local Community Action Agency (or similar agency) or 90 percent of the participants are selected on the basis of residence within target areas designated for this purpose by that agency.

First quarter (June 1-August 31): NYSP projects will be conducted on the campuses of the participating institutions and, during this period, performance and compliance with guidelines will be reviewed.

Second quarter (September 1-November 30): At the conclusion of the summer program, the evaluation materials will be reviewed for each project. The NYSP committee, at its October meeting, will determine the operational status of each project and project representatives will be notified subsequent to committee review. The final financial reports and final attendance reports will be received and reviewed by the national office staff.

Third and Fourth quarters: Data not applicable to this report as the data for the math/science program will be complete at the end of the second quarter.

DOE Pilot Project

First quarter (June 1-August 31): The math/science coordinator will invite all NYSP enrollees to participate in the hands-on component of the math/science project. A minimum of 150 youths per NYSP project will be enrolled. Daily average attendance of 80 percent of the projected enrollment will be required. Participants will receive a certificate and a T-shirt. (See Supplement No. 10.)

Enrolled participants in the hands-on component will receive a minimum of 10 hours of math and/or science programming. Participating institutions will extend the NYSP operating hours or conduct programming on Saturdays to comply with the 10-hour instruction requirement. A total of 10 different math/science experiences to include environmental sciences, will be developed for the participants and designed to ensure active participation. The staff will meet daily at the conclusion of each activity day to review program activities and evaluate experiences.

A survey will be administered to the participants during the first and last scheduled activity days

The NCAA will purchase materials for project implementation such as printed supplies, and T-shirts.

Training workshop. The NCAA will conduct a math/science coordinator workshop. The purpose of the workshop is to provide project personnel (NYSP activity director and math/science coordinator) an opportunity to attend one-day training sessions to enhance their knowledge of math/science programming, review project guidelines and to review data collection and evaluation procedures.

Second quarter (September 1-November 30): Post-program workshop. The workshop will focus on the determination of results of individual projects, review a summary of lessons learned, discussion of problems encountered and recommendations for future programs.

Final financial reporting and data collection complete by November 1.

Third and Fourth quarters not applicable. Grant conditions completed.

SECTION III ACCOMPLISHMENTS

Attendance

This section addresses issues concerning participation and attendance in the math/science program. The figures in the final attendance reports indicate that there were 6,963 participants in the math/science program. Most projects identified the youth through the summer program via outreach programs in the school and community-sponsored youth groups.

In the first year, 16 projects were funded and provided instruction for enrolled participants, 56 percent male and 44 percent female. Following are additional statistics regarding the math/science program. (See Supplement No. 11.)

These accomplishments demonstrate very positive implementation for the first year of the math/science. The program met the needs of economically disadvantaged youth and demonstrated strong potential for strengthening the overall NYSP efforts through improved retention and a greater overall positive impact on the participants.

Activities

Projects also used a variety of methods for presenting instruction. Projects exhibited careful planning and coordination. Carefully planned curricula reflected a consistent and well-developed theme. (See Supplement No. 12.)

Curricula

All projects were required to plan and implement 10 hours of instructional activities; an emphasis was placed on environmental sciences, with explicit attention to balancing information with skills building. Careful attention to ensure active means of presentation also was considered. In all cases, the math/science activities were presented and administered by specialists. The first-year implementation of 10 hours of instruction in prevention was well received and utilized a variety of materials and approaches. (See Supplement No. 13.)

Projects used the opportunities created by the higher-education environment to bring new and varied activities to the schedule. This is a potential strength of the math/science format that will be utilized more fully as the projects gain experience with the NYSP format.

SECTION IV
Reports

Financial reporting and other reports. (See Supplement No. 14.)

Financial reports for all of the 16 institutions indicated the following monetary value for different sources of support (See Supplement No. 15.).

NYSP grant	\$ 350,000
Institutional contributions	\$1,995,626
Other public contributions	\$ 210,350
Private contributions	\$ 214,131

SECTION V SUMMARY

This report has a particular focus on the NYSP program as an educational model for disadvantaged youth in math and science. From this perspective, the program offers an excellent opportunity for effective learning. (See Supplement No. 16.)

In summary, planning and coordination of the math/science program was the responsibility of the auxiliary staff, specifically coordinated by the math/science specialist. Planning and coordination was strongest in projects that emphasize cooperation between regular NYSP and the math/science component, where staff members had experience working with children and where clear concepts were defined. Curricula and approaches differed in concept to fully realize the unique resources and special interests of each community and institution.

The math/science component provided established, friendly access to disadvantaged youth. Established activities have a strong independent appeal for at-risk populations.

The math/science component, paired with the regular NYSP program, provides an exceptional resource by exposing youth to the many caring and committed staff members that work with NYSP. These staff are often familiar and concerned with children and their community and are strong role models. These characteristics ideally fit the important personal factor of education efforts.

The NYSP program provides a structured environment with positive expectations of behavior and accomplishments. Staff are experienced, trained and supervised. This program is popular and attractive to the youth themselves. It involves youth in the critical preteen and early adolescent years when values clarification in learning patterns are defined.

NYSP is an established and valued program with ties to the communities where the disadvantaged participants live and attend school.

NYSP required program administrators and staff to face new situations and experiment with new activities.

Information and skills cannot be effectively transferred if participants are not interested, involved and receptive. The sites where staff presentations were well-received were staffed by enthusiastic and skilled specialists who were responsible for presentations. Participants do not want NYSP to seem like just another day of school.

The large number of contributors from the community represents a major accomplishment; NYSP personnel are clearly effective in their links to the community. These resources were diverse, drawing from many community sectors that were relevant for math/science education. The availability and use of outside resource and speakers can make an important contribution to enrichment. It allows expertise in a broad range of relevant areas and can show involvement and concern in various segments of the community.

The first step in effective educational efforts is acceptance and involvement in sending and receiving the educational message. One indicator of acceptance of the math/science program is the daily attendance. As a first-year program, the NYSP math/science component has made a strong start in strengthening the regular summer program. NYSP serves youth at risk, staff are aware of, and sensitive to, the needs of the participants, and the projects implemented activities that, on average, exceeded program requirements. The findings also documented that math/science programs were well-planned and coordinated with other programs and community activities.

All of these attributes provide a context that meets many of the needs of successful educational components.

The final section of the report makes recommendation for consideration in this learning process. Clearly NYSP provides a very strong opportunity for useful education efforts. It has been a positive addition to the total NYSP program, but it can be improved.

Recommendations for local projects:

1. The math/science component offers an opportunity to increase the uses of university resources. Repetition should be avoided and opportunities to advance through higher levels of achievement should be provided.
2. Math/science specialists are critical to planning and implementation of the math/science project. Staff need to be carefully recruited and selected. Both internal and external recruitment have advantages and drawbacks that must be carefully considered. Care also must be given to ensure that math/science staff are orientated to the NYSP program and that their concepts and approaches are compatible with programs and staff orientations.
3. Support for training could include how to work with at-risk youth and staff roles in support of the education effort.
4. Coordination with local schools and community programs should be developed to avoid duplication of curricula between schools and NYSP.
5. Math/science coordinators and education specialists should work closely together to maximize opportunities for coordination and reinforcement of enrichment activities.
6. Math/science curricula planning should also consider other education activities where participants may be involved; complementary activities should be designed when feasible.
7. Age-appropriateness requires attention in curricula development. The preteen to teen-age span of NYSP requires age differentiation, with older youth taking part in more explicit, focused and age-appropriate activities and discussions.
8. Classroom settings and didactic presentations should be minimized. FUN is an important attribute to educating youth.
9. Care should be taken to avoid abstract presentations and to relate topics directly to the experiences and surroundings of participants.

10. Adjust the pre- and post-survey to consider age-appropriateness and content.

Recommendations for DOE (See Supplement No. 17.):

1. Increase the number of participating institutions.
2. Adjust the grant period to coincide with the HHS grant and list the grantee as The National Youth Sports Program Fund, per the original application.
3. Continue funding to develop a flexible model curriculum for environmental sciences activities.
4. Present training workshops for specialists and provide other training and support for existing programming.

GUIDELINES

for the 1992

NATIONAL YOUTH SPORTS PROGRAM

Conducted by Selected Institutions of Higher Education
The National Collegiate Athletic Association
and
U.S. Department of Health and Human Services,
Administration for Children and Families, Office of Community Services

The NYSP makes available to many American young people important experiences in sports and enrichment activities. Principal partners in this effort are selected institutions of higher education, the National Collegiate Athletic Association and the Office of Community Services. The combination of Federal funds and college resources offers leaders in education and athletics an opportunity and a challenge to perform a needed service that they are uniquely qualified to provide.

PROGRAM OBJECTIVES

- A. To expand opportunities for disadvantaged youth to benefit from sports-skills instruction, engage in sports competition and improve their physical fitness.
- B. To help young people acquire good health practices, to help them become better citizens, and to acquaint them with career and educational opportunities by utilizing the personnel and facilities of institutions of higher education.
- C. To enable the institutions and their personnel to participate more fully in community life and in the solution of community problems.
- D. To provide a combination of employment and on-the-job training in sports instruction and administration.

- E. To serve disadvantaged areas in the major metropolitan centers of the United States and other areas of need, within the limits of program resources.

INSTITUTIONAL ELIGIBILITY

Selected institutions of higher education that possess the appropriate facilities and are accessible to serve disadvantaged areas, even though the institutions may not be located in such areas, may be eligible to participate in the program. Such institutions must be capable of maintaining a minimum average daily attendance of 200 participants.

1992 NATIONAL YOUTH SPORTS PROGRAM

Guidelines

A. Project Schedule

1. All projects shall operate continuously for a minimum of five (5) weeks during the period between June 1 and August 31. The minimum operating schedule for the June through August period shall be five weeks (five days per week), six weeks (four days per week), six weeks (five days per week) or seven weeks (four days per week).
2. NYSP funds shall not be provided for more than thirty (30) project days during the June through August period. Institutions desiring to operate additional days shall seek funds from public or private sources.
3. A project may be divided into two (2) or more sessions provided that the projected average daily attendance can be met by the combined attendance during the sessions.
4. Projects shall provide each participant a minimum of two (2) hours (120 minutes) of physical activities per day, exclusive of the time required for travel, meals, enrichment program and dressing.
5. NYSP funds may be utilized for participant medical examinations, participant-orientation meetings and personnel-orientation meetings. The orientation process for participants and personnel shall be completed prior to the first official day of the beginning of the project.

B. Participating Youth

1. A minimum of 90 percent of the participants in each project shall meet the criteria established by the U.S. Department of Health and Human Services.
2. Participating institutions shall contact the local Community Action Agency (or similar agency) and shall actively seek the assistance of that agency in recruiting project participants.
3. The 90 percent requirement of these Guidelines shall be met if 90 percent of the project participants are recruited or referred by the local Community Action Agency or (where such an Agency does not exist or elects not to participate) by a similar agency that primarily focuses on the economically disadvantaged. An acceptable alternative is for 90 percent of the participants to be selected on the basis of residence within a target area designated for this purpose by the local Community Action Agency.
4. The ages of the participants shall be 10 through 16 years of age, inclusive, before the ending date of the project.

5. All projects shall include both males and females as participants.

6. All participants shall be officially enrolled. Enrollment shall consist of a completed participant application, a properly completed NYSP medical-examination record and attendance in the project of a minimum of one day.

7. A participant directory shall be compiled and shall include the following information regarding each officially enrolled participant: name, residential address and zip code, residential telephone number, emergency telephone, birth date, age, sex, returnee, participant application and NYSP medical-examination record.

8. Participating institutions shall maintain an average daily attendance of 80 percent of the projected enrollment. If the average daily attendance falls below 80 percent, additional participants shall be enrolled immediately and the **NCAA director of youth programs** must be notified. If average daily attendance falls below 80 percent, funding levels will be affected.

9. Participating institutions shall be required to maintain a daily attendance roster of participants by name. Current and accurate daily attendance records shall be filed systematically in a central office.

10. Procedures shall be taken to maintain a high average daily attendance.

11. The actual enrollment shall equal or exceed the projected enrollment.

C. Institutional Services

1. Participating institutions shall provide appropriate facilities such as swimming pools, gymnasiums, indoor courts, outdoor courts, athletics fields, tracks, office space, medical space, lockers, showers, etc., at no cost to NYSP. The institutions may utilize facilities in addition to their own provided such use is arranged at no cost to NYSP. Facility-restoration expenses may be paid partially from NYSP funds.

2. Participating institutions shall provide nonexpendable equipment such as mats, gymnastic apparatus, hurdles, etc., at no cost to NYSP; however, replacement of nonexpendable items may be paid partially from NYSP funds.

3. Participating institutions shall provide expendable supplies; NYSP funds may be utilized to purchase such

supplies.

4. Participating institutions shall provide the services of a project administrator at no cost to the NYSP.

D. Project Organization

1. The project administrator shall be required to devote a sufficient amount of time to the project for effective administration.
2. An overall participant-staff ratio that falls within the range of 15-1 and 20-1 shall be maintained in the activity program unless a deviation is approved by the **NCAA director of youth programs**. Certain activities such as gymnastics and swimming may have a lower ratio due to safety considerations as long as overall ratio is maintained. The average participant-staff ratio shall be determined by dividing the actual average daily attendance by the total number of professional instructors and project aides paid from NYSP funds.
3. Participating institutions shall be required to develop and utilize appropriate employment procedures for all individuals paid from NYSP funds. Such procedures shall include personnel job descriptions and personnel employment-application forms.
4. Participating institutions shall be required to maintain current and accurate personnel work records on all individuals paid from NYSP funds.
5. Participating institutions shall be required to conduct an adequate number of personnel meetings before and a minimum of one meeting per week during a project and to maintain records of such meetings.
6. Participating institutions shall be required to conduct an adequate number of Advisory Committee meetings before, during and after a project and to maintain minutes of such meetings.
7. Participating institutions shall be required to prepare and to distribute an institutional guide to staff and appropriate individuals. The institutional guide shall include objectives, policies, procedures and pertinent details of the project.
8. Participating institutions shall provide an NYSP T-shirt to each participant **during the first week of the program**.
9. Participating institutions shall attempt to arrange for needed personal clothing items that participants are unable to provide. Community agencies, local businesses and social agencies should be requested to assist in the endeavor at no cost to NYSP.
10. Participating institutions shall make appropriate arrangements for transportation of the participants.
11. Participating institutions shall be required to develop and to implement appropriate procedures to ensure that participants in the project are constantly and actively engaged in the various aspects of the program in an effort to eliminate nonparticipation.
12. The institution shall be required to develop and to implement appropriate procedures to ensure that participants proceed in an organized manner from activity to

activity.

13. The project shall be free of charge to all participants; thus, participating institutions shall be prohibited from instituting special participant fees or charges.

E. Nutritional Services

1. Participating institutions shall be required to apply for financial assistance for meals from the United States Department of Agriculture (USDA) Summer Food Service Program for Children.
2. Participating institutions shall provide a minimum of one daily USDA-approved meal for all participants. Hot meals served in the institutional cafeteria shall be preferred.
3. Minimum requirements for a meal shall be a sandwich, milk and fruit; however, if an institution receives financial assistance from the United States Department of Agriculture, the institution shall abide by the local USDA minimum requirements for meals.
4. NYSP funds may be utilized to pay for personnel meals if the respective individuals engage in counseling and/or interacting with participants during mealtime.

F. Medical Services

1. All youngsters shall be required to have a properly completed participant medical-examination record form before participation in the project.
2. NYSP funds may be utilized to pay for medical examinations not to exceed an average of \$7 per exam per enrollee.
3. The minimum requirements of the medical-examination process shall include the items per the NYSP medical-examination record; however, the process shall include sickle cell testing, a chest x-ray, blood analysis and urinalysis only if the tests can be provided without additional costs to the NYSP.
4. A youngster may be excluded from a project only if he or she does not possess the physical and/or mental qualifications necessary to participate or if participation can be demonstrated to present an unacceptable risk of injury or illness.
5. Handicapped youngsters shall not be excluded from the project automatically; thus, an institution shall not assume that a youngster is too great a risk for physical injury or illness, or that he or she is otherwise unqualified because of a handicap. Such decisions shall be made on a case-by-case basis.
6. Medical treatment shall be required for injuries and illnesses that occur during the project. Such services shall be provided to the participants on the same basis as to regularly enrolled students of the institution.
7. A participant's parent(s) and/or guardian(s) shall be informed of any medical problem discovered during the medical-examination process or during the time period of the project. An appropriate health-care agency also shall be informed of such medical problems if approval is secured from the parent(s) and/or guardian(s).

8. An institution shall pursue a medical problem until the problem receives proper treatment or until all reasonable opportunities for such treatment have been exhausted.
9. Institutional responsibility for preexisting medical problems or for medical problems unrelated to NYSP participation ends with the conclusion of the project.
10. A medical-emergency plan shall be printed, posted and circulated to all staff.
11. Current and accurate medical records of participants shall be maintained in a central office and shall be filed in a systematic manner (separate from the application).

G. Activity Program

1. Participating institutions shall schedule instructional swimming to include lifesaving and/or water-survival techniques for all participants.
2. Participating institutions shall provide an instructional program for all participants in a minimum of three (3) of the following activities: badminton, basketball, dance, football (touch or flag), gymnastics, physical fitness, soccer, softball, swimming, tennis, track and field, volleyball, wrestling or additional sports suitable to local interests and available facilities. (The activities of trampoline, roller skating and cheerleading are examples of activities that may not be offered.) A minimum of two distinct physical activities must be offered daily.
3. The activity program shall include instruction in a minimum of one lifetime activity in addition to swimming for all participants.
4. A lesson plan that provides for progression in each age or ability group shall be required for each daily activity.
5. Skill tests shall be administered **at the beginning of each activity**.
6. Participating institutions' activity schedule shall be 90 percent instruction and competition. Competition shall not exceed 50 percent of the total activity time.
7. A minimum of one activity in a coed setting shall be provided for all participants; this may include swimming.

H. Enrichment Program

1. Participating institutions shall provide an enrichment program that includes a minimum of 15 hours of instruction in enrichment activities for all participants; a minimum of two (2) hours shall be scheduled weekly.
2. The enrichment program shall include the following categories: (1) alcohol-and-other-drug prevention, (2) nutrition and personal health, (3) career opportunities and job responsibilities, (4) higher education, and (5) miscellaneous topics.
3. The enrichment program shall consist of a minimum of 7.5 hours of instruction in the prevention of drug and alcohol abuse.
4. The enrichment program shall consist of a minimum of three (3) hours of instruction in nutrition, disease prevention and personal health.
5. The enrichment program shall consist of a minimum of

three (3) hours of instruction in career opportunities, higher education and job responsibilities.

6. A topic outline as appropriate shall be required for the following categories: (1) drug and alcohol abuse, (2) nutrition and personal health, (3) career opportunities and job responsibilities, (4) higher education, and (5) miscellaneous topics.
7. Small group instruction (50 or less participants per group) shall be a requirement for a minimum of 50 percent of the instructional sessions.
8. Outside resources shall be utilized as appropriate in the instructional sessions.
9. A comprehensive schedule for the enrichment program shall be prepared and distributed to appropriate personnel.

I. Financial Resources

1. A specified amount of funds shall be made available to participating institutions through the National Collegiate Athletic Association to conduct projects. Such funds shall be approved by the **NCAA director of youth programs** and the NYSP committee.
2. Participating institutions shall be required to provide adequate supplementary funds and resources to conduct an effective project.
3. Participating institutions shall be required to seek assistance from outside resources in an effort to enhance the effectiveness of the project. A summary of outside resources shall be prepared and shall include the name, address and zip code of the individual, institution, agency, etc., rendering the assistance, a brief description of the service(s) rendered and an estimated total monetary value of the service(s).

J. Project Personnel

1. Project personnel include: auxiliary staff (activity director, enrichment coordinator, alcohol- and other drug-prevention specialist, liaison officer and medical coordinator); professional staff (individuals who have attained a college degree or are considered professionals; e.g., dance, judo, karate or tennis instructors); project aides, and support staff (secretary, lifeguard, maintenance, security, etc.). Auxiliary staff must have attained a college degree with the exception of the medical coordinator. The auxiliary staff is required to be in attendance at the project site and actively involved during project operational hours.
2. **The project administrator shall be responsible for project performance, compliance with the Guidelines and fiscal operations. Responsibility for day-to-day operation of the project may be delegated to the activity director. [Note: The project administrator is not considered an auxiliary staff member.]**
3. Participating institutions shall employ one qualified individual to serve in the capacity of activity director. The activity director shall be responsible for the day-to-day organization and supervision of the project.

4. Participating institutions shall employ one qualified individual to serve in the capacity of liaison officer. The duties and responsibilities of the liaison officer shall include the recruitment of participants, maintenance of selected records, counseling of participants, community relations, coordination of the Advisory Committee, etc.
5. Participating institutions shall employ one qualified individual to serve in the capacity of enrichment coordinator. The duties and responsibilities of the enrichment coordinator shall be the coordination of all aspects of the enrichment program.
6. Participating institutions shall employ one qualified individual to serve as alcohol- and other drug-prevention specialist. The individual shall be an alcohol- and other drug-prevention professional with considerable experience and expertise in this field. The duties of the alcohol- and other drug-prevention specialist shall be to coordinate the alcohol- and other drug-prevention program.
7. Participating institutions shall employ one qualified individual to serve in the capacity of medical coordinator; that individual is solely responsible to NYSP duties during project operational hours. The duties and responsibilities of medical coordinator shall be the coordination of all aspects of medical services. The medical coordinator shall be a registered nurse, a licensed practical nurse, a certified athletics trainer or a certified equivalent medical professional.
8. Participating institutions shall employ a minimum of 30 percent of instructional staff as professional instructors. The duties and responsibilities of the professional instructors shall be the instruction of the activities offered in the activity program.
9. Considering the risk factor of the aquatics program, the professional in this area must have a current water-safety certification. In addition, individual(s) with water-safety, advanced water-safety or lifeguard-training certification must be available during instruction and recreation sessions solely for the purpose of lifeguarding.
10. Participating institutions may employ qualified individuals as project aides. The duties and responsibilities of the project aides shall be to assist the professional instructors in the instruction of the activities offered in the activity program and/or to supervise groups of participants as determined by the organization of the project.
11. Participating institutions may employ qualified individuals to serve as support personnel. The duties and responsibilities of the support personnel shall be determined by the organization of the project. Such positions as secretary, maintenance supervisor, custodian, security personnel, lifeguard, clerical personnel, etc., must be included in this category.
12. Participating institutions shall attempt to recruit and employ individuals who are sensitive to the needs and problems of the participants.
13. Participating institutions shall utilize affirmative action and other applicable Federal guidelines in the employment of personnel.

14. Participating institutions shall provide maximum feasible employment opportunities in all personnel categories to qualified individuals who reside or work in target areas or are economically disadvantaged as determined by the U.S. Department of Health and Human Services Poverty Guidelines regarding family income.
15. Participating institutions shall include both males and females in each of the following personnel categories: auxiliary personnel, professional instructors and project aides.
16. A personnel directory shall be compiled and shall include the following information on each individual: name, residential address and zip code, residential telephone, professional position, NYSP position, source of salary, sex, resides or works in target areas and economically disadvantaged.

K. Community Participation

1. Participating institutions shall establish an advisory committee whose members shall include representatives of the target-area population, the local Community Action Agency (if such an agency exists), the institution and the business community. The committee shall be involved in recruiting participants and identifying community resources available to the program.
2. An advisory-committee directory shall be compiled and shall include the following information on each member: name, agency name, agency position, agency address and zip code, and agency telephone.
3. The project administrator shall notify the mayor or city manager of the community being served that a project will be conducted. This notification shall occur after preliminary approval of an institutional application for participation and prior to final approval and allocation of funds. A copy of such notification shall be provided to the **NCAA director of youth programs**.
4. The project administrator shall familiarize the local Community Action Agency or similar agency and other public and private organizations whose major focus is on programs for economically disadvantaged citizens, concerning project plans, and shall exert every effort to coordinate such plans with other local programs in a manner that will maximize the effectiveness of the program.

L. Application and Reporting Procedures

1. Interested institutions shall complete the application for participation form. Applications must contain items such as projected average daily attendance, budget request, and proposed project content, facilities, staff schedule, etc.
2. **Applications are to be submitted to the NCAA, 6201 College Boulevard, Overland Park, Kansas 66211-2422, for consideration and action by the NYSP Committee.**
3. Participating institutions are required to complete a variety of forms and to submit a number of reports at the times prescribed by the NYSP Committee and on the forms provided. These forms and reports include the

following:

a. Prior to Operation of Project.

- (1) Tentative Agreement—nonbinding indication of grant. Complete prior to April 1, 1992.
- (2) Application—must be completed prior to April 30, 1992.
- (3) Accounting-Systems Certification—certification of adequacy of accounting system. Complete prior to April 30, 1992.
- (4) Insurance Enrollment or Nonenrollment form—application for insurance coverage. Complete prior to April 30, 1992.
- (5) Letter to mayor or city manager—complete prior to April 30, 1992.
- (6) Community Action Agency form—complete prior to April 30, 1992.

b. During Project.

- (1) Preliminary Attendance Report—due 10 calendar days after the beginning of the project.
- (2) Equipment-Inventory Report—must be completed prior to evaluation.
- (3) Final Personnel Roster—due 10 calendar days after the beginning of the project.
- (4) Visitation-Report form—must be completed the day before the institutional visit.

c. At Conclusion of Project.

- (1) Final Attendance Report—due 10 calendar days after completion of project.
- (2) Final Financial Report—due 90 calendar days after the close of the project but no later than November 1, 1992.
- (3) Audit Materials—due 90 days after the close of the project but no later than November 1, 1992.

4. Every institution must file all reports on time. Payments may be withheld during any period when adequate reports have not been received and approved.

The Grantee has no obligation to reimburse the subgrantee for final expenses submitted after the conclusion of the grant period, May 31, 1993.

5. Participating institutions are required to comply with evaluation procedures as requested by the evaluator.

M. Program Organization

1. Parties include:

- a. **United States Department of Health and Human Services, Administration for Children and Families, Office of Community Services (OCS): Grantor.**
- b. The National Collegiate Athletic Association (NCAA): Grantee.
- c. Universities and Colleges: Subgrantees.

2. Key Personnel include:

- a. The NCAA National Youth Sports Program Committee.
- b. **Edward A. Thiebe, NCAA director of youth programs** and staff liaison to the committee. Direct all inquiries regarding these guidelines to Edward A. Thiebe.

3. Responsibilities include:

NCAA program direction and control, including institution selection, approval of proposed projects, responsibility for project detail and execution by participating institutions.

N. Program Resources and Funding

1. The NCAA has been awarded a grant by the OCS and will award subgrants to designated institutions whose budgets have been approved by the NYSP Committee in accordance with these guidelines.
2. Pooled-resources basis is a combination of in-kind and financial resources. Each institution provides not less than 20 percent of the direct costs of its project, and subgrant funds provide the remainder of the approved total project cost.
3. Selected institutions shall provide their facilities, necessary capital equipment and a project administrator (e.g., athletics director or key administrative personnel).
4. Subgrant funds shall cover direct costs incurred in the conduct of each project such as reasonable fees for teaching and supervisory personnel, transportation for enrollees, meals, insurance, medical expenses, cleanup and necessary repair of facilities (if damage is directly related to project), and expendable supplies and equipment purchased for the project.
5. No indirect costs or overhead charges will be paid with subgrant funds, nor will such costs or charges be counted toward the required 20 percent institutional contribution.
6. The actual subgrant amount per institution shall be based upon number of youth, project content and length, and supporting services provided.
7. Federal and state employment-program enrollees may be made available to work in the project. Their costs, however, are not chargeable to this program.
8. The full resources of the NCAA will be brought to bear to develop and stimulate a continuing successful program. The NCAA will urge the private sector, on both national and local levels, to support the program. Private sector support might include transportation, equipment and supplies, clothing, volunteer labor, incentives and awards materials.

[See other materials: Questions and Answers, Definition of Terms, Direct-Cost Definitions, Certification Regarding Debarment]

NATIONAL YOUTH SPORTS PROGRAM

1992-93 Committee Members

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JAMES C. O'DONNELL

Food and Nutrition Service
Child Nutrition Program
3101 Park Center Drive
Alexandria, Virginia 22302
(w) 703/305-2621

Application for Participation Math/Science Education Program

1. Institution _____ Date _____
2. Name of Chief Executive Officer, President or Chancellor _____
3. Address _____

Street

City State Zip
4. Name of Project Administrator _____
(a) Title _____ Phone (_____) _____
(b) Fax phone (_____) _____ (c) Normal function _____
5. Name of Math/Science Enrichment Coordinator _____
(a) Normal Function _____
(b) Other work phone (_____) _____ NYSP phone (_____) _____
(c) Address _____
6. Name of Fiscal Officer _____ Phone (_____) _____
(a) Title _____
(b) Address (if different from above) _____
7. NYSP Project Schedule: Beginning date _____ Ending date _____
(a) Number of operating weeks _____
(b) Number of operating days per week _____
(c) Operate: M-F _____. M-Th ____. T-F _____. Other _____ (Describe)
(d) NYSP Math/Science Hands-on Component operating dates (minimum of 10 hours; not to exceed two hours per day) _____
(e) NYSP Math/Science Hands-on Component daily operating schedule:
Pre-NYSP _____ During NYSP _____ Post-NYSP _____ Alternate Day _____
8. Math/Science Education Program Hands-on Component nutrition services:
Date of application to USDA _____ USDA regional office _____
(a) Date of application to source other than USDA _____
Source _____
(b) Nature of meal: (check) Breakfast () Lunch () Dinner () Hot () Cold ()
(c) Snack _____ Juice _____ Fresh fruit _____ Other _____
(d) Meals will be prepared and served by _____

9. NYSP project enrollment:

- (a) Boys _____ Girls _____ Total _____
- (b) Math/Science Enrichment Program Hands-on Component projected enrollment (minimum of 150).
- (c) Math/Science Enrichment Program Hands-on Component average daily attendance (total enrollment less 20 percent).

10. Enrichment Component (15 hours per enrollee, no less than two hours per week--refer to Guideline H-1):

- (a) Number of periods per week _____
- (b) Approximate length of periods (in minutes) _____
- (c) Content (check subjects to be offered):
- _____ Environmental Sciences*
- _____ Sports Sciences
- _____ Natural Sciences
- _____ Mathematics
- _____ Other (specify)

*Required

11. Math/science Staff:

(a) Math/science Instructional Staff

				Total Number
(1) Full-Time Professionals	M _____	F _____	_____	
(2) Full-Time Project Aides	M _____	F _____	_____	

- (b) Math/science enrollee-to-staff ratio: _____ to _____ (NOTE: A ratio from 15-to-1 to 20-to-1 is required; ratio is determined by dividing the total number of instructional staff members into projected average daily attendance.

(c) Math/science Auxiliary Staff

(1) Activity Director	M _____	F _____	
(2) Math/Science Enrichment Coordinator	M _____	F _____	
(3) Medical Coordinator	M _____	F _____	
TOTAL	M _____	F _____	

(d) Math/science Supporting Staff

			Total Number
(1) Clerical	M _____	F _____	_____

12. Math/Science Hands-on Component Transportation:

- (a) Required: Yes _____ No _____
- (b) Number of enrollees requiring transportation _____
- (c) Type: Institution's Vehicles _____ Charter Vehicles _____ Public Transit _____
Other (specify) _____
- (d) Average distance from project site to pickup points and return (round trip) _____
- (e) Total number of enrollee travel miles [Figure (b) times Figure (d) times number of operating days] _____

13. Math/Science Hands-on Component Medical Services:

- (a) Type of treatment available: On-site first aid _____ Dispensary _____
Hospital _____ Other (describe) _____

14. Insurance:

- (a) Do you plan to participate in the current NYSP Accident-Medical Insurance Plan?
Yes _____ No _____
- (b) Whether answer is yes or no, complete the accompanying Enrollment/Nonenrollment Form and return with this application.

All institutions must participate in the liability insurance coverage.

15. Submitted by:

Project Administrator and Title

Signature of Project administrator

Date

Name and Title of office empowered to make contracts

Signature of officer empowered to make contracts

Date

APPROVAL OF THIS APPLICATION WILL BE CONTINGENT UPON COMPLETE AND ACCURATE SUBMISSION OF REQUESTED DATA. GRANT FUNDS WILL NOT BE FORWARDED UNTIL APPLICATION, INCLUDING BUDGET ESTIMATE (APPENDICES A AND B), HAS BEEN APPROVED.

APPENDIX A

BUDGET ESTIMATE

Please give specific budget figures in detail. Final financial report must conform to amounts listed unless written approval is granted by NCAA director of youth programs.

BUDGET

Part I. DIRECT COSTS TO BE FEDERALLY FUNDED (MAXIMUM \$24,000):

A. Staff Wages and Salaries (Please refer to salary ceilings.):

1. Auxiliary	\$ _____
2. Professionals	\$ _____
3. Project Aides	\$ _____
4. Supporting	\$ _____

TOTAL WAGES AND SALARIES \$ _____

B. Staff Benefits (FICA)

TOTAL BENEFITS \$ _____

C. Insurance (liability)

TOTAL INSURANCE \$ 135

D. Operating Costs:

1. Facilities restoration	\$ _____
2. Expendable supplies	\$ _____
3. T-shirts (\$4.25/shirt)	\$ _____

TOTAL OPERATING COSTS \$ _____

E. Miscellaneous:

1. Nutrition	\$ _____
2. Other (medical services, non-expendable replacement and/or repair	\$ _____

TOTAL MISCELLANEOUS COSTS \$ _____

F. Transportation

TOTAL TRANSPORTATION COSTS \$ _____

TOTAL PART I \$ _____

G. Submitted By _____
(Fiscal Officer) (Signature) (Date)

PART II. INSTITUTIONAL CONTRIBUTION:

- A. Athletic Facilities (use estimated cost of renting comparable facilities in arriving at cost figures):

Type	Number	Days in Use	Cost per Day	Total Cost
Athletic facilities	_____	_____	_____	\$ _____
Laboratories	_____	_____	_____	\$ _____
Classroom	_____	_____	_____	\$ _____
Other	_____	_____	_____	\$ _____
				TOTAL \$ _____

- B. Nonexpendable equipment (total replacement cost): TOTAL \$ _____

Description	Number	Cost	Total Cost
_____	_____	_____	\$ _____
_____	_____	_____	\$ _____
_____	_____	_____	\$ _____

- C. Project Administrator's Salary:

1. \$ _____ per week (regular salary). TOTAL \$ _____

- D. Supporting services (estimated dollar value):

1. Office space: _____ sq. feet
used for _____ weeks at _____
per week per sq. foot for rent \$ _____

2. Lockers \$ _____

3. Utilities (lights, water, etc.) \$ _____

4. Administrative procedures
(auditing, payroll, etc.) \$ _____

Services Rendered	Employee Wages	No. of Hours
-------------------	----------------	--------------

_____	_____	_____
-------	-------	-------

_____	_____	_____
-------	-------	-------

_____	_____	_____
-------	-------	-------

5. Other (medical services, etc.) \$ _____

TOTAL \$ _____

TOTAL PART II \$ _____

*Must constitute at least 20 percent of Total Budget Estimate

PART III. OTHER PUBLIC CONTRIBUTIONS

A. Nutrition

USDA Assistance \$ _____

State and/or Local Assistance \$ _____

Description	Number	Cost	Total Cost
_____	_____	_____	\$ _____
_____	_____	_____	\$ _____
_____	_____	_____	\$ _____

B. Work Study or JTPA Workers \$ _____

Name	Wages	Hrs. Worked	Total Cost
_____	_____	_____	\$ _____
_____	_____	_____	\$ _____
_____	_____	_____	\$ _____

TOTAL PART III \$ _____

PART IV. PRIVATE SECTOR (NONINSTITUTIONAL) CONTRIBUTIONS:

A. Facilities donated by local organizations. \$ _____

B. Medical services \$ _____

C. Transportation \$ _____

D. Supplies, equipment or other items \$ _____

TOTAL PART IV \$ _____

RECAPITULATION

I.	Total NYSP Math/Science Enrichment Program	\$ _____
II.	Total Institutional Contribution	\$ _____
III.	Total Other Public Contribution	\$ _____
IV.	Total Private Sector (Noninstitutional) Contributions	\$ _____

TOTAL BUDGET ESTIMATE \$ _____

APPENDIX B

SALARIES AND WAGES FOR INSTRUCTIONAL & SUPERVISORY STAFF
(PLEASE TYPE)

	NYSP Activity	Total NYSP Salary	Live or Work in Target Area	Meet Poverty Guidelines	Former NYSP Participant
I. AUXILIARY STAFF (Salary range \$1,000-\$2,500)					
1.	_____ Activity Director	_____	_____	_____	_____
2.	_____ Math/Science Enrichment Coordinator	_____	_____	_____	_____
3.	_____ Medical Coordinator	_____	_____	_____	_____
		TOTAL	_____	_____	_____
II. PROFESSIONALS (Salary range \$800-\$1,500) (Listed by name alphabetically)					
1.	_____	_____	_____	_____	_____
2.	_____	_____	_____	_____	_____
3.	_____	_____	_____	_____	_____
4.	_____	_____	_____	_____	_____
5.	_____	_____	_____	_____	_____
6.	_____	_____	_____	_____	_____
		TOTAL	_____	_____	_____
III. PROJECT AIDES ([Students] Salary Range \$300-\$900) (List by name and NYSP activity)					
1.	_____	_____	_____	_____	_____
2.	_____	_____	_____	_____	_____
3.	_____	_____	_____	_____	_____
4.	_____	_____	_____	_____	_____
5.	_____	_____	_____	_____	_____
6.	_____	_____	_____	_____	_____
		TOTAL	_____	_____	_____
IV. SUPPORTING STAFF (Salary range \$500 - \$1,000)					
1.	_____	_____	_____	_____	_____
2.	_____	_____	_____	_____	_____
3.	_____	_____	_____	_____	_____
4.	_____	_____	_____	_____	_____
		TOTAL	_____	_____	_____

MINUTES OF THE
NATIONAL YOUTH SPORTS PROGRAM
MATH/SCIENCES ENRICHMENT PROGRAM WORKSHOP

Kansas City Airport Marriott
Kansas City, Missouri

April 25, 1992

Those in attendance were:

Mark Ahrens, University of St. Thomas
Tom Barnhart, North Dakota State University
John Bayless, Oklahoma State University
Jon Berry, University of St. Thomas
Paul E. Bieron, Canisius College
Orlando Brown, New Mexico Highlands University
Ruth Cristo, New Mexico Highlands University
Larry Dorsey, Mississippi Valley State University
Brenda Edmond, Southern University, Baton Rouge
Barry A. Frishberg, South Carolina State College
Vivian L. Fuller, Indiana University of Pennsylvania, NYSP chair
Diane Gilbertson, University of Wisconsin, Eau Claire
Justine Gilman, University of Southern California
Lucille Hester, University of District of Columbia
Theresa Janifer, University of District of Columbia
Vivian Johnson, Norfolk State University
Kimberly Keller, Southern University, Baton Rouge
Vandessa King, University of Wisconsin, Eau Claire
Ryan Kling, Temple University
Frank Kulling, Oklahoma State University
Susan Lammers, St. Ambrose University
James Lauffenburger, Canisius College
Kelli Layman, North Dakota State University
Stephen A. Martin, South Carolina State College
Thomas Morris, Norfolk State University
Marcia Oxley, Temple University
Silas Peyton, Mississippi Valley State University
Bob Poth, St. Petersburg Junior College
Raymond J. Shovlain, St. Ambrose University
Jennifer Siu, University of Southern California
Porter L. Troutman, University of Nevada, Las Vegas
Kathy Walker, St. Petersburg Junior College
Bernadette Williams, University of Nevada, Las Vegas
Rochelle M. Collins, NCAA
Edward A. Thiebe, NCAA

Ms. Fuller called the meeting to order at 8:30 a.m.

1. Review of Project Scope and Work Plan. The NYSP math/sciences enrichment program objectives, scope, work requirement, data requirement, capability, sample, staff and procedures were reviewed with attendees.
2. Review of 1991 Pilot Program Meeting Minutes. Attendees reviewed the May 31 and September 14, 1991, pilot program minutes.

3. Review of Individual Project Format/Schedule. Project representatives provided overviews of their program designs. All projects will provide a total of three hours of math/science enrichment programming in the existing NYSP enrichment component for all enrolled participants. Math/science enrichment coordinators have been hired at each project to work with existing NYSP auxiliary staff members. In addition, the following program designs were noted:

Canisius College: Math/science enrichment program will operate during NYSP daily schedule; 180 enrollees, three weeks (July 6-24).

University of District of Columbia: Math/sciences enrichment program will operate on Saturdays; 300 enrollees, six weeks (June 22-August 1).

Mississippi Valley State University: Math/sciences enrichment program will operate on Saturdays; 150 enrollees, five weeks (June 1-July 3).

University of Nevada, Las Vegas: Math/sciences enrichment program will operate before NYSP daily schedule; 325 enrollees, five Fridays (June 15-July 17).

New Mexico Highlands University: Math/sciences enrichment program will operate during NYSP daily schedule; 500 enrollees, five weeks (June 8-July 10).

Norfolk State University: Math/sciences enrichment program will operate on Saturdays; 400 enrollees, five weeks (June 20-July 24).

North Dakota State University: Math/sciences enrichment program will operate after NYSP daily schedule; 250 enrollees, two weeks (July 20-31).

Oklahoma State University: Math/sciences enrichment program will operate before NYSP daily schedule; 150 enrollees, three weeks (June 15-July 3).

St. Ambrose University: Math/sciences enrichment program will operate during NYSP daily schedule; 250 enrollees, four weeks (June 22-July 17).

St. Petersburg Junior College: Math/sciences enrichment program will operate after NYSP daily schedule; 300 enrollees, five weeks (June 12-July 17).

University of St. Thomas: Math/sciences enrichment program will operate during NYSP daily schedule; 250 enrollees, five weeks (June 12-July 16).

South Carolina State College: Math/sciences enrichment program will operate during NYSP daily schedule; 300 enrollees, five weeks (June 8-July 16).

University of Southern California: Math/sciences enrichment program will operate after NYSP daily schedule; 150 enrollees, six Tuesdays (July 1-August 4).

Southern University, Baton Rouge: Math/sciences enrichment program will operate on Saturdays; 150 enrollees, five weeks (June 1-July 3).

Temple University: Math/sciences enrichment program will operate after NYSP daily schedule; 150 enrollees, five weeks (June 26-July 31).

University of Wisconsin, Eau Claire: Math/sciences enrichment program will operate during NYSP daily schedule; 320 enrollees, five weeks (June 8-July 10).

4. Review of Individual Project Curricula. It was noted that all programs will include hands-on activities in the areas of environmental science. Project representatives provided overviews of program curricula involving environmental science. The following project curricula was noted:

Canisius College: Introduction to biodegradability, noise pollution, solar power, acid rain and components of garbage.

University of District of Columbia: Introduction to plant biology and recycling.

Mississippi Valley State University: Introduction to pesticides, fertilizers, disposal of garbage, landfill monitoring systems and recycling.

University of Nevada, Las Vegas: Introduction to air and water pollution, nuclear waste, nuclear power, recycling and desert plant life.

New Mexico Highlands University: Curriculum undecided.

Norfolk State University: Introduction to recycling and astronomy.

North Dakota State University: Introduction to recycling, pollutants and respiratory functions of mammals.

Oklahoma State University: Introduction to pollution, waste management, landfills and formation of tornadoes.

St. Ambrose University: Introduction to plant biology, water use and conservation, nuclear power and astronomy.

St. Petersburg Junior College: Introduction to marine biology, recycling, solar power, air and water pollution and animal life.

University of St. Thomas: Introduction to water sample measurements and solar power.

South Carolina State College: Introduction to air pollution, water pollution and properties of biodegradability.

University of Southern California: Curriculum undecided.

Southern University, Baton Rouge: Introduction to biology, nuclear pollution, water and air sample measurements.

Temple University: Introduction to recycling, waste management and insect life.

University of Wisconsin, Eau Claire: Introduction to plant life, and water testing.

Project personnel also discussed curricula in the areas of computer science, natural science, biological science, sports science, technology, zoology and mathematics.

5. Review of Insurance Policy. Project personnel discussed the insurance policy administered by National Sports Underwriters, Inc. Projects will submit operating dates and times and identify math/sciences enrichment program staff to the national office prior to the start of the math/sciences enrichment program for proper insurance coverage.
6. Review of Report Forms and Reporting Procedures. Attendees reviewed the chronological timetable noting due dates for filing of printed materials. The following printed materials were reviewed: subgrant agreement, pretest participant survey answer sheet, daily attendance report, post-test participant survey answer sheet, final personnel roster, final attendance report, evaluation narrative report and final financial report.
7. Review of Pre- and Post-Participation Survey. Attendees discussed the participation survey. It was noted that computer scantron general purpose answer sheets will be utilized to facilitate data collection. It was noted that data collected will remain confidential in federal reports. Also, attendees discussed survey results of math/science returnees versus non-returnees.
8. Review of Grant Allocation and Final Financial Reports. Attendees reviewed the final financial report. It was determined that requests for revisions in submitted budgets should be made in writing to the national office for approval.
9. Paperwork. Attendees reviewed the participant certificate and T-shirt. It was noted that red and blue T-shirts are not allowed in the Los Angeles area. Attendees discussed math/science photographs. It was noted that the national office will reimburse photography fees up to \$150 for services to photograph math/science program participants. Also, projects will provide the national office with copies of all public relations efforts.
10. Future Meeting Date and Site. It was recommended that the next meeting be held September 25-26 or October 2-3, 1992, at Marco Island, Florida, Virginia Beach, Virginia, or Hilton Head, South Carolina.
11. Adjournment. The meeting adjourned at 2:25 p.m.

NATIONAL YOUTH SPORTS PROGRAM

Pilot Math/Science Program
Summary of Operational Schedule

Institutions conducting math/science program before summer operating hours for NYSP:

Nevada, University of, Las Vegas
Oklahoma State University

Institutions conducting math/science program during summer operating hours for NYSP:

Canisius College
New Mexico Highlands University
St. Ambrose University
St. Thomas, University of
South Carolina State College
Southern University, Baton Rouge
Wisconsin, University of, Eau Claire

Institutions conducting math/science program after summer operating hours for NYSP:

North Dakota State University
St. Petersburg Junior College
Southern California, University of
Temple University

Institutions conducting math/science program on non-NYSP operating dates:

District of Columbia, University of
Mississippi Valley State University
Norfolk State University

I. ENRICHMENT PROGRAM

CATEGORY	TOPIC OUTLINE AVAILABLE	TOTAL NUMBER OF PARTICIPANTS	TOTAL HOURS PER TOPIC PER PARTICIPANT (In 15-minute increments)	TOTAL HOURS IN SMALL GROUPS PER PARTICIPANT (In 15-minute increments)	NONINSTITUTIONAL RESOURCES UTILIZED*
			(7.5 hours)		
Alcohol- and other- drug prevention (General Topics)	Yes () No ()	_____	_____	_____	Yes () No ()
			(3 hours)		
Nutrition, Disease Prevention and Personal Health (General Topics)	Yes () No ()	_____	_____	_____	Yes () No ()
			(3 hours)		
Career Opportuni- ties, Higher Educa- tion and Job Respon- sibilities (General Topics)	Yes () No ()	_____	_____	_____	Yes () No ()
Other Categories (General Topics)	Yes () No ()	_____	_____	_____	Yes () No ()

TOTAL _____ TOTAL _____
Percentage _____
(small group instruction)

*Include a list of public and private noninstitutional resources utilized in the enrichment program with the summary of noninstitutional resources, section J. List should include name, address, zip code, agency name and total monetary value.

J. FINANCIAL RESOURCES

SOURCES (refer to Summary of Non-Federal Contributions worksheet)

FUNDS

1. National Youth Sports Program Grant	\$ _____
2. Institutional Contribution	\$ _____
3. USDA	\$ _____
4. Other Public Contributions (Any City, State or Public Funds)	\$ _____
5. Private Sector (Noninstitutional) Contributions	\$ _____
TOTAL:	\$ _____

SUMMARY OF NONINSTITUTIONAL RESOURCES

(This section should include Enrichment, Transportation, Medical and Nutritional Funds Contributed from Sections F, G, H, I)

NAME, ADDRESS AND ZIP CODE (Individual, Institution, Agency, etc.)	SERVICE(S) (Brief Description)	AMOUNT (Total Monetary Value)
---	-----------------------------------	----------------------------------

Public (Any City, State or County Funds other than USDA): _____

Subtotal _____

Private _____

Subtotal _____

(USE ADDITIONAL PAGE IF NEEDED) TOTAL OF 4 AND 5 ABOVE _____

NATIONAL YOUTH SPORTS PROGRAM

Job Responsibilities for NYSP Auxiliary Staff Members per Federal Guidelines

- J-3 Participating institutions shall employ one qualified individual to serve in the capacity of activity director. The activity director shall be responsible for the day-to-day organization and supervision of the project.
- J-4 Participating institutions shall employ one qualified individual to serve in the capacity of liaison officer. The duties and responsibilities of the liaison officer shall include the recruitment of participants, maintenance of selected records, counseling of participants, community relations, coordination of the Advisory Committee, etc.
- J-5 Participating institutions shall employ one qualified individual to serve in the capacity of enrichment coordinator. The duties and responsibilities of the enrichment coordinator shall be the coordination of all aspects of the enrichment program.
- J-6 Participating institutions shall employ one qualified individual to serve in the capacity of alcohol-and-other drug-prevention specialist. The individual shall be an alcohol-and other drug-prevention professional with considerable experience and expertise in this field. The duties of the alcohol-and other drug-prevention specialist shall be to coordinate the alcohol-and other drug-prevention program.
- J-7 Participating institutions shall employ one qualified individual to serve in the capacity of medical coordinator; that individual is solely responsible for NYSP duties during project operational hours. The duties and responsibilities of medical coordinator shall be the coordination of all aspects of medical services. The medical coordinator shall be a registered nurse, a licensed practical nurse, a certified athletics trainer or a certified equivalent medical professional.

**1992 NATIONAL YOUTH SPORTS PROGRAM
MATH/SCIENCE DIRECTORY**

Canisius College

2001 Main Street
Buffalo, New York 14208

Mr. Paul E. Bleron	716/888-2950
Mr. James Lauffenburger	716/888-2583

District of Columbia, University of

4200 Connecticut Avenue, N.W.
Washington, D.C. 20008

Mr. Wilmer L. Johnson	202/282-2163
T. Janifer	202/282-2163

Mississippi Valley State University

P.O. Box 1178
Itta Bena, Mississippi 38941

Mr. Larry Dorsey	601/254-9041
Mr. Silas Peyton	601/254-9041, ext. 6301

Nevada, University of

4505 Maryland Parkway
Las Vegas, Nevada 89154

Mr. John Massengale	702/739-3291
Mr. Robert Moore	702/739-3229

New Mexico Highlands University

Baca Avenue
Las Vegas, Nevada 87701

Mr. Rob Evers	505/454-3351
Mr. Ray Padilla	505/455-2234

Norfolk State University

2401 Corprew Avenue
Norfolk, Virginia 23504

Mr. William L. Price	804/683-8152
Ms. Vivian Johnson	804/683-8133

**1992 NATIONAL YOUTH SPORTS PROGRAM
MATH/SCIENCE DIRECTORY**

North Dakota State University

Bison Sports Arena

Fargo, North Dakota 58105-5600

Mr. Denis Isrow

701/237-7463

Ms. Kelli Layman

701/237-7804

Oklahoma State University

Room 120 Colvin PEC

Stillwater, Oklahoma 74078

Mr. George Oberle

405/744-5493

Mr. Frank Kulling

405/744-6753

South Carolina State College

300 College Street, N.E.

Orangeburg, South Carolina 29117

Mr. Kenneth D. Mosely

803/536-8654

Mr. Barry A. Frishberg

803/536-8652

Southern California, University of

Lyon University Center

Los Angeles, California 90089-0012

Mr. Dave Koch

213/740-5127

Ms. Kenya Ellis

213/740-4667

Southern University

J.S. Clark Administration Building

Baton Rouge, Louisiana 70813

Mr. Marvin L. Yates

504/771-5020

Ms. Karen Stevens

504/771-3705 or 3990

St. Ambrose University

518 West Locust Street

Davenport, Iowa 52803

Mr. James Fox

319/383-8727

Ms. Susan Lammers

319/322-0213

**1992 NATIONAL YOUTH SPORTS PROGRAM
MATH/SCIENCE DIRECTORY**

St. Petersburg Junior College

6605 Fifth Avenue, N.

St. Petersburg, Florida 33710

Mr. Maurice E. Nott

813/341-4605

Mr. Bob Poth

813/345-0603

St. Thomas, University of

Mail Stop No. 5006, 2115 Summit Avenue

St. Paul, Minnesota 55105-1096

Mr. Charles Keffer

612/647-5258

Mr. Mark Ahrens

612/647-4335

Temple University

1900 North Broad Street

Philadelphia, Pennsylvania 19122

Mr. Charles Theokas

215/787-7447

Mr. Doyt Jones

215/732-4814

Wisconsin, University of

Hilltop Recreation Center

Eau Claire, Wisconsin 54702-4004

Mr. William B. Harms

715/836-4757

Mrs. Beverly Ogan

715/839-2847

NATIONAL YOUTH SPORTS PROGRAM

SCIENCE ENRICHMENT

SUMMER PROGRAM

SUMMARY REPORT

JUNE 20 - JULY 25, 1992

DR. CLARENCE D. COLEMAN

INSTRUCTOR

National Youth Sports Program
Summer Science Enrichment Program

1992

The initial phase of the science enrichment program addressed seven objectives during the summer of 1992. The five sessions provided a limited amount of time to introduce students to career opportunities, and skills, scientific laboratory experiences, and field trips. However, the sessions did serve as a foundation to increase students interest in science and ameliorate their attitude toward science.

The dates, objectives and activities covered are listed below:

I. June 20, 1992

Objective

The students will use the process skills as a basis of answering questions and providing explanations.

Activities

Planetarium presentation/participation. An observation of June, constellations and planets. Students were given activity follow-up sheets to locate planets and star patterns from their home location.

II. June 27, 1992

Objective

The student will explore the application of scientific principles in various occupations and interest via field trips laboratory activities, photography, readings and speakers.

Activities

Field trip to the Virginia Marine Science Museum for observation, scientific activity participation and speakers.

III. July 11, 1992

Objective

The student will identify the manipulated variables which are held constant in a simple experiment.

The student will work independently and as a member of small and large groups in the laboratory.

Activities

Students (pairs) designed cargo bays for space travel. The security of each bay was tested by dropping the cargo from the second floor of the Science Building.

IV. July 15, 1992

Objective

The student will explore the application of scientific principles in various occupations and interests via field trips and space science activities.

The student will observe ecosystems at work.

Activities

Field trip to the Virginia Air and Space Museum for observation, scientific activities, and speakers.

V. July 18, 1992

Objectives

The student will demonstrate safety techniques in the handling of chemicals and equipment.

The student will observe changes and classify them as chemical or physical.

Activities

Students performed activity on water purification followed by a discussion of pollution, recycling and environmental awareness.

Students assembled three to a group to participate in the chemical reactions and changes activities.

NATIONAL YOUTH SPORTS PROGRAM
MATHEMATICS ENRICHMENT
SUMMER PROGRAM

SUMMARY REPORT
JUNE 20 - JULY 25, 1992

MRS. CARROL RHODES NELSON
INSTRUCTOR

National Youth Sports Program
Mathematics Enrichment Summer Program
Summary Report
June 20 - July 25, 1992

Instructional Methodology

The summer mathematics component of the National Youth Sports Program began June 20th and ended July 25, 1992. It encompassed basic computation using graphs, charts, percentages, averages, means and problem solving (critical thinking). USA Today was incorporated into the program as an integral part, along with Computer Assisted Instruction in mathematics.

Participants were given hypothetical situations in which they solved for answers, using the newspaper. In general, the students enjoyed this activity; however, their favorite class activity was time spent on the computers. Each student averaged about 20 minutes per class on CAI mathematics.

During the first and last class period, the Science Attitude Survey was administered. Classes in mathematics focused on making the enrichment component as enjoyable and as interesting as possible. This was done by incorporating science related field trips into the program. It was emphasized that most professions require strong mathematics and science backgrounds.

Students were involved in hands-on experiences on the field trips to the Air and Space Museum and the Virginia Marine Science Museum. They were briefed on what to anticipate and possible questions to ask as they related mathematics: aerodynamics, jet propulsion, weight and measurement. Our students thoroughly enjoyed the movie at the Virginia Air and Space Museum on outer space. They discussed the trip during their next class session. At least three (3) science related field trips should be planned for a program of this caliber.

Areas of Instruction

June 20, 1992	Science Attitude Survey (Pretest) Basic Computation Computer Based Test Instructional Resource: <u>USA Today</u> A. word problems - problem-solving B. fractions/addition-subtraction multiplication-division C. metric system Instructional Resource: CAI Mathematics
June 27, 1992	<u>Field Trip: Marine Science Museum, Virginia Beach, Virginia</u>
June 11, 1992	Graphs, Charts, and Tables Instructional Resource: <u>USA Today</u> A. Weather B. Vote Count C. Sports Instructional Resource: CAI Mathematics
July 15, 1992	<u>Field Trip: Air and Space Museum, Hampton, Virginia</u>

July 18, 1992

Percentages of a Whole

Instructional Resource: USA Today

A. Baseball Percentages (Sports Section)

B. Shopping by the Clock

Instructional Resource: CAI Mathematics

July 25, 1992

Averages, Means, Estimation and Prediction

Instructional Resource: USA Today, July 7th
(38)

A. Winner bet on Market Trends

B. Teachers 87% White
72% Women, (1A) estimation, prediction

Instructional Resource: CAI Mathematics

Science Attitude Survey (Post Test)

**NATIONAL YOUTH SPORTS PROGRAM
READING AND LANGUAGE ARTS
SUMMER PROGRAM**

**SUMMARY REPORT
JUNE 20 - JULY 25, 1992**

**DR. MATILDA MARTIN
INSTRUCTOR**

National Youth Sports Program
Reading and Language Arts
Summer Program
June 20 - July 25, 1992

Rationale

Research has indicated that students' proficiency in reading correlates highly with their mastery of content in mathematics and science (Earle, 1978). Moreover, Piercey (1986) has reported that the most difficult of all reading skills and specialized vocabularies in the school curriculum are those in mathematics and science. She has contended that despite the fact that these areas of study draw the better student, the technical reading and specialized vocabularies continue to be problematic. Thus, for students who elect these courses, the language barriers are sometime unsurmountable. Therefore, as a result of the challenges presented in mathematics and science, many students are not attracted to these fields of study. Although students may find the concepts in these areas interesting, they simply may not possess the reading and thinking skills to acquire and apply mathematics and science content. Thus, in an effort to accomplish the mission of the National Youth Sports Program Math/Science Project, the reading and language arts program focused on teaching reading and reasoning skills that are essential for students to successfully read and master mathematics and science content. It is theorized that once students acquire these reading skills which are requisite for effective learning in these content areas, they will experience academic success and may then elect to pursue careers in mathematics and science.

Instructional Methodology

The reading and language arts program's instructional delivery was effectuated through individualized instruction, small intra-group instruction, whole class instruction, peer tutoring, and instructor explanation, modeling and demonstration of reading and language arts skills. The direct instruction and cooperative learning approaches were also integral components of the instructional program. Learning situations were provided which allowed students opportunities to assimilate and practice reading and language arts skills and to apply these skills in content subject areas.

The USA Today's Issues Curriculum Guide was used as the major instructional resource. The Classline Today Instructional plan is designed to teach reading and language arts skills using "real world" textual material, which helps students to understand our changing society and world, environmental problems, and resolve problems through critical and creative thinking. In addition, reading material obtained from the Virginian Pilot newspaper and library informational books were used as supplements to the USA Today Educational Program.

The field trip experiences to the Virginia Marine Science Museum and the Air and Space Museum served as an impetus to motivate students to read materials pertaining to marine life and space travel. Prior to each field trip, informational books and newspaper articles pertaining to space and marine life were used to activate and build students' background knowledge in order to maximize students' learning from these experiences. Moreover, after the field trip visitations, follow-up activities, were

implemented to address students' questions regarding the exhibits and to provide relevant reading material on these topics.

Students' attitudes and performances regarding the reading and language arts activities were positive. They were particularly receptive to the analytical, critical reading and thinking activities. Moreover, the cooperative learning activities encouraged students to work effectively in groups and enhanced both their social skills and their academic skills in reading content area materials in mathematics and science.

Areas of Instruction

Session

During the instructional sessions students were presented with reading and thinking activities in which they,

June 20, 1992

- I. Read for literal meaning
 - A. Discerned facts and opinions
 - B. Recognized main ideas
 - C. Used context clues to gain the meanings of specialized vocabularies.

Instructional Resource: USA Today and Classline Today - Language Arts Lessons and Top Ten Review for June 16-17.

June 27, 1992

- II. Participated in a field trip to the Virginia Marine Science Museum in Virginia Beach, Virginia.
Instructional Resource: Used Informational books to activate and build students' background knowledge regarding the field trip.

July 11, 1992

- III. Summarized and Analyzed Information
 - A. Formed opinions based on critical examination of relevant information
 - B. Related information in a concise form
 - C. Detected bias, assumptions and points of views.

Instructional Resource: USA Today and Classline Today Language Arts Lessons and Top ten Review for July 7 and 8;

7/11/92

- July 15, 1992 IV. Participated in a field trip to the Air and Space Museum in Hampton, Virginia. Instructional Resource: Used information books to activate and build background knowledge regarding the field trip.
- July 18, 1992 V. Synthesized information
 A. Extrapolated from data sources
 B. Gathered information
 C. Communicated orally and in writing.
 Instructional Resource: USA Today and Classline Today Language Arts Lessons and Top Ten Review for July 14; the Virginian Pilot, July 12, 1992.
- July 25, 1992 VI. Evaluated information
 A. Used critical thinking skills
 B. Evaluated the relevance, validity and sufficiency of data and sources
 C. Tested the validity of information.
 Instructional Resource: USA Today and Classline Today Language Arts Lessons and Top Ten Review for July 15.

Instructional Resources

Newspapers

USA Today's Educational Program
 Virginian-Pilot, Norfolk, Virginia

Library Books: Informational Books Related to the Virginia Marine

Science Museum and Air and Space Museum Field Trips.

Mysteries of Outer Space - Bensussen

Travel to the Bottom of the Sea - Briggs

The Sea Around Us - Carson

The Long View in Space - Crown

Space Colony: Frontier of the 21 Century - Dank

Space: Stars, Planets, and Spacecraft - Kindersley

The Astronaut Training Book for Kids - Long

Sea Creatures - Time Life

Space Shuttle: The Quest Continues - Torres

Teacher Resources

Teaching Reading and Mathematics - Earle

Reading and Understanding Mathematics, Science, Social Studies,
and Practical Arts - Spargo and Harris

Reading Activities in Content Areas - Piercey

Improving Reading in Science - Thelen

**NATIONAL YOUTH SPORTS PROGRAM
1992 MATH/SCIENCE ENRICHMENT PROGRAM
Evaluation Narrative Report**

INSTITUTION North Dakota State University **TELEPHONE** 701-237-7804

Project Administrator Dr. Denis Isrow

Activity Director Dr. Tom Barnhart

Math/Science Enrichment Coordinator Kelli Layman

INSTRUCTIONS: Describe highlights/accomplishments/areas needing improvement and recommendations for improvement.

1. Highlights/Accomplishments/Areas Needing Improvement.

- A. Project Schedule. This project gave the participants a variety of experiences in Math and Science. The project ran from July 20-30, 1992. See attached schedule to see how students were moved from the four areas.
- B. Participating Youth. The participants varied in age from 10-16 years of age. They all seemed to be interested and enthusiastic about each of the areas. In fact, a week after the camp the participants were still talking about the Science/Math Camp. The participants were extremely enthusiastic about the recycling component of the camp. We had pick-up trucks full of newspaper, cans and plastics.
- C. Project organization. The project was well organized in relation to time management. The instructors had a better understanding of the time factors that would be placed on them, since this is our second year with the camp.
- D. Project Personnel. The personnel involved in this project were terrific, they worked hard to make the camp run smoothly and to make it fun and educational for the participants. If we are fortunate to receive this grant again, we would ask the same staff back. The participants really enjoyed the instructors as well as the activities.
- E. Nutritional Services. Snacks provided daily were enjoyed by everyone and provided a nice break between sessions.
- F. Medical Services. An athletic trainer was available to provide services if necessary.

1. Highlights and Accomplishments (continued).

G. Special Programs. At the end of each day, participants were talked to by members of the staff, explaining why science and math were important in their decision for their career in college.

H. Enrichment Program. We added a recycling component to this years camp. We divided the participants into four groups and had a contest with recycling. The group that came up with the most items for recycling would receive a pizza party. Each day we would tell the group what item to bring for recycling. The mayor of Fargo was nice enough to declare July 30, 1992 as

I. Financial Resources. NYSP Math and Science Conservation Day.

There appeared to be sufficient funding for this project.

J. Community Participation. The mayor of Fargo by declaring the Math and Science Conservation Day. The Fargo department of recycling for providing recycling b for our use.

2. Recommendations for Improvement. To add additional areas to the project. We would like to add Agronomy, Animal Science and Physics to the already existing areas. However, we would need additional funding for the expansion. Along with the additional areas we would like to extend the camp from 8 days to 10 days. We would also like to keep the group interested in conservation. Maybe add a field trip to the Math and Science Camp.

NYSP Science/Mathematics Program

July 20 - July 30, 1992

Dates	Times	Groups/Areas			
		1	2	3	4
7/20	1:30 - 2:30	Biochem	Zoo	Comp	PE
	2:30 - 2:45	Break			
	2:45 - 3:45	Zoo	Comp	PE	Biochem
	3:45 - 4:00	Science & Math Chat			
7/21	1:30 - 2:30	Comp	PE	Biochem	Zoo
	2:30 - 2:45	Break			
	2:45 - 3:45	PE	Biochem	Zoo	Comp
	3:45 - 4:00	Science & Math Chat			
7/22	1:30 - 2:30	Biochem	Zoo	Comp	PE
	2:30 - 2:45	Break			
	2:45 - 3:45	Zoo	Comp	PE	Biochem
	3:45 - 4:00	Science & Math Chat			
7/23	1:30 - 2:30	Comp	PE	Biochem	Zoo
	2:30 - 2:45	Break			
	2:45 - 3:45	PE	Biochem	Zoo	Comp
	3:45 - 4:00	Science & Math Chat			
7/27	1:30 - 2:30	Biochem	Zoo	Comp	PE
	2:30 - 2:45	Break			
	2:45 - 3:45	Zoo	Comp	PE	Biochem
	3:45 - 4:00	Science & Math Chat			
7/28	1:30 - 2:30	Comp	PE	Biochem	Zoo
	2:30 - 2:45	Break			
	2:45 - 3:45	PE	Biochem	Zoo	Comp
	3:45 - 4:00	Science & Math Chat			
7/29	1:30 - 2:30	Biochem	Zoo	Comp	PE
	2:30 - 2:45	Break			
	2:45 - 3:45	Zoo	Comp	PE	Biochem
	3:45 - 4:00	Science & Math Chat			
7/30	1:30 - 2:30	Comp	PE	Biochem	Zoo
	2:30 - 2:45	Break			
	2:45 - 3:45	PE	Biochem	Zoo	Comp
	3:45 - 4:00	Science & Math Chat			

**NATIONAL YOUTH SPORTS PROGRAM
1992 MATH/SCIENCE ENRICHMENT PROGRAM
Evaluation Narrative Report**

INSTITUTION OKLAHOMA STATE UNIVERSITY **TELEPHONE** (405) 744-9337

Project Administrator Dr. George H. Oberle

Activity Director Dr. John G. Bayless

Math/Science Enrichment Coordinator Dr. Frank A. Kulling

INSTRUCTIONS: Describe highlights/accomplishments/areas needing improvement and recommendations for improvement.

1. Highlights/Accomplishments/Areas Needing Improvement.

- A. Project Schedule.** Math Science enrichment occurred from 8:45 to 9:45 a.m., Monday through Friday, June 15th through July 3rd. Time was sufficient to conduct program indicated in H.; however, may have been more efficient to increase periods to 1.5 hours and decrease days of participation.
- B. Participating Youth.** 200 NYSP youth, age 10-16 participated in Math/Science. Participants were interested, involved and enthusiastic. Least receptive group was 14-16 year olds. Youth seemed to be most involved when randomly sub-divided into small groups (4-8) with specific tasks to perform.
- C. Project organization.** Math/Science was organized to permit five, one hour lessons in each of the following areas: Human Body; Water Resources (Environment); and Animal Predators and Prey. Students were divided into three groups (60-70 each) and each group spent one week in each area, eventually rotating through all areas.
- D. Project Personnel.** Collaboration of University faculty and public school teachers. Very effective and productive results in terms of curriculum and student involvement. Team sub-divided and made responsible for individual curricular components. Math/Science Coordinator directed efforts.
- E. Nutritional Services.** Students were provided a morning snack following the Math/Science enrichment hours (10:00 a.m.). Snacks were nutritious, wholesome and efficiently distributed.
- F. Medical Services.** All NYSP participants received a comprehensive physical from student/interns of the O.S.U. Osteopathic College. Students/interns were under direction of D.O. College faculty. Excellent first aid provided by NYSP nurse.

**NATIONAL YOUTH SPORTS PROGRAM
1992 Math/Science Enrichment Program
Evaluation Narrative Report**

Page 2 of 2

1. Highlights and Accomplishments (continued).

- G. Special Programs.** (1) Special presentations by zoologist-explanation of predators and prey accompanied by stuffed specimens. Students excited to get hands on approach to animals. (2) Entomologist presented section on spiders, complete with live specimens. (3) Civil Engineer demonstrated water treatment--students followed with mini-sample.
- H. Enrichment Program.** Human Body: Students participated in health and skill related fitness testing. Students got to see EKG representation of heart rate response to activity.
- I. Financial Resources.** Generally adequate; however, received donations of supplies, equipment, facilities and talent from OSU and community to make program more comprehensive than otherwise possible.
- J. Community Participation.** Excellent coverage by local newspaper. Numerous favorable comments from students, parents and NYSP staff. Donations of supplies from local businesses. Donations of equipment, facilities and faculty from OSU.

- 2. Recommendations for Improvement.** (1) Increase unit time from 1 to 1.5 hours and decrease number of days. (2) Ratio of 1:20 was possible only by incorporating already existing NYSP staff. While this did not pose any particular problem, it necessitates incorporation of non-math/science staff in planning. (3) Math/Science staff needs to be increased to permit Math/Science Coordinator to evaluate conduct of Math/Science curriculum as it occurs. In our program, Math/Science Coordinator had to be directly involved in program delivery, negating pre-program workshop. This could be done in a number of ways; however, an efficient method would be to make available a "sample workbook" from one or several other previously successful programs. "Workbook" could be constructed by Math/Science Coordinator and explained at pre-program workshop.

NATIONAL YOUTH SPORTS PROGRAM
1992 MATH/SCIENCE ENRICHMENT PROGRAM
Evaluation Narrative Report

INSTITUTION St. Ambrose University TELEPHONE 319-383-8729

Project Administrator Jim Fox

Activity Director Raymond J. Shovlain Susan Lammers

INSTRUCTIONS: Describe highlights/accomplishments/areas needing improvement and recommendations for improvement.

1. Highlights/Accomplishments/Areas Needing Improvement.

A. Project Schedule. The schedule worked well into the existing NYSP schedule. Recommendations for future programs would be to schedule the M/S program for the early morning, or better yet, make it a regular part of the daily activity schedule.

B. Participating Youth. For its initial year, the participants didn't do too bad. The 10 and 11 year olds were very enthusiastic. A closer look needs to take place at what can be done to stimulate and keep the 12-16 year olds interested in the program.

We maintained a daily average of 93 campers although the grant was written for 90.

C. Project Organization.

D. Project Personnel. As with the early years of the sports program, we found that our most success was achieved by a staff that combined both University members and community members.

E. Nutritional Services. Not applicable.

F. Medical Services. Our medical coordinator arranged for all the participants free physicals and was available during program time to administer aid if needed.

1. Highlights and Accomplishments (continued).

- G. Special Programs. We took several field trips which were informative and interesting. The campers enjoyed seeing industries and meeting people they were not aware of in their own community.
- H. Enrichment Program. We integrated the enrichment program directly into the program. This proved to be the most successful approach to our program.
- I. Financial Resources. The facilities and resources provided by the University were excellent. The community and industry contributions of time, facilities and resources were invaluable. There was a lot of outside interest in the program with offers of support for future programs.
- J. Community Participation.

2. Recommendations for Improvement.

**NATIONAL YOUTH SPORTS PROGRAM
1992 MATH/SCIENCE ENRICHMENT PROGRAM
Evaluation Narrative Report**

INSTITUTION University of St. Thomas TELEPHONE (612) 647-4335

Project Administrator Dr. Charles Keffler

Activity Director Ms. Zara Kinnunen

Math/Science Enrichment Coordinator Mr. Mark Ahrens

Report prepared by Mark Ahrens: *Mark Ahrens 7/24/92*

1. Highlights and Accomplishments

A. Project Schedule

Our program was a part of the NYSP regular program, and covered 25 days from June 12 to July 16. The students participated in athletic activities in the AM (9:00 to 11:30) and academic activities in the PM (12:15 to 2:45). The lunch hour from 11:30 to 12:15 included performances (singing, dancing, etc.) by the NYSP participants, and prize giveaways on Fridays for the "Participants of the Week". The performances helped the groups earn "World Perk" points; these points were totaled for each group during each week in order to earn the "Friday treat" - ice cream or cookies - as well as special prizes at the end of the NYSP program.

B. Participating Youth

Approximately 302 youths were invited to participate, and average daily attendance was around 214. We had a wonderful mixture of ethnic backgrounds, including African-American, Native American, Asian-American, Hispanic, and Anglo-American students, from both St. Paul and Minneapolis and a ratio of about 40%/60% female/male. About 51% were returning participants from the 1991 NYSP program, and an additional 8% were returning participants from the 1991-92 Extended NYSP program (but were not participants last summer).

C. Institutional Services

The University of St. Thomas provided the classrooms, the computer lab, the NYSP office, and a portion of the geometry and science supplies required. The classrooms were extremely nice classrooms, with air-conditioning. All of the classrooms were in the same building, and it was very quick to move the groups from room to room. We also had use of a large auditorium, suitable for the entire group, in the same building as the classrooms. This auditorium was used several times for speakers and films, as well as for our Parent-participant orientation before the start of the program and for the Awards Presentations for parents and participants at the end of the program.

The classroom building was adjacent to most of the athletic facilities, which allowed for very quick travel time. The lunch and breakfast facilities were not adjacent to the classrooms, however, necessitating about a 3 block walk from breakfast and to and from lunch.

The University of St. Thomas helped NYSP in publicizing the program this summer. Several articles and pictures were run in the St. Thomas newspaper, along with several news releases for the metro daily papers. I am very pleased that our public relations office is helping us with this part of running the program.

A class in the Communications Department at St. Thomas also made a documentary of the NYSP program. The documentary is being edited down to about 25 minutes in length. The class videotaped various aspects of the athletic and academic program, including interviews with staff and participants, over a two week period. We hope to use the final product as a recruitment tool with schools, as well as for staff training. In addition, the documentary will likely be shown on the local cable TV systems.

D. Project Organization

We had excellent and dedicated personnel in every area for this program. Since all students participated in both the regular NYSP program and the math/science program we had fewer logistical problems than might be expected. The athletic and academic programs fit together quite well, with no problems on scheduling.

Cindy Zelinski, the NYSP Activity Director, and Mark Ahrens, the Math/Science Coordinator, acted as a team to run the athletic and academic programs.

We have a Parent's Handbook which includes our Code of Conduct (respect people, respect property, respect the environment, follow instructions, and act safely). Our "World Perks" point system allows counselors and teachers to assign points for following the code of conduct and for specific actions during the day (clean up at meals, class participation, etc.). These points allowed groups to earn a treat at the lunch on Friday, plus the 3 groups with the most total points at the end of the program won Nike bags, notebooks, and gift certificates for pizza.

E. Nutritional Services

Our food service department was able to provide breakfast and lunch each day to each participant and staff member. Reimbursement for the meal charges will be provided by the USDA.

We would like to improve the food service in one significant area, however. The cafeteria space we used is about 3 blocks from the main classroom and athletic facilities. The walk from place to place often caused problems since we have to cross a fairly busy street. The cafeteria area near the main facilities we use is heavily scheduled during the summer, but we hope to negotiate to use it for NYSP. Eliminating the walk at breakfast and twice at lunch will greatly lessen some logistic problems.

F. Medical Service

Our medical staff was given excellent facilities, both for the initial medical exams (for which several doctors and nurses donated their time) and for the duration of the program. The only medical problems were minor scrapes and a twisted ankle.

All of the medical exams for NYSP participants were performed free of charge to NYSP, through donations of facilities by the St. Thomas Clinic and of time by doctors from the Minnesota Medical Association.

G. Special Programs

We were fortunate to have several special speakers and events this summer.

Richard Coffey, a former NBA MN Timberwolves player and currently playing in the European league, was able to run a basketball camp for our students for 5 days. We also had players from the University of Minnesota Women's Basketball Team help Richard run the camp. Richard was an excellent speaker and role model for the students, and I am delighted that he was so generous with his time.

Darrell Thompson of the Green Bay Packers was able to speak with several of the groups of students during his two day visit with us. Darrell stressed the importance of completing an education for anyone thinking of an athletic career. His sentiments were reinforced by one of our staff members for NYSP, Von Sheppard, who is a former professional football player whose career ended due to injuries. Darrell was also an excellent speaker, and the kids showed a lot of respect for him.

Sean Salisbury, quarterback for the Minnesota Vikings, was able to speak to several groups of kids about goal setting and education. He was a very strong speaker, and the kids were able to ask a lot of questions of Sean.

The mayor of St. Paul, Jim Scheibel, was able to come and visit the program for an afternoon. He visited several classes, and was able to converse with the kids and answer questions from them. He is a very likable and easy going person, and the kids were very comfortable with him.

Dwayne Williams, from the Minnesota Historical Society, was able to spend a day with Tamara Buffalo, our history teacher, speaking with the students about African-American history in Minnesota. His lectures were a favorite among the kids.

H. Enrichment Program

The Enrichment activities of the NYSP program were integrated into the Math/Science program. It is difficult to separate the programs since we think of them as one. Also, the Math/Science program is much more than that - we include academic areas from several disciplines. The goal is to provide a lot of variety in topics and cross fertilization between disciplines.

There were 14 groups of participants, separated by age, scheduled so that seven groups had athletics at the same time that the others had academics. Each week the groups switched the AM/PM schedule so that they did not always have, say, academics in the AM.

The academic schedule was broken into 3 forty-five minute periods. We had classroom activities in History, Mathematical Problem Solving, Geometry, Science, Computers, Creative Writing, Critical Thinking, and Economics. More details of the topics covered in these classes are given in the appendix to this report. More complete lesson plans are being prepared.

Each Friday was reserved as a special activity day for the academic program. Special speakers discussed drug education and self-development (in both large and small groups); and a poster contest was held on one of the Fridays.

Our special speakers included speakers and youth from the Institute for Black Chemical Abuse, a former Athletic Director at St. Thomas (Dr. Frank Mach), and several professional athletes.

I. Financial Resources

This year we used a lot of funds for staff salaries. For the NYSP and Math/Science programs we had over 55 staff members and full time volunteers. We had 21 group counselors, 10 academic teachers (some only part time), 6 athletic teachers, and the usual collection of support staff (many of which were volunteers) and auxiliary staff.

Our staff was required to be present from 8:00 AM to 3:00 PM on all days. We could not have obtained the services of such an experienced staff without supplementing their salaries above the NYSP salary caps. St. Thomas was able to provide the supplementary salaries. We hope to find outside funding for much of these supplemental salaries for the future.

We were also fortunate to have many donations from businesses and corporations. Rainbow Foods was able to donate the ice cream and cookies which were the Friday treats. Domino's Pizza donated gift certificates for our point system. The Minnesota Timberwolves and the University of St. Thomas Admissions office donated prizes of T-shirts, hats, notebooks, and other items. The Minnesota Professional Golf Association donated 100 golf clubs, golf balls, golf visors, and instructional material.

AT&T was very generous and donated \$6,750 to pay for the transportation costs of all Minneapolis students. The St. Paul School District paid for the transportation of the St. Paul students. We used the savings to provide 3 big prizes for our students: 3 Northgate (IBM compatibles) computers were given away in a random drawing during the Awards Presentation on the last evening of the program. In addition, some of the science equipment, including electronic kits, robot kits, optical kits, and calculators, were given away to about 60 students who were chosen by the teachers as having been exceptional students in participation and learning.

J. Project Personnel

We had a large and diverse group of teachers and staff for the program. We had a very professional staff, with most of the teachers having 15 to 20 years of teaching experience. Several of them were people of color.

Each of our 14 groups of students had a group counselor, with 4 of the groups having 2 group counselors. These counselors were undergraduate students, many majoring in elementary or secondary education. They thus worked very well with the teachers in the different subject areas. There was a good mixture of people of color in this group of counselors.

We also had a large number of education students volunteer to help with the groups. This earned them credit for in-service training, and gave us a lot of adults to add to each of the groups. These volunteers were from the University of St. Thomas and from the University of Wisconsin - River Falls.

K. Community Participation

There are a large number of community organizations, social work programs, and schools which helped us recruit students for our program. This year we advertised NYSP in a handbook produced by the Minnesota Minority Education Partnership and distributed throughout Minnesota to schools and families. This handbook gives brief (one page) descriptions of programs which are primarily for students of color or for economically or educationally disadvantaged youth.

We have an on-going relationship with more than 25 schools since we are introducing new mathematics education programs with them. This mathematics program has been very successful, and is expanding into 2 High Schools for this next academic year. This past year about 1500 students, ages 11 to 14, were involved in this mathematics program. Many of our NYSP Math/Science students were from this group, although most of the NYSP Math/Science students were recruited from agencies which were not a part of the math program.

A very special feature of the NYSP program at St. Thomas was that the St. Paul school district granted school credit to the NYSP participants (12 or older) from St. Paul schools. The school district felt that the athletic teaching earned the students one elective PE credit, and that the various topics in the academics earned the students a total of 3 elective credits, one each in the areas of Math/Science, English, and Social Studies. Our staff was required to assign grades in those disciplines. St. Paul also assigned a staff member, Gene Ronning, to be present during our program and to help with the day to day operations. He has been very helpful and has continued working with us on planning for the Extended program and the 1993 summer NYSP program.

Three years ago, in our pre-NYSP days, we ran a summer program called Believe and Achieve which emphasized Math and Computer programming. At that time St. Paul was able to assign elective credit for our students. They decided that our NYSP academic program is also deserving of such consideration, and are likely to continue the granting of school credit for the Extended NYSP program. As a benefit to the program, the St. Paul school district provided all of the costs for the St. Paul buses since we were considered a summer academic school program. That also is likely to be continued with the Extended NYSP program.

2. Areas Needing Improvement

A. Food Service

As mentioned under food service above, we would like to move our food service to a cafeteria closer to the academic and athletic facilities that we use. This would definitely eliminate problems involving crossing streets and rowdy behavior of some participants.

B. Participant Discipline

This year we had the services of a graduate student in counseling to talk with students who misbehaved. We wish to expand this by using experts from Social Work, Counseling, and Child Psychology. We believe we can obtain graduate student workers from the departments here at St. Thomas or from the University of Minnesota. It is likely that we will need to find funding for these professionals.

C. Staff Salaries

As mentioned previously under financial resources, we ask a lot of time from our staff, and feel that we need to compensate above the NYSP salary caps. This is especially a problem for the professional staff, but is also an issue with our project aides. We will attempt to find outside funding for the supplemental salaries, though we would appreciate the NCAA investigating the possibility of raising the salary caps for NYSP programs. It may be necessary, if salary caps can be raised, to increase the funding level either for the regular NYSP or for the Math/Science grant.

D. Name of the Program

As the metropolitan community learns about our program we may not have a problem, but we feel we may be misleading parents about NYSP because the word "Sports" in the title does not fully represent what we do at St. Thomas.

Two-thirds of the 11 year old group this summer were males. We believe that many girls did not consider applying if they thought it was solely a sports program. We like the idea of a title that says "Sports and Academics", but we are concerned that the NCAA would be against any modification of their NYSP title.

If the NCAA office has concerns, questions, comments, or suggestions on how we might effectively emphasize in our written materials our program, please feel free to contact us. We hope that "word of mouth" and our documentary will enlighten parents and students about the nature of NYSP at St. Thomas.

Appendix: Academic Topics

Science: (9 lessons)
Introduction to Science and Investigative Thinking
Motion detector; velocity and acceleration
Sound & Oscilloscope
Heart Waves; Brain Waves; Muscle Waves; effect of exercise on heart rates and health
Electronics using electronic kits
Energy Sources (fossil fuels, nuclear, solar)

Mathematical Problem Solving: (8 lessons)
Various Math puzzles and games,
e.g. card tricks, magic squares, number properties, geometric puzzles

Geometry: (7 lessons)
Line designs
3-D Geometric constructions
Geometric puzzles

Computers: (8 lessons)
Programming in BASIC
Intro. to spreadsheets (Lotus 123); baseball statistics, age in seconds, interest calculations
Spirograph & computer spirograph program
Strategy games on the computer

History of Minority Cultures in Minnesota: (7 lessons)
Discovering Columbus - 2 versions of encounter
Cultures of the Caribbean and South America
Native North Americans - Ojibwa and Dakota nations in Minnesota
Minnesota Black history
Minnesota Chicano/Hispanic history

Critical Thinking: (13 lessons)
Logic games
Forms of reasoning and argumentation
Fallacies in reasoning; examples from USA Today and advertisements
Human rights and children's rights (some material from the UN)

Creative Writing: (4 lessons)
Biographies
Short Essays
Poetry
Epitaphs

Economy: (4 lessons)
Assets and education as an asset
Long term goals; use of budget to show expense of a chosen life style
Loans, savings, interest, and investments
Time management and investments in time; short and long term goals

NATIONAL YOUTH SPORTS PROGRAM
1992 MATH/SCIENCE ENRICHMENT PROGRAM
Evaluation Narrative Report

INSTITUTION South Carolina State Univ. TELEPHONE 536-8654

Project Administrator Kenneth D. Mosely

Activity Director Stephen A. Martin

Math/Science Enrichment Coordinator Barry A. Frishberg

INSTRUCTIONS: Describe highlights/accomplishments/areas needing improvement and recommendations for improvement.

1. Highlights/Accomplishments/Areas Needing Improvement.

- A. Project Schedule. Integrating the Math/Science enrichment program into regular NYSP sports program provided experiences for all participants not just volunteers or a chosen few. If time and money permit, it would be better to offer Math/Science experiences each day.
- B. Participating Youth. Some youth used this program as a place to be between other local programs with many spending 2 - 3 weeks in NYSP and other weeks in Project Access or Keenan Program. Most of the participants enjoyed Math/Science activities with some questioning why they could not attend each day.
- C. Project organization. Students received 12 hrs. of Math/Science enrichment for entire program. By having professionals teach four sessions per day, actual student/pupil ratio was very low. This improved enrichment period outcomes and teacher/student interaction.
- D. Project Personnel. Superior personnel give superior results. Personnel had a varied background and expertise that kept interaction with participants fresh. It was a good mix of 2 full time professionals, 3 graduate students and 3 undergraduate students.
- E. Nutritional Services. NA - See NYSP '92 report
- F. Medical Services. NA - See NYSP '92 report

1. Highlights and Accomplishments (continued).

- G. Special Programs. Need to add special programs by bringing onto campus role models and/or using college facilities such as planetarium, nature areas, etc. We did not plan for these events since this was the first year Math/Science was an integral part of overall program rather than a supplement as in past years.
- H. Enrichment Program. NA
- I. Financial Resources. Personnel should have a higher wage scale for job they are doing.
- J. Community Participation. Participation was hurt when Allendale County Council didn't pay transportation bill for two years and OCAB stopped service. Parents day was very successful in bringing the program to the entire family. Parents went (some dragged by eager children) from one station to next as child and instructor explained Math/Science activities.

2. Recommendation for Improvement. Planning and implementation of program must start before grant is funded in April. Participants who did not meet minimum attendance or other program standards should not be permitted to register for next year's program unless extenuating circumstances were ruled by a hearing committee.

Letters should go home biweekly explaining program procedures, accomplishments, upcoming events, etc., as well as asking for suggestions for improvement. This will enhance parental involvement making program even stronger

SOUTHERN UNIVERSITY
BATON ROUGE, LOUISIANA 70813
(504) 771-2011
July 21, 1992

NATIONAL YOUTH SPORTS PROGRAM

Rochelle Collins
Youth Programs Coordinator
6201 College Blvd.
Overland Park, Kansas
66211-2422

Dear Rochelle,

As per our conversation on Monday, July 20, 1992, please include this revised copy of the Math/Science Narrative and Booklet as part of our report.

Thanks,

A handwritten signature in cursive script that reads "Brenda L. Edmond".

Brenda L. Edmond

**NATIONAL YOUTH SPORTS PROGRAM
MATH SCIENCES ENRICHMENT PROGRAM
SUMMER SCIENCE ACADEMY**

**SOUTHERN UNIVERSITY
BATON ROUGE, LOUISIANA**

PROJECT SUMMARY

The math/science enrichment component of the Southern University National Youth Summer Sports (NYSP) program is a collaborative effort supported by the NYSP program, and the Southern University Center for Energy and Environmental Studies under its Environmental Technology Waste Management Program. The following strategic objectives are to be accomplished by this program:

To provide a stimulus that will facilitate an enhanced interest in the sciences.

To provide hands on activities that will illustrate scientific principles in a practical manner.

To foster environmental awareness, and help students to experience the spectrum of ways in which their lives are affected by newable and nonrenewable resources.. and to further understand the human dependence o these resources and the need for resource conservation.

To home basic skills, develop enhanced capacities for critical thinking, creative imagery, information acquisition, analysis, data acquisition and assimilation, as well as to foster creative and thoughtful minds that can reason and make sound conclusions/decisions.

To provide an arena of interaction for these students to become intimately acquainted scientists, educators, students, and other personalities that can serve as positive role models and mentors.

The approach for presentation of the math/science component is to utilize Environmental Science as the window or conceptual framework to facilitate interdisciplinary exploration of concepts underlying all of the major scientific disciplines as well as those that are social sciences by nature. Environmental Science modules will be utilized to present concepts in math, chemistry, biology, physical science, computer literacy, and will at the same time facilitate development of oral and written communication skills.

Outlined below are the topics that are to be covered in the math/science enrichment program. These activities were designed specifically to achieve the previously mentioned goals.

Topic:	Solid Waste Management
Activity:	Make your own paper
Subjects:	Environmental Science, Biology, Chemistry
Concepts:	Resource conservation, and recycling
Topic:	Hazardous Waste Management
Activity:	Household chemicals
Subjects:	Chemistry and Environmental Science
Concept:	The nature of hazardous materials, household hazardous waste, and waste disposal
Topic:	Water pollution
Activity:	Water and waste water analysis
Subjects:	Environmental Science, Chemistry and Math
Concept:	Methodology for measuring pollution levels in water, pollution source, the relationship between contaminant levels and water quality
Topic:	Ecology
Activities:	Tree synthesis A Mini Ecosystem Signs of Wildlife "O Deer"
Subjects:	Environmental Science, Fine Arts, Math and Communications
Concepts:	Diversity of forest toles, the nature of natural materials, food chains as energy transfer systems and the food chain in a terrestrial environment
Topic:	Resource Conservation
Activity:	Tree cookies
Subjects:	Math, Science and Social Studies
Concepts:	The relationships between history and the environment, forestry influence in the U.S. and the perception of time from the perspective of tree growth.

**National Youth Sports Program
1992 Math/Science Enrichment Program
Southern University Baton Rouge, Louisiana**

Evaluation Narrative Report

PROGRAM HIGHLIGHTS AND ACCOMPLISHMENTS

Project Schedule

The Southern University National Youth Sports Program Math Science Enrichment Program was held for five consecutive Saturdays beginning June 6, 1992 and culminating on July 4, 1992 at the Southern University Laboratory School. The program was designed to offer to participating students a total of ten hours of math/science programming and enrichment activities which were designed to achieve the following goals:

To enhance the level of preparedness of students in the area of science and mathematics.

To increase the level of self confidence of students and their ability to perform successfully in science related subject matter through fun action oriented 'hands-on' experiences.

To foster awareness regarding environmental issues, while developing knowledge skills, and commitments that will result in informed decisions, responsible behavior, and constructive actions regarding the environment and other issues related to making a positive impact on the society.

To provide an introduction to computer literacy to all students and demonstrate how computers can aid in the learning process.

The project schedule involved an average exposure of one hour of chemistry/environmental science, and one hour of math enrichment activities for all enrolled students each Saturday. The participants also received a total of at least one hour of training in basic computer literacy. (See the attached program booklet for the session schedules, descriptions of activities performed, and the concepts and skills enhancement to be accomplished as a result of participating in the activity.

During each Saturday session students were served breakfast and lunch before departing. The session time interval was 8:00 a.m. to 12:00 noon.

PARTICIPATING YOUTHS

There was a total of one hundred fifty youths participating in the Saturday Math/Science Enrichment Program. Participants in the program ranged in ages ten through sixteen and were divided into five groups based on age and level of educational experience. In that there were more students in the ten to eleven year range. Groups I and II were composed of this age group. Group III was composed of students ages twelve and thirteen (grades 7 and 8), Group IV ages fourteen and fifteen (grades 9 and 10), and Group V age 16 (grade 11). All students performed the same science, math, and computer activities; however, the instruction was presented based on academic grade level and the individual group's level of competency. The students who participated in the Math/Science Enrichment Program segment were selected through an application process from the body of students who encompassed the regular NYSP program.

PROJECT ORGANIZATION

The math science organizational structure was developed to provide a wide range of experiences for the students, with a particular focus toward enrichment experiences for the students, with a particular focus toward enrichment experiences as well as providing positive role models for the students. Further more through interacting with practicing science oriented personnel, the students themselves might see science or math related disciplines as career options that are too difficult or impossible to attain. As a mechanism for achieving maximum staff for the Math/Science program the NYSP program entered into a collaborative agreement with the Southern University Center for Energy and Environmental Studies to provide additional support staff and math/science related resources for instructional support. The center provided assistance in the form of two teaching assistants who were undergraduate chemistry majors, supplied most of the reagents and resource materials used in the math/science instruction, as well as providing supplemental nutritional service.

To help the students maximize their math/science experiences, the project organization was structured to encompass personnel with sound training in the discipline area taught, as well as having some experience working with outreach programs geared toward math/science enhancement. The project organization included the following: a math science coordinator, four professional instructors, six teaching assistants (two sponsored by the Center for Energy and Environmental Studies), and four support staff personnel.

PROJECT PERSONNEL

The personnel associated with the Math/Science Enrichment effort are enumerated below:

Math Science Coordinator

Karen Stephens
Instructor of Chemistry
Center for Energy and
Environmental Studies
Affiliate; Southern
University

Chemistry Instructors

Sharon Chriss*
Instructor of Chemistry

Willie B. Shorter*
High School Chemistry
Teacher (East Baton
Rouge Parish)

Math Instructors

Mary Courtney
Chemistry Department
Technical Service
(teachers aide)

Kimberly Keller*
Instructor of Chemistry
Southern University

Computer Instructors

Patricia Ross*
Southern University
Laboratory School

Michelle Ayo
(aide) graduate student

*Professionals denoted by an asterisk

The teachers aides were graduate and undergraduate students from local universities:

Instructional Aides

Melissa Bethley
Mary Courtney
Michelle Ayo
Pam Jones
Adondria Parker
Tomeko Ayo

Support Staff

Diane Spurlock
Felton Square
Laverna Small
Willie Mae Williams

Kristina Davis
(Volunteer)

NUTRITIONAL SERVICES

Nutritional services for the Saturday Math/Science Enrichment Program were supplied by the East Baton Rouge Parish Mayor's Office, the Center for Energy and Environmental Studies, and donations from the NYSP Parent Support Group.

MEDICAL SERVICES

Medical services for the Math/Science Program were provided by the Medical Coordinator for the regular program, Mr. Carl Williams.

SPECIAL PROGRAMS

The Center for Energy and Environmental Studies provided and added dimension to the Math/Science Enrichment program through its decision to interact with NYSP Saturday effort. The Center is composed of a multi-disciplinary array of scientists, educators, and technical support staff whose major focus is to address local, state, national, and global environmental issues and to help find solutions to the environmental problems of our society. The Center through its Environmental Technology and Waste Management Program, provided instructional resource materials such as Project Learning Tree, Project Wild, Global Patrol, and Math Power in School to format the activities that were part of the math/science instruction. The Center has also pledged to provide Math/Science Enhancement to the extended NYSP program that will be operable during the academic year.

ENRICHMENT PROGRAMS

The Math/Science program was further enhanced by the introduction of the students to CE-PUP (Chemical Education for the Public Understanding of Pollution) environmental modules, which were donated to the program by Sheila Pirkle who is a CE-PUP fellow and is a facilitator of CE-PUP instruction for the state of Louisiana. These modules use the multi-disciplinary nature of Environmental Science to teach students basic scientific concepts in a hands-on easy to use and understandable methodology. These modules also teach practical application of environmental science/chemistry in societal perspectives, and enhances the awareness of environmental issues.

FINANCIAL RESOURCES

Additional resources external to the program for Math Science Enrichment Activities were provided by the Center for Energy and Environmental Studies. Other resources in the form of laboratory equipment, reagents, and general school supplies were donated by several university departments: Chemistry, College of Education, The Laboratory School, and private individuals.

COMMUNITY PARTICIPATION

An added enhancement to the Math/Science program was the participation of local industries in the project effort. Waste Management of Baton Rouge in conjunction with Recycle America presented to the students a mini-seminar on recycling and solid waste management. The students were allowed to ask questions regarding waste management practices, and interacted with professionals in the Environmental arena.

There were also some student volunteers who assisted the instructors in the program, and provided assistance in the handling of the large student populous who comprised the Saturday program.

RECOMMENDATIONS FOR IMPROVEMENT

The following are offered as mechanisms to improve the Math/Science Enrichment program:

Selecting more secondary education teachers for instruction because of their expertise in dealing with the age groups of students who attend the program

Utilization of more counselors from the regular program to help achieve the level of student discipline desired

Formation of a formal disciplinary committee to assist with students that have special problems

Develop an additional system for rewarding students to supplement the certificates and t-shirts

Incorporate at least one field activity, and make use of more math/science professionals as resource speakers to make presentations to students

Develop a system to track student's performance as a result of the math/science enrichment activity, this will help to assess the impact of the program on the targeted student

**NATIONAL YOUTH SPORTS PROGRAM (NYSP)
Math and Science Program
SOUTHERN UNIVERSITY LABORATORY SCHOOL
Summer, 1992**

SCHEDULE

SATURDAY, JUNE 6, 1992

8:00 a.m. - 9:00 a.m. - Arrival and Breakfast
9:00 a.m. - 10:00 a.m. - Groups 1,2,3,4 and 5 -- PRE TEST
10:15 a.m. - 11:30 a.m. - Groups 1 and 2 -Chemistry/Household
Chemicals
Groups 3 and 4 - Math/Fast-Food
Group 5 - Computers
11:30 a.m. - 12:00 Noon - LUNCH
12:00 p.m. - 12:30 p.m. - Departure
*Alternate Activities: Fast-food Math/Tree Cookie/Whale Weight
A Timely Puzzle

SATURDAY, JUNE 13, 1992

8:00 a.m. - 9:00 a.m. - Arrival and Breakfast
9:00 a.m. - 10:30 a.m. - Groups 3 and 5 Chemistry/Make your own
paper
Groups 1 and 2 - Math/Paper Consumption
and how much
Group 4 - Computers
10:30 a.m. - 11:30 a.m. - Groups 2 and 4 Chemistry/Make your own
paper
Groups 3 and 5 - Math/Same as above
Group 1 - Computers
11:30 a.m. - 12:30 p.m. - LUNCH and Departure
*Alternate Activities: Simple Sampling/Tangram Areas

SATURDAY, JUNE 20, 1992

8:00 a.m. - 9:00 a.m. - Arrival and Breakfast
9:00 a.m. - 10:30 a.m. - Groups 1 and 5 Chemistry/Water and
Wastewater
Groups 3 and 4 Math/Celebrated Leaping
Frog
Group 2 - Computers
10:30 a.m. - 11:30 a.m. - Groups 2 and 4 Chemistry/Same as above
Groups 1 and 5 Math/Estimation w/play
money
Celebrated Leaping Frog
Group 3 - Computers
11:30 a.m. - 12:30 p.m. - Lunch and Departure
*Alternate Activities: Any alternate activities not used from
previous sessions

NATIONAL YOUTH SPORTS PROGRAM (NYSP)
Math and Science Program
Southern University Lab School
Summer 1992 SCHEDULE
Page 2

SATURDAY, JUNE 27, 1992

8:00 a.m. - 9:00 a.m. - Arrival and Breakfast
9:00 a.m. - 10:30 a.m. - All Groups 1 - 5 Environmental Chemistry
Signs of Wildlife/Tree Cookies
10:30 a.m. - 11:30 a.m. - Groups 1,2,4,5 - Oh Deer!
Group 3 - Computers
11:30 a.m. - 12:30 p.m. - LUNCH and Departure

SATURDAY, JULY 4, 1992

8:00 a.m. - 9:00 a.m. - Arrival and Breakfast
9:00 a.m. - 9:30 a.m. - Post-Test (ALL GROUPS)
9:30 a.m. - 10:30 a.m. - Groups 1,2,3 and 4 Chemistry and
Environmental Chemistry - Introduction
to CEPUP (Chemical Education for
Public Understanding)
Group 5 - Computers
10:30 a.m. - 11:15 a.m. - Groups 1,2,3 and 4 - CEPUP Part II
Group 5 - Computers
11:15 a.m. - 12:00 NOON - AWARDS PROGRAM, LUNCH, AND DEPARTURE

Math/Science 1992 National Youth Sports program Evaluation Narrative Report

Institution:
University of Southern California
University Park Lyon University Center MC-2500
Los Angeles, CA 90089-2500
(213) 740-5127

Project Administrator: Dave Koch
Activity Director: Jennifer Stu
Math/Science Enrichment Coordinator: Justine Gilman

Scheduling:

Appropriate length of time (20 hours) - Individual classes were too short - too difficult to schedule in conjunction with the regular NYSP schedule (ending 1:30pm and beginning at 1:30pm). Suggestion to schedule it on a totally separate day (Friday). Had some question about the logistics of servicing 200-400 youngsters - classrooms, small group ratio, etc.

Possibly scheduling the program a little "tighter" -- rather than once a week.
Tues/Thurs for 3 weeks or
Everyday for 2 weeks

1992 Subjects offered:

- a. Environmental Science
- b. Physics and Engineering
- c. Physiology
- d. Math

Participating Youth:

Most kids were there because they wanted to be. What to do with those who do not! Wide range of comprehension levels - possibly give a pre-test/skills test. What can be done for remedial students? Be sure the "specialists" have lesson plans designed for age level.

Suggest that more youngsters be allowed the opportunity to be involved with the math/science program. Parents were more than willing to have their youngsters be a part of the program. Some parents wrote special letters for their youngsters to be considered for the program.

" I thought it was fun to watch the children go from refusing to touch the sheep hearts to being unwilling to give them up at the end of the day. It was wonderful to listen to the youngsters talk to other youngsters about the things they did in class and how exciting "fresh" it was."

Perhaps think about some "home" projects for youngsters if math/science is only once a week.

Project organization:

Good organization and good understanding of "how" it is supposed to run. Difficult to regroup at 1:30pm. Classrooms and locations were adequate. Museums were convenient (near by) and cooperative.

Suggest to the National Office to rethink the scantron for the pre and post test. Scantron is threatening (too long) and the questionnaire VERY confusing considering the ages of the children. Questionnaire should be run on a different scale than strongly agree, somewhat agree, etc.

Number of t-shirts were adequate however, more shirts for volunteers and tour guides would be helpful.

Project personnel:

Staff was excited and helpful. Teachers were competent, enthusiastic and well-prepared. Counselors were very flexible with any changes in the schedule. Staff was very supportive and dedicated to the success of the program. Youngsters were usually in control.

Orientation for staff - a must! - with hands-on demonstrations for additional (counseling) staff.

Teachers should attend orientation in order to coordinate their projects which would allow more integration of lesson plans. Youngsters may be more apt to learn and retain information.

Some material seemed to be somewhat "over the heads" of the younger students. Teachers should design lesson plans accordingly. More assistance from USC faculty may be helpful however, there may be a possibility that these college professors may not "relate" to 10-16 year olds very well.

Nutritional services:

Snack was adequate. Location for distribution might be rethought. Dining services were helpful. Always enough to go around. Glass containers are not a good idea.

Medical Services:

Adequate but rarely used.

Highlights and Accomplishments: -

Field Trips on and off campus - Special Programs - Community Participation (JPL)

a. IRIS - USC

This visit to the IRIS Computer Vision Laboratory allowed the youngsters to view the use of computers (intelligent machine systems) with robotics. The students participated and observed: range sensing, motion analysis, computer object recognition, automated mapping, and autonomous navigation through artificial intelligence (computers).

b. JPL - Jet Propulsion Laboratory - Pasadena

California Institute of Technology

The visit to JPL was scheduled for Tuesday, July 21st from 2:00pm-3:30pm (youngsters did not return to campus until 4:00pm). Two groups of participants with counselors met the guide at the visitors center at JPL. They first were introduced to the center with a movie, "Welcome to Outer Space" and continued to tour the facility including the Space Flight Operations Facility, satellites which have returned from space, Control Center of JPL, computer simulated videographics and robotics which will be implemented into the Space Shuttle program in the near future.

c. Natural History Museum

Two groups of youngsters were scheduled each week to meet speakers and tour guides at the museum. Youngsters also participated in a museum scavenger hunt.

The presentation included: introduction to the museum, careers in museum science, advice on academics, and a "behind the scenes" tour of the museum. The schedule of topics included:

1. Land mammals and Marine Mammals
2. Marine Biology (crustacea, etc.)
3. Collections Manager in mammalogy (specializing in bats)
4. Children's Programs

d. Museum of Science and Industry

This field trip (across the street) was a self-guided learning tour for youngsters - like a scavenger hunt for knowledge - regarding earthquakes. Through exploration of the Museum's earthquake exhibit and the earthquake simulator, the youngsters observed and discussed earthquakes (how to prepare for them, what they are, how they occur, where they occur most, and where were you during the last earthquake, how did you feel during the last earthquake, etc.)

e. Afro-American Art Museum

This was a historical museum which depicted Afro-American art dating from ancient African art to the present day Afro-American artists, painters and architects of Afro-American heritage.

f. IMAX Theater (Niagra)

The Natural History Museum management allowed four groups of youngsters to visit the impressive IMAX theater with a wide angle screen that stands over 3-4 stories high and is equipped with sensoround sound for realistic sounds. The youngsters viewed the movie, "Niagra" which brought them in touch with Niagra Falls and its history.

g. Safety Office - USC

The USC Safety Office conducts tests on helmets and motorcycle safety. The Safety Office covered other such topics as: household safety (fire and earthquake) and vehicle safety. Many of the youngsters found the information about helmet safety (bikes, motorcycles, skateboarding, etc.) very useful and shared the information with their families.

h. Exercise Science - USC

Youngsters were exposed to the technology of exercise physiology including underwater body fat composition, maximum oxygen uptake tests, treadmill tests, EKG (aka ECG), and training techniques of athletes in a variety of sports.

Financial Resources:

1. IMAX theater tickets from Natural History Museum (\$3-\$5 person)
2. All supplies used at field trips (on and off campus)
3. Discount on transportation to JPL from USC Transportation/Parking
4. Access for participants to Natural History Museum (\$3-\$5/person)
5. Volunteered time from field trip speakers and guides (JPL, Natural History Museum, Exercise Physiology, etc.)
6. Classroom usage - USC

NATIONAL YOUTH SPORTS PROGRAM
1992 MATH/SCIENCE ENRICHMENT PROGRAM
Evaluation Narrative Report

INSTITUTION TEMPLE UNIVERSITY TELEPHONE (215) 787-1949

Project Administrator Charles Theokas

Activity Director Tina Sloan Green

Math/Science Enrichment Coordinator Marcia Oxley

INSTRUCTIONS: Describe highlights/accomplishments/areas needing improvement and recommendations for improvement.

1. Highlights/Accomplishments/Areas Needing Improvement.

A. Project Schedule.

The Math/Science program was held from 1:30p.m. - 3:30p.m. on Mondays, Tuesdays and one Thursday. The kids in the general program recieved Math/Science enrichment during the regular camp program.

B. Participating Youth.

Some 105 girls and 116 boys participated in the program. The participants seemed to thoroughly enjoy the program. As the program progressed we had more and more youth asking to be allowed to bring a friend, or to ensure that if they were not a part of this year's program, they would be able

C. Project organization to participate next year.

The participants were divided into age groups with at least two age groups doing the same programs.

D. Project Personnel.

The professional staff was made up of teachers from the Philadelphia school district and doctoral students at the university. The aides were primarily graduate students from the Philadelphia area.

E. Nutritional Services.

The participants were served a hot lunch between the conclusion of the sports program and the start of the Math/Science program.

F. Medical Services.

Medical Services were provided by the University. However we were not required to utilise them at any time.

1. Highlights and Accomplishments (continued).

G. Special Programs.

Students were able to visit various resource areas on campus and in the surrounding neighbourhoods. Graduate students from the Physical Education, Computing, and Engineering departments were quite willing to demonstrate various types of research in progress, or

H. Enrichment Program. (just show some of the things that are done in their field.)

The Math?Science staff, along with other community resource personnel, conducted daily enrichment sessions in Math/Science.

I. Financial Resources.

The University was able to provide quite a bit of the resources we needed, however where necessary, NYSP funds were used for this purpose.

J. Community Participation.

A number of groups were anxious to lend their expertise both with the enrichment program and with the afternoom Math/Science program. One such group was the 4-H group which services the North Philadelphia area. They ran cooperative programs, sent speakers, and donated equipment.

2. Recommendations for Improvement.

I think we shoul offer the program either on a daily basis next year, or at least four times per week.

If we are informed at an earlier date whether we were successful in acquiring the program, more could be done to utilise the various science institutions in the city.

More contact time would enable all the students to experience all the program areas.

**NATIONAL YOUTH SPORTS PROGRAM
1992 MATH/SCIENCE ENRICHMENT PROGRAM
Evaluation Narrative Report**

INSTITUTION University of Wisconsin-Eau Claire **TELEPHONE** (715) 836-4757

Project Administrator William B. Harms

Activity Director Diane Gilbertson

Math/Science Enrichment Coordinator Beverly J. Ogan Beverly Ogan

INSTRUCTIONS: Describe highlights/accomplishments/areas needing improvement and recommendations for improvement.

1. Highlights/Accomplishments/Areas Needing Improvement.

A. Project Schedule.

The Math/Science Component was built into the NSYP schedule. It became a part of the project in the same manner as the Activity, Enrichment, and Medical Components.

B. Participating Youth.

All youth that participated in NYSP participated in the Math/Science Component. Results of surveys were very positive from both the participants and staff.

C. Project organization.

Incorporating the Math/Science Component into the NYSP project worked out great! All attendees participated in Math/Science projects.

D. Project Personnel.

Math/Science personnel were viewed as part of the NYSP team because their component was incorporated into the total project. They were very well qualified as most were master teachers from the area. They knew their subject matter well.

E. Nutritional Services.

Utilized USDA -- Because the program was incorporated into our NYSP project all students ate together at the regularly scheduled time. Food was great and was well received by students and staff.

F. Medical Services.

Medical services were fantastic. Physicals for all participants exceeded the minimum requirements as established in the Guidelines.

1. Highlights and Accomplishments (continued).

G. Special Programs.

** See Attached
(I)

H. Enrichment Program.

** See Attached
(II)

I. Financial Resources.

Financial resources were adequate because by incorporating the Math/Science Component into the regular NYSP schedule we did not incur exorbitant transportation and food costs. Hence we could save that money in the Math/Science budget to purchase equipment for the projects.

J. Community Participation.

** See Attached
(III)

2. Recommendations for Improvement.

** See attached
(IV)

ATTACHMENT I

G. SPECIAL PROGRAMS

The Math/Science Program included the following activities to all participants:

1. After the first survey from the Department of Energy, students were taught a number of card magic tricks which were based on number logic. The questions "How did that work?!" was heard numerous times. Students enjoyed taking the ideas home and sharing them with family and friends.
2. The Egg Obstacle Course - The problem of working with a partner to move a raw egg through seven obstacles using limited resources (Example: A straw, pencil, envelope, toothpick, etc.) was highly received, and mentioned most often as an activity students would like to do again. The recent Space Shuttle rescue of the satellite provided the concluding discussion regarding solving problems using limited resources.
3. Two computer activities were given to students. One was a Wood Car Rally where participants experimented with race cars. They were able to change variables to create situations where cars went various distances and speeds. The use of technology in experimentation was discussed as well as the recent INDY 500 results. Students in this age group love computers, and this activity was no exception.
4. One session was spent on teaching students how to play a mathematics card game which incorporates strategy with mental calculation. The game was seen throughout the remainder of camp whenever students were between activities as well as on rainy days.
5. Extending the deer hunting season was a current topic which tied in to our Deer Population activity. Students simulated a deer herd searching for food during a five-year period. They experienced overpopulation, drought, dispersal, and hunters. Department of Natural Resources career opportunities were discussed and information was displayed for the remainder of camp.
6. Experiments with light and symmetry were included in the Kaleidoscope Session. Each student made a kaleidoscope which they got to keep. Participants moved through four stations and worked with mirrors to solve symmetry problems. Students who were absent this day made sure they inquired about getting to make a kaleidoscope - they became very popular items!
7. Eggs were used again in the Egg Drop Session. Partners worked to create a container that would allow a raw egg to survive a twenty foot drop onto concrete. Again, the focus was creative problem solving using limited resources. Car safety was discussed -- the use of seat belts, air bags, and brakes being related to their containers. The participants loved this activity, and there was always an audience of non-camp spectators present for each drop.

ATTACHMENT I - CONTINUED

8. To extend the Egg Drop activity, the Wisconsin State Highway Patrol and the Eau Claire Police Department spent a day at camp demonstrating the importance of seat belts. The Highway Patrol brought "The Convincer" -- a simple device which "convinces" each rider of the importance of seat belts. The Eau Claire Police Department brought in the "Roll Over Simulator", an S-10 pick-up truck which rolls in an accident simulation, and graphically shows what happens to the dummies inside with and without their seat belts. The number of campers pledging to wear their belts was significantly higher after these demonstrations.

9. The second computer experience was the Lunar Greenhouse. Participants traveled to the moon and attempted to grow enough vegetables to allow the colony to survive. As with the Wood Car Rally, variables can be changed during the experimentation. The discussion included the variables in our environment including pollution, ozone problems, rain forest concerns, etc. More computer time was suggested by many participants as a suggestion for next year.

10. Participants took a trip around the state for the Wisconsin Vacation Session. Students worked with a partner and planned a vacation to visit various sites around Wisconsin. With the use of calculators, participants computed their total mileage and expenses including gas, food, lodging, and miscellaneous costs. Maps were highlighted to help students in their travels, and these maps quickly disappeared when offered to the participants to take home.

11. After the final survey and evaluation, juggling and geometry came together for the last session. The use of arcs and planes to learn the steps in juggling provided a very active final activity. Again, participants were seen practicing this skill all over camp.

ATTACHMENT II

H. ENRICHMENT PROGRAM

Careers were stressed in the activities and always went beyond just being a "scientist". They included: magician (specifically David Copperfield), astronauts, engineers, race car drivers, numerous DNR positions, artists, car manufacturers, police/highway patrols, botanists, travel agent, etc.

All sessions attempted to revolve around these two main objectives: Math/Science is fun and Math/Science is everywhere in each camper's life.

None of the activities had the participants working individually. Cooperative group work was the theme. Large groups were often split between two activities to provide small group experiences of two to six participants per group. Sessions would reverse the following meeting. Successful teamwork was reinforced, which was not necessarily related to a successful final project.

ATTACHMENT III

J. COMMUNITY PARTICIPATION

The help of the Highway Patrol/Police Department was a very positive experience for the campers. The officers demonstrating were very friendly and enthusiastic. Each was well received by the campers.

Some community businesses donated various supplies for the Egg Drop activity, and were very supportive of the component. Other businesses provided a discount for supplies, and again, expressed positive comments that students were involved in Math/Science activities during the NYSP experience.

Parent feedback regarding the Math/Science component was overwhelmingly positive. Parents were very supportive and expressed their happiness with the program at the picnic. Campers communicated a lot about the Math/Science activities at home because parents were able to discuss the activities in detail.

ATTACHMENT - IV

2. RECOMMENDATIONS FOR IMPROVEMENT

Even though these are recommendations for improvement, the Math/Science Staff are very positive relative to the component that was integrated into the NYSP project at the University of Wisconsin-Eau Claire. Very positive experiences were provided to the children who participated in this program.

As far as recommendations for improvement are concerned, we felt that the following issues should be considered relative to the Math/Science Project:

The survey established by the Department of Energy was inappropriate for the students that participated in NYSP because it was too complicated for 10-12 year olds to comprehend and follow through on. The rating scale is inconsistent with what students are familiar with -- "A" on the survey stood for "strongly disagree"; "A" to this group means something positive. This rating caused much confusion for the students. Also, the majority of 10-12 year olds had never been exposed to the computer answer sheets. Marking the answer sheets caused major problems -- many of the answer sheets were marked incorrectly due to lack of experience with this type of form. The Math/Science Staff spent considerable time working with students on the answer sheets because of the anxiety experienced in marking them. The Math/Science Staff questioned exactly what type of information the survey was attempting to gain. In response to this problem, our staff developed their own survey (which is attached) which was distributed to students participating in the Math/Science Component. The results of this evaluations showed that 95% of the students responded with the highest rating for the ten activities they were involved in, and an overwhelming 97% wanted the Math/Science Component to be included in the program again next year.

The following comments were written by students who participated in the Math/Science Component:

It was fun (written by 128 of the students)
It was interesting (written by 20 of the students)
It is very important for us to learn Math/Science
It tricked us into doing Math/Science
It was great
It was "funner" than the Math/Science at school
It was "funner" than the sports
It will help my grades
It helped me understand Science
I learned new things
I didn't mind coming
I hope you have it next year (written by 26 students)
It made me think
It made me work
It increased my thinking about Math/Science
It can be more often next year
It was exciting

University of Wisconsin-Eau Claire

NYSP MATH/SCIENCE EVALUATION

NAME _____ GROUP _____

Please rank each Math/Science Activity:

1 = Great! 2 = OK 3 = No good!
Circle the number that gives your rating.

(DO NOT rate an activity if you did not participate in it!)

1. Card trick (Will the cards match?)	1	2	3
2. Egg Obstacle Course	1	2	3
3. Wood Car Rally (computer)	1	2	3
4. 99 card game	1	2	3
5. Deer Population	1	2	3
6. Kaleidoscope	1	2	3
7. Egg Drop	1	2	3
8. Lunar Greenhouse (computer)	1	2	3
9. Roll Over Simulator/Convincer	1	2	3
10. Wisconsin Vacation	1	2	3
11. Juggling	1	2	3

IF you participate in NYSP next summer, would you like to have
Math/Science activities again? YES NO

Why or Why not? _____

What kinds of topics would you like to work with in Math/Science?

Any other comments? _____

Welcome

Egg Obstacle Course

Wood Car Rally (Computer)

DEER POPULATION

LIGHT/SYMMETRY (KALP HOSPITAL)

THE CONVINCER

MINUTES OF THE
NATIONAL YOUTH SPORTS PROGRAM
MATH/SCIENCES ENRICHMENT PROGRAM WORKSHOP

Marco Island Hilton Beach Resort
Marco Island, Florida

September 25-27, 1992

Those in attendance were:

Mark Ahrens, University of St. Thomas
Tom Barnhart, North Dakota State University
John Bayless, Oklahoma State University
Jon Berry, University of St. Thomas
Paul Bieron, Canisius College
Orlando Brown, New Mexico Highlands University
Ruth Cristo, New Mexico Highlands University
Brenda Edmond, Southern University, Baton Rouge
Barry Frishberg, South Carolina State College
Vivian L. Fuller, Northeastern Illinois University, NYSP committee chair
Diane Gilbertson, University of Wisconsin, Eau Claire
Justine Gilman, University of Southern California
Tina Sloan Green, Temple University
Lucille Hester, University of District of Columbia
Patti Hester, University of Nevada, Las Vegas
Millicent Jackson, University of District of Columbia
Vivian Johnson, Norfolk State University
Frank Kulling, Oklahoma State University
James Lauffenburger, Canisius College
Kelli Layman, North Dakota State University
Steve Martin, South Carolina State College
Maurice Nott, St. Petersburg Junior College
Beverly Ogan, University of Wisconsin, Eau Claire
Marcia Oxley, Temple University
Maggie Payton, Mississippi Valley State University
Silas Payton, Mississippi Valley State University
Bob Poth, St. Petersburg Junior College
Jennifer Siu, University of Southern California
Karen Stephens, Southern University, Baton Rouge
Bart Timmerman, St. Ambrose University
Porter Troutman, University of Nevada, Las Vegas
Kathy Walker, St. Petersburg Junior College
Rochelle M. Collins, NCAA
Edward A. Thiebe, NCAA

Ms. Fuller called the meeting to order at 8:30 a.m.

1. Minutes of Previous Minutes.

It was VOTED

"That the minutes of the April 25, 1992, meeting be approved as distributed."

2. Review of Individual Project's Design and Three Hours of Math/Science Enrichment Programming for all NYSP Participants. Project representatives discussed project designs. All projects provided a total of three hours of math/science enrichment programming in the existing NYSP enrichment component for all enrolled participants. The following project designs and comments were noted:
- a. Canisius College: Math/science enrichment program operated during NYSP session. Advantages of design: small student/teacher ratio; use of elementary/middle school teachers, and no transportation problems. Disadvantages of design: evaluation is a continuing problem. Incorporated three hours of math/science programming for all participants in regular NYSP enrichment component by combining outside guest lecturers, USA Today and a field trip for small groups.
 - b. University of District of Columbia. Math/science enrichment program operated on non-scheduled NYSP session days. Advantages of design: the opportunity to have access to the entire campus (science labs, greenhouse, architectural facility, photography labs) gave the participants a feeling of ownership and a connection with the University; allowed for extra time to complete large projects, and use of smaller student-teacher ratios. Disadvantages of design: none noted. Incorporated three hours of math/science programming for all participants in regular NYSP enrichment component. Coordinators for math/science, alcohol and other drugs and enrichment collaborated in planning and implementation.
 - c. Mississippi Valley State University. Math/science enrichment program operated on non-scheduled NYSP session days. Advantages of design: extra time to complete projects. Disadvantages of design: length of program was too long (faculty and students wanted to stop), and large number of students enrolled. All NYSP participants were involved in math/science component.
 - d. University of Nevada, Las Vegas. Math/science enrichment program operated prior to NYSP session. Advantages of design: all participants were enrolled in the math/science component. Disadvantages of design: transportation needs required all participants to arrive at the same time, and NYSP staff utilized for math instruction. All NYSP participants were involved in math/science component.
 - e. New Mexico Highlands University. Math/science enrichment program operated during NYSP session. Advantages of design: attitudes of participants improved. Disadvantages of design: rescheduling existing NYSP program. Incorporated three hours of math/science programming for all participants in regular NYSP enrichment component by focusing on careers in the field of science and through kite flying contests. Also, all participants were invited to an "Open House" that featured launchings of rockets and parachutes.

1. South Carolina State University. Math/science enrichment program operated during NYSP session. Advantages of design: utilized small groups, and all participants were enrolled in math/science component. Disadvantages of design: participants felt they were missing a sports activity. All NYSP participants were involved in math/science component.
 - m. Southern University, Baton Rouge. Math/science enrichment program operated during NYSP session. Advantages of design: complete use of university facilities; enhanced instruction because time 'not rushed', and increased opportunities for field experiences. Disadvantages with design: unable to reach all participants that need or requested the math/science component. Incorporated three hours of math/science programming for all participants in regular enrichment component by utilizing guest speakers, and networking with other precollege programs. Also, all participants had the opportunity to be involved in one science-based activity.
 - n. University of Southern California. Math/science enrichment program operated after NYSP session. Advantages of design: accommodated year-round school cycle, and parents loved it. Disadvantages of design: difficult to move participants into new location in a timely manner, and participants remained on campus on non-math/science program days. Incorporated three hours of math/science for all participants through computer programming, information on earthquake preparedness and recycling materials from lunch.
 - o. Temple University. Math/science enrichment program operated after NYSP session. Advantages of design: parents were assured of supervised programming for youngsters for the entire work day, and better use of facilities and instructors. Disadvantages of design: hard transition from NYSP to math/science for participants, and security re-entry procedures for campus facilities. Incorporated three hours of math/science programming for all participants through use of speakers from the community. Also, at least one math/science professional was assigned to each group for math/science based activities in the NYSP enrichment component.
 - p. University of Wisconsin, Eau Claire. Math/science enrichment program operated during NYSP session. Advantages of design: allowed math/science staff and NYSP staff to interact, and all participants had the opportunity to be exposed to math/science component. Disadvantages of design: none noted. All NYSP participants were involved in math/science component.
3. Overview of Individual Project's Pre- and Post-Test Results. The group reviewed the results of the NYSP Math and Science Survey, which was designed to assess students' attitudes toward science education, and if those attitudes were changed after involvement in an NYSP program that stressed science and math. The group noted that, overall, the attitude of the students surveyed increased slightly on the post-test portion of the survey and that the difference was found to be statistically significant using a paired-comparison T-test.

- f. Norfolk State University. Math/science enrichment program operated on non-scheduled NYSP session days. Advantages of design: participants were able to concentrate on math and science exclusively. Disadvantages of design: None noted. All NYSP participants were involved in math/science component.
- g. North Dakota State University. Math/science enrichment program operated after NYSP session. Advantages of design: parents were assured of supervised programming for youngsters for the entire work day; instructor's summer work schedules could accommodate NYSP in the late afternoon; no additional transportation costs, and easy control of groups. Disadvantages with design: none noted. All NYSP participants were involved in math/science component.
- h. Oklahoma State University. Math/science enrichment program operated prior to NYSP session. Advantages of design: participants were open to project information; NYSP staff were available to assist with math/science component; transportation readily available, and university facilities were available. Disadvantages of design: time factor made it impractical to involve distant locations in community, and number of leaders available with budget constraints limited the program that was offered to participants. Incorporated three hours of math/science enrichment programming for all participants through use of USA Today, presentations made by food/nutrition faculty, including calorie counting and calculations, miniature golf (calculation of scores and averaging) and cooking classes, including recipe development and use of math in calculating ingredients.
- i. St. Ambrose University. Math/science enrichment program operated during NYSP session. Advantages of design: all participants were enrolled in math/science component. Disadvantages of design: groups were too large, and unable to use instructors from school district. All NYSP participants were involved in math/science component.
- j. St. Petersburg Junior College. Math/science enrichment program operated after NYSP session. Advantages of design: instructor's summer work schedules could accommodate NYSP in late afternoon; no transportation problems, and participants were focused on math/science. Disadvantages of design: none noted. Incorporated three hours of math/science programming for all participants in regular NYSP enrichment component through guest speakers and science-based activities.
- k. University of St. Thomas. Math/science enrichment program operated during NYSP session. Advantages of design: all participants were enrolled in math/science; instructors were able to teach what they enjoyed, and program able to utilize public school teachers. Disadvantages of design: none noted. All NYSP participants were involved in math/science component.

The group commented on the possibility of redesigning the survey instrument to be more compatible with the comprehension levels of participants. Also, the group suggested a follow-up instrument be designed to measure the effectiveness of the NYSP math/science component as it correlates to performance in school. Lucille Hester agreed to identify possible resources in the District of Columbia area and to work with the national office in the development of a revised instrument.

4. Review of Public Relations Strategies. The group reviewed newspaper articles that highlighted math/science programs in various communities. Projects were reminded to provide copies of newspaper articles, video tapes and other items that promoted NYSP and the math/science component to the national office.
5. Review of Final Financial Report and Budget Comparisons. Each project reviewed a copy of their budget comparison. Projects were reminded of the November 1, 1992, due date.
6. Review of Materials Sent From the National Office. The group discussed the following materials sent from the national office: math/science participant t-shirt, and math/science participant certificate. Projects indicated that the certificates and t-shirts were well received by participants. It was noted that the participant t-shirt may provide a negative connotation of individuals in the fields of math and/or science. It was agreed that the national office will consider revising the NYSP participant t-shirt.
7. Review of Reporting Forms and Procedures. Projects reviewed the following math/science reporting forms: science attitude survey, participant directory, final attendance report, final personnel roster and evaluation narrative report. It was suggested that the evaluation narrative report be revised to more accurately reflect the components of the math/science program. Projects were commended for their timely submission of reporting forms.
8. Progress Report on Future Funding. Projects received information regarding the annual funding process with the Department of Energy (DOE). Concerns were raised regarding the late notification to projects participating in the math/science program. It was noted that both the NCAA and DOE are interested in expediting the funding process through an improved working relationship. Also, it was determined that the 1993 funding cycle will begin with the submission of the 1992 final report.
9. Review of Recommendations for Future Program Strategies. The group discussed strategies relevant to promotion of NYSP in various communities and nationwide. It was agreed that the resources of the NCAA national office as well as resources of individual institutions must be combined to properly educate the public about services of NYSP.

10. Review of Individual Project's Performance and Review of Hands-On Lesson. Projects presented one successful hands-on instructional lesson utilized for the math/science component and one instructional lesson utilized specifically for the environmental science component. It was agreed that successful instructional lessons at each of the projects included hands-on activities that provided maximum participation for youth. The following instructional lessons were presented: [Note: Attached as Appendix A are the instructional lessons presented.]

a. Canisius College.

Environmental Science: Title -- "Smoked-Drunk Fish Activity . . . Environmental in a Broad Sense." Objective -- To observe the effects of smoke and alcohol on fish and extrapolate the observations to human physiology.

Other Math/Science: Title -- "Experiments with 'Space Noise Hoses'." Objective: To determine the correlation between air and space hoses.

b. University of District of Columbia.

Environmental Science: Title -- "Environmental Science: Pollutants." Objective -- To show how pollutants from Industrial Waste affect the pH of Estuaries and Fresh Water Streams.

Other Math/Science: Title -- "Histopathological Staining." Objective -- To show how different histochemical staining can be used to identify abnormalities in the brain.

c. Mississippi Valley State University.

Environmental Science: Title -- "Nature of Domestic Sewage and Chemical Analysis." Objective -- To understand the Standard Methods for the examination of Water and Wastewater, and to understand the need for trained chemist and technicians.

Other Math/Science: Title -- "Kinetic and Potential Energy." Objective -- To demonstrate that one kind of energy can be converted to another kind (form).

d. University of Nevada, Las Vegas.

Environmental Science: Title -- "Concepts in Waste Management." Objective -- To explore why certain packaging materials are used and what options exist for disposal of materials.

Other Math/Science: Title -- "The Whirly Bird." Objective -- To understand air resistance against wings and gravity.

e. New Mexico Highlands University.

Environmental Science: Title -- "Environmental Study." Objective -- To become more aware of the environment through the study of plants and insects of the region, to construct both a plant and insect collection, and to use a classification key to identify plants and insects.

Other Math/Science: Title -- "Rocketry." Objective -- To construct, paint and launch rockets.

f. Norfolk State University.

Environmental Science: Title -- "Water Purification." Objective -- To observe changes and classify them as chemical or physical.

Other Math/Science: Title -- "Magic Mothballs." Objective -- To demonstrate safety techniques in the handling of chemicals and equipment.

g. North Dakota State University.

Environmental Science: Title -- "Introduction to Indicators, pH, Buffers." Objective -- To measure chemicals in our environment, to monitor wastes and to determine levels of pollutants to protect us and the other inhabitants of our land, water and air.

Other Math/Science: Title -- "Skinning the Fetal Pig." Objective -- To understand the route taken by air when it is taken into the lungs.

h. Oklahoma State University.

Environmental Science: Title -- "Oil Contamination of Ocean Water and Cleanup: Mini-simulation." Objective -- To list/discuss primary sources of oil pollution, to determine the potential negative impact on the environment, to become aware of the difficulty in cleaning up an oil spill, and to determine ways we can help minimize the oil pollution problem.

Other Math/Science: Title -- "Heart Rate Response to Body Position and Exercise." Objective -- To learn to determine heart rate through palpation at Radial and/or Carotid artery(ies), to determine heart rate in lying, sitting and standing positions, to determine heart rate response to exercise, to determine heart rate recovery time after exercise, and to discuss the importance of the heart and the importance of exercise.

i. St. Ambrose University.

Environmental Science: Title -- "Whale of a Tail." Objective -- To describe the sizes of different great whales compared to their own body size.

Other Math/Science: Title -- "Sports Numbers." Objective -- To use baseball statistics to study numbers, fractions, decimals and percentages.

j. St. Petersburg Junior College.

Environmental Science: Title -- "To Dam or Not To Dam." Objective -- To evaluate potential positive and negative effects from constructing a dam or a river.

Other Math/Science: Title -- "Bernoulli Was a Bird-Brain." Objective -- To understand principles of geometry.

k. University of St. Thomas.

Environmental Science: Title -- "Water Filtration Activity." Objective -- To know the difference between different forms of impurities in water, and to understand filtering methods to eliminate large suspended particles.

Other Math/Science: Title -- "Constructing Regular Polygons with Paper Folding." Objective -- To develop a foundation for future geometry lessons.

l. South Carolina State College.

Environmental Science: Title -- "Measuring the pH of Different Types of Water." Objective -- To be able to follow oral instructions, observe and record data and compare and contrast results.

Other Math/Science: Title -- "Stabilizing Geometric Structures." Objective -- To derive a rule for minimum number of internal supports needed to stabilize a structure.

m. Southern University, Baton Rouge.

Environmental Science: Title -- "Tree Observation Activity Synthesis." Objective -- To take a closer look at a tree and its habitat, viewing it from a variety of perspectives.

Other Math/Science: Title -- "The Celebrated Leaping Frog." To develop mathematical power by recording measurements and describing statistics.

n. University of Southern California.

Environmental Science: Title -- "The Study of Earthquakes." Objective -- To understand earthquakes, to be prepared for an earthquake, and to experience an earthquake.

Other Math/Science: Title -- "Survival Math." Objective -- To determine monthly salaries and to design a budget.

o. Temple University.

Environmental Science: Title -- "Rocketry." Objective -- To introduce and demonstrate Newtons Law of Motion.

Other Math/Science: Title -- "Science - Embryology." Objective -- To give participants the opportunity to see the transformation of fertilized eggs into young chicks.

p. University of Wisconsin, Eau Claire.

Environmental Science: Title -- "Population Game." Objective -- To find out how many deer can survive in a herd's home range.

Other Math/Science: Title -- "Egg Drop." Objective -- To see what types of materials and designs will protect an egg dropped from a high place; to relate what was learned from the egg drop to the importance of vehicle design and safety.

11. Other Business. The group recognized Bob Poth for his recent selection of the Presidential Award for Excellence in Science and Mathematics Teaching. Also, St. Petersburg Junior College, Canisius College, Southern University, Baton Rouge, University of District of Columbia, Oklahoma State University, and Mississippi Valley State University agreed to work with the national office in the planning of a math/science booth at the national workshop.
12. Adjournment. The meeting adjourned at 9:30 a.m., September 27, 1992.

UNIVERSITY OF THE DISTRICT OF COLUMBIA
NATIONAL YOUTH SPORTS PROGRAM

DAILY LESSON PLAN
MATH/SCIENCE PROGRAM

ACTIVITY: ENVIRONMENTAL SCIENCE (POLLUTANTS)

- Objective:** To show how pollutants from Industrial Waste affect the ph of Estuaries and Fresh Water Streams.
- Procedure:** Two different dyes diluted in distilled water, either sodium hydroxide or hydrochloric acid was added to demonstrate the changes in ph.
- Method of Presentation:** Hands on and Visual.
Students were grouped in 3's or 4's.
One student dispensed dye solution.
One student dispensed hydrochloric acid.
One student dispensed sodium hydroxide.
- Materials Used:** 2 Tubes Bromophenol Blue
2 Tubes Bromocrenol Blue
1 Tube Red
0.2N sodium hydroxide
0.2N hydrochloric acid
- Evaluation:** Water that is polluted may appear to be non-toxic, but in actuality students could visually see that pollutants could alter the ph of the water, thereby being detrimental to wild life and human population.
THE STUDENTS LOVED IT!
- Comments:** As a result of these pollutants in the estuaries and streams, birth defects can often be the result in the animal as well as the human population. Farmers leach fertilizers into the ground water which often times converts the ph to basic. While the opposite can occur in large metropolitan cities filled with automobiles and factories. The ph tells whether a solution is acidic. A common acidic solution is vinegar. A common basic solution is a solution containing baking soda.

NCAA
Math/Science
Enrichment Curriculum
Science Lesson

Oklahoma State
University

I. TOPIC AREA

Heart rate response to body position and exercise.

II. PURPOSE

Students will: (1) Learn to determine heart rate through palpation at Radial and/or Carotid artery(ies); (2) determine heart rate in lying, sitting and standing positions; (3) determine heart rate response to exercise; (4) determine heart rate recovery time after exercise; and (5) discuss importance of heart and the importance of exercise.

III. SCIENCE PROCEDURES INVOLVED

A. Collecting and recording. B. Applying and generalizing.

IV. MATH SKILLS INVOLVED

A. Counting. B. Multiplying C. Subtracting D. Determination of mean and range.

V. MATERIALS REQUIRED

A. Wall clock. B. Pencils. C. Worksheet.

VI. OPTIONAL EQUIPMENT

A. EKG machine. B. Electrodes. C. Wire harness or remote telemetry device. D. Oscilloscope or remote telemetry receiving device. E. Treadmill or bicycle ergometer.

VII. PROGRESSION OF LESSON (USE ATTACHED WORK SHEET)

A. Instruct groups to complete worksheet by answering questions, collecting requested information, completing math skills components, and discussing importance of exercise to a healthy heart.

WORK SHEET

1. What does your heart do? Why is this important?
2. Demonstrate method of determining heart rate by palpating radial or carotid artery. Have students lie down for two minutes. Have students determine heart rate for one minute from wall clock. Repeat procedure for sitting and standing positions. Record results below:

HEAT RATES

_____ LYING _____ SITTING _____ STANDING

3. Which heart rate was highest? Lowest? Why?
4. Within each group, record each students standing heart rate. Who had the Lowest? Highest? What was the average heart rate? (Explain concept of range and mean using above information)
5. Instruct students to run in place for one minute, immediately after which each student will determine his/her heart rate by palpating the radial/carotid artery for 15 seconds and multiplying results by four.
_____ 15 second heart rate immediately after exercise
_____ one minute exercise heart rate (above X 4)
6. Why did we take heart rate for only 15 seconds after exercise and multiply by four, rather than taking it for one full minute?
7. Have students take heart rate during each 30 seconds following exercise. How long did it take for heart rate to return to pre-exercise levels? Why?
8. If optional equipment available, solicit volunteer(s) to exercise on bicycle/treadmill while displaying EKG on oscilloscope/monitor.
Show resting heart rate, increases resulting from increased workload, and time required for recovery.
9. Lead discussion of increased heart rate response to exercise. Is this good? Why? How high would heart rate (intensity) have to get and for how long (duration) and how often (frequency) to benefit the heart? Discuss daily games and activities relative to this criteria.

NCAA
Math/Science
Enrichment Curriculum
Environmental Lesson

Oklahoma State
University

I. TOPIC AREA

Oil contamination of ocean water and cleanup: Mini-simulation.

II. PURPOSE

Relative to topic, students will list/discuss: (1) Primary sources of oil pollution; (2) potential negative impact on environment; (3) difficulty in cleaning up oil spill; (4) ways we can help minimize the oil pollution problem

III. SCIENCE PROCESSES INVOLVED

A. Simulating. B. Predicting. C. Observing and Recording.
D. Applying and Generalizing

IV. MATH SKILLS INVOLVED

A. Measuring
B. Multiplying Using Fractions*
C. Dividing*

V. MATERIALS REQUIRED (PER GROUP)

A. Aluminum pie tin (1/2 filled with water). B. Dropper; medicine, eye, etc. C. Cotton balls D. String. E. Dental floss. F. Paper towels. G. Cheese cloth. H. Feathers I. Liquid detergent. J. Used oil: motor or crude.

VI. OPTIONAL FILM

Lavar Burton. Reading Rainbow Segment (PBS): Oil Spills, from Jack, the Seal, and the Sea.

VII. PROGRESSION OF LESSON (USE WORK SHEET ATTACHED)

A. Show film or discuss oil spills relative to topics mentioned in II. PURPOSE. above.

B. Instruct groups to complete worksheet by answering questions, recording predictions, simulating oil spill and clean up, recording observations, comparing predictions with observations, solving math problems and discussing ways we can make real, significant contributions to reducing oil pollution of our oceans.

* Age group determinant

WORK SHEET

1. List the largest sources of oil pollution

2. What do you think will happen when oil comes in contact with water- will it float, mix in, or sink to the bottom? Write in your prediction _____. Simulate an oil spill by placing 5 drops of motor oil into your ocean (pie pan 1/2 filled with water). What did it do? Write in your observation _____.

3. How would the oil spill affect birds? Simulate this by dipping the feather in the oil spill. What happened? _____. Try to remove the oil from the feather using your fingers. Is this easy or hard to do? _____. What would this mean for birds who became coated with oil from an oil spill? How would oil affect other forms of marine life?

4. How would wind and waves affect the oil spill? Write in your prediction _____. Simulate wind by blowing on your ocean. Simulate waves by tilting the pie pan back and forth. Write in your observations _____.

5. We can clean up an oil spill by using mechanical devices (booms, absorbents and skimmers); chemicals (detergents); and biological organisms (oil eating microbes). Listed below are some oil clean up materials you have. In which category above would each belong?
String _____ Dental Floss _____
Cotton Balls _____ Paper Towels _____
Cheese cloth _____ Liquid Detergent _____

6. Using the clean up materials you have, try to clean up the oil spill using them in the order listed in # 5. Which worked best. (clean up the most oil in least time)

7. How should the oil contaminated material be disposed of? How can we help solve the problem of oil contaminated water?

8. If improper disposal of used automobile oil accounts for 20% of all oil pollution of water, and _____ gals. of oil pollute water each year, how many gals. of oil could be kept from polluting water if everyone disposed of used automobile oil properly? How many 50 gal. oil drums would this fill up?

9. What can we do to help solve the problem of oil pollution?

TO DAM OR NOT TO DAM

Objective

Students will be able to evaluate potential positive and negative effects from constructing a dam on a river.

Method

Students role play individuals representing differing perspectives and concerns related to a complex issue.

Background

Hypothetical situation: The town of Rocksburg, population 900, is located along the scenic Jones River approximately 60 miles from the closest big city. The mayor and city council of the big city have proposed that a dam be constructed two miles upriver of Rocksburg. In the Environmental Impact Statement written by the city engineers, the following information was identified.

The dam would meet the area's electrical power demand for ten or more years in the future. It would provide some water for irrigation and would help with flood control problems downriver.

Construction would be of rock-earth fill, 75 feet high and 300 feet across. Seven miles of river would be turned into a lake.

The dam construction would take five years to complete and would employ over 2,000 workers. After the dam was finished, approximately 150 workers would be required to keep the plant running.

Wildlife would be affected in the following ways:

- 20% loss to the deer herd that browses the lands alongside the river due to lost forage
- 20% loss to small mammals living in the river valley due to loss of habitat
- 20% loss to the area's songbird population due to lost riverbank nesting sites
- blockage of the upstream and downstream movement of fish that live in the river due to the creation of the lake and dam
- reduction of the area's wintering population of bald eagles due to the loss of riverbank trees where the eagles commonly roost while feeding on the fish; the eagles winter in the area and disperse to other areas in and out of the state to nest

Age: Grades 4–12

Subjects: Social Studies, Science

Skills: analysis, classification, communication, description, discussion, evaluation, generalization, inference, interpretation, invention, kinesthetic concept development, listening, listing, observation, public speaking, reading, synthesis, writing

Duration: two or three 45-minute periods, depending on whether time out of class is used to develop position papers and write essays

Group Size: developed for 30 students; can be modified for smaller or larger groups

Setting: indoors

Conceptual Framework Reference: VI.A., VI.A.2., VI.A.3., VI.A.4., VI.A.5., VI.B., VI.B.1., VI.B.2., VI.B.3., VI.B.4., VI.B.5., VI.B.6., VI.C., VI.C.1., VI.C.2., VI.C.3., VI.C.4., VI.C.6., VI.C.12., VI.C.13., VI.C.15., VI.C.16., VII.A., VII.A.1., VII.A.2., VII.A.3., VII.A.4., VII.B., VII.B.1., VII.B.2., VII.B.3., VII.B.4., VII.B.5., VII.B.6., VII.B.7.

Key Vocabulary: dam, river, costs, benefits, tradeoffs

ST Petersburg JC
environmental science

- development of suitable habitat for bass, carp and other spiny-ray warm water fish due to the creation of the lake; the lake water tends to be warmer than the flowing river water
- loss of 10,000 acres of prime timber growing land and wildlife habitat

The people in Rocksborg are concerned about the problems and benefits from the number of people that would come to their town during and after the construction of the dam. For example, they project the arrival of 2,000 workers plus their families during construction for five years and that 150 permanent workers plus their families would stay after the dam was finished. They are concerned about effects on schools, sewage disposal, roads, homesites, property values, and the rural atmosphere, as well as police, fire, and hospital emergency capacities. They see some potential benefits from the development, such as new recreation opportunities for the people of Rocksborg and the city which is only about an hour away (water skiing, sailboarding, motorboating, swimming, fishing, camping, picnicking, and other lake-related sports).

Other impacts could include:

- loss of drinking water quality locally and in the metropolitan area
- flooding of Native American Indian archeological sites
- cultural changes for local Native American tribal people who have fished the river for generations
- water for irrigation at a lower monetary cost
- potentially less (monetarily) expensive power when compared to other forms of power production, e.g. nuclear, coal, oil, fossil fuels
- potentially more (monetarily) total power bills that may be necessary to pay for construction of the dam
- loss of seven miles of prime whitewater; private and commercial raft, kayak, and canoe trips would be gone

Materials

role playing cards

Procedure

1. Provide students with the background information. Generate an initial discussion with them about some of the possible costs and benefits from the construction of this dam, considering it from a variety of perspectives.
2. Ask each student to choose the role of an individual to become or represent for the purpose of this activity—or assign roles randomly. Examples of roles are included. Establish a balanced variety of roles with people having conflicting values and concerns relating to the potential impacts of this dam construction. NOTE: Teachers have copied the role descriptions and cut them apart to pass out to students.
3. Ask students to prepare for their role, developing a short position paper for use as background for the dramatization of their role.
4. Arrange the classroom to represent a meeting room for the county council in the area in which the town of Rocksborg is located. Students will role-play their position and make a presentation to the five-member Rocksborg County Council. This council will ultimately make a recommendation to the F.E.R.C. (Federal Energy Regulatory Commission) on a siting permit for the dam. (For more detail on procedures that can be adapted for use in this activity, see "To Zone or Not to Zone" in the *Project WILD Activity Guides*.)
5. After all the students have made their presentations, ask the county council to render a decision.
6. Following the council's decision, have a brief class discussion to summarize the "pros" and "cons" that emerged from the students' presentations. Identify and list the benefits, if any, and costs or liabilities, if any, as a result of building the dam. Include effects on people, plants, and animals. The list of "pros," "cons," and effects can be listed visually on a chalkboard.
7. After the role play and class discussion, ask each of the students to write a brief essay describing his or her own personal recommendation for whether or not to build this dam. The students might expand their position papers, or "start from scratch" in writing their essays.

1. **Five people** chosen as members of the **County Council**.
2. **A.G. "Rick" Ullure**: a representative of the local farmers' coalition interested in the irrigation potential of the dam.
3. **Lotta Power**: a lobbyist for the municipal electrical power company interested in developing the dam.
4. **Rob or Marta Kanu**: kayaker concerned with the loss of the whitewater stretch for canoeing and kayaking.
5. **Sam N. Fish**: a local sporting goods store owner and avid fisherman concerned with the loss of migration routes of the fish on the river.
6. **Dan D. Lion**: the president of the "Save Our Native Plants and Wild Animals" organization.
7. **Pat "Pottery" Brusher**: an archeology professor from the local university who has done extensive research on the archeological sites of Indian fishing camps along the river.
8. **Lynn Dripper**: the director of the municipal water quality authority responsible for providing quality drinking water for the city, and attracted to the dam's potential for providing a reservoir of high quality water useable during long hot summers.
9. **H. M. Owner**: a representative for all homeowners in the river valley below the dam who would like to see more flood control.
10. **Bobbie Lawkeeper**: the local Rocksborg sheriff concerned about maintaining police protection, peace, health and safety with only a one person staff as the sole legal authority in the region.
11. **T. M. Burr**: the owner of a lumber company whose land would be inundated by the dam.
12. **I.M. Floaten**: an owner of a whitewater rafting company who uses the river for commercial rafting. Concerned about loss of the "best seven miles of the river," I.M. argues that the best rapids would be submerged by the lake.
13. **"Sky" Soarer**: the president of the local bird club who has organized eagle-watching trips to the river every winter for the last 15 years.
14. **Sam Slalom**: an avid water skier who sees the new lake as a real boon to skiing interests.
15. **Velma or Virgil Vigil**: a local representative of the gray panthers, a group of retired people who are concerned about any rise in power bills.
16. **"Boater" Cartop**: an older fisherman who enjoys throwing the boat on the top of the car and putting in at the closest float spot—especially lakes!
17. **Marshal or May Flyfisher**: a long-time resident who champions the purity of fly fishing and insists on pristine habitat, noting the necessity of white water riffles.
18. **Col. "Bull" Winkle**: the president of "More Moose Now" who believes that with the lake behind the dam, more moose habitat will be created.
19. **Lap Larson**: the president of W.O.W. (Watch Our Waves).
20. **Cy or Sy N. Tist**: a respected biologist who is prepared to testify about potential effects on wildlife from the building of the dam.
21. **O. L. Slick**: a salesperson for motor boats, water skis, and other recreational equipment.
22. **Forest or Park Site**: a trained forester who has worked in the woods in the area for more than 50 years.
23. **Running Waters**: a tribal leader who is concerned about loss of native heritage from flooding the region for the dam.
24. **E. Conomy**: a local businessperson who is concerned about the long-range business potential of the area.
25. **C. D. Minium**: a wealthy land developer who has architects working on designs for lakeside condominiums and resort homes.

And so on! Create any additional roles which serve to illustrate a variety of major perspectives and interests. NOTE: Some students have dressed for their roles to heighten the dramatic quality of the experience.

Extensions

1. Change roles and conduct the council meeting again. Note any differences in the results, as well as your perceptions of the process and experience.
2. Find out if there are any proposals to create new dams or any other proposals that will affect wildlife habitat in your region. If so, investigate the "pros and cons" of one or more of these proposals, from your perspective.
3. Is there a dam in your area? Visit it. Find out about its effects on people, plants, and animals—both positive and negative, if any.

Evaluation

Name two or more possible benefits to people if a dam were constructed on a river.

Name two or more possible negative consequences to people if a dam were constructed on a river.

Describe possible positive and negative effects on a variety of different kinds of plants and wildlife under each of the following conditions if these conditions existed as a result of the construction of a dam: water levels in the area below the dam are low for at least part of the year; water going over the dam drops a long way; very cold water is taken from the bottom of the dam and released into the river below.

Water Filtration Activity

Overview:

Impurities in water can come from several forms: suspended particles, dissolved solids and gases, chemical agents, and biological contaminants such as bacteria and viruses. The simplest form of impurity to remove is suspended particles. This lab illustrates a simple filtration method for eliminating all but the smallest of suspended particles. The filters are not fine enough to remove bacteria or viruses, but will remove larger microscopic organisms.

Note: Boiling and then condensing the steam, or using solar heat and then condensation, will remove the lighter chemical contaminants, and may kill some of the biological organisms. Generally, bacteria will not survive boiling, but viruses may. Most dissolved contaminants will also be eliminated by boiling and condensing.

Objectives:

The student will be know the difference between different forms of impurities in water, and will understand filtering methods to eliminate large suspended particles.

Materials:

Each student group should have:
Two bowls or cups
A spoon or stirring stick
A spoonful of dirt
3 or 4 paper towels
A block, book, or something to set one of the bowls of water on

Procedure:

Explain the entire activity to the students before starting the following steps. **It is a very good idea to do the activity as a demonstration as part of your explanation.**

Separate the students into groups, 2 (or 3) students in a group.

Pass out the materials to each of the student groups.

Have the students mix the dirt into a bowl which is half full of water.

Have them place the bowl of dirty water on top of the block, can or, book which is being used for a support. Fold the paper towel into a 1 to 2 inch strip, and place one end into the dirty water. The paper towel should be bent so that the other end is above the other bowl, about an inch above the bottom.

The water will begin to drip into the lower bowl within 5 to 10 minutes. Within an hour a significant amount of water will have accumulated in the lower bowl. By the next day the filtration will be complete.

Discussion:

Since the results of the filtration take some time, here are some ideas for group discussion while the filtering occurs.

A discussion should take place that mentions that other impurities may remain in the seeming clean water. Bacteria and chemicals may still be present. Discuss further methods of cleansing such as boiling to eliminate some of these dissolved and chemical contaminants.

The filtration method works by osmosis of the water through the fibers of the paper towel. A discussion should mention that this is the method that plants use to get water from their roots to the leaves. You could even add a demonstration of using food coloring in water with celery shoots to show how the osmosis works in plants. This, too, will take until the next day to be complete.

The idea of siphoning could be used here, too, to illustrate how water "seeks its own level". The easiest would be to fill a clear plastic tube of water, and plug both ends of it with your fingers. Lower one end into a container of water and release your finger. Hold the other end over a container which is lower than the first, and release your finger. The water will rather quickly flow into the lower container through the tube.

Another filtering demonstration could be done by filling a coffee filter with either clean sand or charcoal particles, placing the filter over a bowl or cup, and pouring dirty water through the sand. Though quicker, this requires materials.

UNIVERSITY OF SOUTHERN CALIFORNIA
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(213) 740-5127
**National Youth Sports Program - Math/Science Program
Summer 1992**

Jennifer Siu, Activity Director
Justine Gilman, Math/Science Coordinator

ENVIRONMENTAL AND EARTH SCIENCE

The study of environmental and earth science, at the University of Southern California NYSP were presented in many forms. A variety of activities were available to all participants including field trips, recycling paper, and studying the ecosystem.

One of the most unique lessons was the study of earthquakes - a phenomenon which is pervasive, feared and familiar in California. The three areas of the earthquake lesson plan were discussed and demonstrated. These areas were:

1. Understanding earthquakes: how earthquakes occur; how are earthquakes measured; earthquake terminology; how do you feel about earthquakes; where they occur; and history of earthquakes.
2. Preparing for earthquakes: what to do when you're at home, at work, or walking along the street; what safety precautions do you take in the event of an earthquake (water heaters, gas lines, glass and windows, electrical lines, etc.); what is an earthquake survival/emergency kit; develop an earthquake escape plan, etc.
3. Experiencing an earthquake - earthquake simulation.

Overall, we have found that discussions about preparedness can be applied to many other natural (hurricanes, floods, fire, tornados, etc.) or manmade (riots, fire, gas or chemical spills, war, etc.) disasters and emergencies. The Scouts Motto should be applied in all accounts: Be Prepared!

Resources:

USC Geology Department
Friends of the Los Angeles River
Museum of Science and Industry
LA Fire Department

USC Geography Department
USC Risk Management Office
National History Museum

Student Activities:

1. Guided tour through the Museum of Science and Industry
2. Earthquake simulator
3. Discuss personal experiences of earthquakes
4. Discuss earthquake preparedness
5. Perform an earthquake drill (similar to a fire drill)
6. Earthquake terminology - read and discuss

Additional "Home" Activities

1. Develop an escape route and meeting plan for family/friends after an earthquake.
2. Develop an emergency phone list.
3. Develop an earthquake/emergency supply kit for home, work and car.

Student Activities (Detailed):

1. Guided tour through the Museum of Science and Industry
 - a. Movement of the earth's crust
 - b. History of Earthquakes
 - c. History of the Richter Scale
2. Earthquake simulator
 - a. Quake/Aftershock
3. Discuss personal experiences of earthquakes
 - a. Where were you during the last earthquake? How did you feel? (Scared?)
 - b. Where were your parents/guardians?
 - c. What did you do? What should you do?
 - d. Did you get hurt?
 - e. What things broke or fell down?
 - f. How can you prevent that from happening again?
 - g. What did you read about the earthquake the next day?
4. Discuss earthquake preparedness
 - a. Have you secured your home? Water heater?
 - b. Do you know how to turn off the gas?
 - c. Are you prepared? Do you have ID on you?
 - d. Do you know where your local church, police or emergency shelter is?
 - e. Do you have a survival kit?
5. Perform an earthquake drill (similar to a fire drill)
 - a. Who's in charge?
 - b. What do you do? Water. Fire. Power. Electrical. Gas. Transportation.
 - c. Where is the central emergency location for your school or work?
6. Earthquake terminology - read and discuss

Additional "Home" Activities (Detailed):

1. Develop an escape route and meeting plan for family/friends after an earthquake.
 - a. Meeting place while everyone is at home
 - b. Meeting place while everyone is away (at work)
2. Develop an emergency phone list.
 - a. work, school, baby sitter
 - b. church, emergency shelter, Red Cross
 - c. Neighbors, hospital
 - d. Relatives - out of state and out of local area
3. Develop an earthquake/emergency supply kit for home, work and car.
Water, food, blanket, first aid, flashlight, batteries, clothing, can opener, matches or cigarette lighter, battery operated radio, salt tablets, personal hygiene supplies (if possible), towel, extra shoes, etc.

Earthquake Terminology:

Epicenter, Aftershock, Tremors, Magnitude, Richter Scale - (each number is 10 times bigger than the other), Faults, Earth crust and plates, Seismology.

Los Angeles Times

CIRCULATION:
164,388 DAILY / 1,531,527 SUNDAY

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2 Strong Quakes Jolt 7.4 Desert Temblor Is Sharp

Double Shaker

Here are some key facts about the earthquakes:

- **The quakes:** At 4:58 a.m., a magnitude 7.4 temblor in Landers. At 8:04 a.m., a second quake of magnitude 6.5 in Big Bear.
- **The strength:** Landers quake is the strongest to hit the state in 40 years; the last one stronger was a 7.7 temblor in Kern County in 1952.
- **The toll:** 1 fatality confirmed, and hundreds injured.
- **The damage:** Estimate for San Bernardino County: \$16.3 million
- **The range:** Skyscrapers reportedly swayed in Denver, Colo., and water in swimming pools sloshed over in Boise, Ida. Also felt in Salt Lake City, Utah.
- **Twin temblors:** Rarely do two major earthquakes strike along different fault lines in a single area within hours of one another. After Sunday's twin quakes, seismologists said the chance of a magnitude 6 or greater aftershock within a week is about 50%.
- **The warning:** State emergency officials on Sunday advised Southland residents "to curtail nonessential activity and to the extent possible stay off the freeway system" for the day.

Brett Whitson works to extract car stuck in an earthquake caused fissure on the road between Landers and Yucca Valley

Los Angeles

THE TIMES MIRROR COMPANY

MAJOR CONCEPTS

Deformation of the earth's crust is well documented by historical movement along faults, by raised beach terraces, and by deformed rock bodies.

Folds in rock strata range in size from microscopic wrinkles to large structures hundreds of kilometers long. The major types are (a) domes and basins, (b) plunging anticlines and synclines, and (c) complex flexures.

Faults are fractures in the crust along which slippage or displacement has occurred. The three basic types are (a) normal faults, (b) thrust faults, and (c) strike-slip faults.

Joints are fractures in rocks without displacement.

Unconformities are major discontinuities in rock sequence, which indicate interruptions in rock-forming processes because of crustal movement.

EVIDENCE OF CRUSTAL DEFORMATION

Statement

Although a casual observer might think that the crust of the earth is permanent and fixed, a great deal of evidence, both direct and indirect, indicates that the crust is in continuous motion and that it has moved on a vast scale throughout all of geologic time.

Discussion

Earthquakes are perhaps the most convincing evidence that the crust is moving. Those who experience an earthquake are certainly convinced. During earthquakes, the crust not only vibrates, but segments of it are fractured and displaced (Figure 20.1). One impressive example is the movement along the San Andreas Fault during the 1906 San Francisco earthquake, which offset fences and roads by as much as 7 m. Another is the 1899 earthquake at Yakutat Bay, Alaska, during which a beach was uplifted 15 m above sea level. Similar displacements, well documented with photographs, occurred during the Good Friday earthquake in Alaska in 1964, the Hebgen Lake earthquake in Montana in 1959, and the Dixie Valley earthquake in Nevada in 1954.

(A) Niigata, Japan, 1964

(B) Kern County, California, 1952

(C) San Fernando, California, 1971

(D) Near Woodville, California, 1906

Figure 20.1 Evidence of crustal deformation produced during historic earthquakes is seen most vividly in the disruption of human structures.

NATIONAL YOUTH SPORTS PROGRAM
1992 Math/Science Education Program

TIMETABLE OF PRINTED MATERIALS

A chronological timetable noting due dates for filing of printed materials is provided below.

1. <u>Prior to Operation of Project</u>	<u>Date</u>
a. Application for Participation.	April 1, 1992
b. Subgrant Agreement will be sent to the institution contingent upon approval of the grant proposal by the Department of Energy.	The agreement must be signed and returned to the national office whereupon the first two-thirds payment will be sent.
2. <u>During Project</u>	
a. Pretest Participant Survey.	First meeting date, math/science program.
b. Daily Attendance Report.	Daily hands-on programming.
c. Final Personnel Roster.
Pretest Participant Survey.	Due five days after hands-on math/science program.
d. Post-test Participant Survey.	Last meeting date, math/science program.
e. Post-test Participant Survey.	Due 10 days after conclusion of math/science component.
3. <u>After Conclusion of Project</u>	
a. Final Attendance Report.	Due 10 days after the conclusion of the hands-on program.
b. Evaluation Narrative Report.	Due 10 days after the conclusion of the hands-on program.
c. Final Financial Report.	Due 90 days after the completion of project, but no later than November 1, 1992. Final payment will be sent upon resolution of all questioned costs.

THE NATIONAL YOUTH SPORTS PROGRAM FUND

OVERLAND PARK, KANSAS

SUBGRANT AGREEMENT

GRANT NO.: MS <no.>

EFFECTIVE DATE: June 1, 1992

SUBGRANTEE: <instit>

ADDRESS: <address>

<OSZ>

PRIMARY PLACE OF PERFORMANCE: Same

PURPOSE: To provide a math/science education program for the 1992 National Youth Sports Program (NYSP)

REIMBURSABLE DIRECT COSTS
CEILING PRICE:

Not to exceed: \$ 24,000

SPONSOR:

U.S. Department of Energy
U.S. Department of Health and Human Services

This Subgrant Agreement is entered into this first day of June, 1992, by The National Youth Sports Program Fund (the "Grantee"), and the <instit>, <OSZ> an educational, nonprofit institution (the "Subgrantee").

WITNESSETH THAT:

WHEREAS, the Subgrantee is qualified and equipped to perform the work and services hereinafter described; and

WHEREAS, it is in the best interest of the Grantee to obtain the assistance of the Subgrantee for performance of said work and services; and

WHEREAS, the Subgrantee has submitted an "Application for Participation" in the 1992 Math/Science National Youth Sports Program; and

WHEREAS, a ceiling on direct costs for which the Subgrantee may be reimbursed has been established;

NOW, THEREFORE, in consideration of the Subgrantee and for other valuable considerations, the receipt of which is hereby acknowledged, the parties hereto do mutually agree as follows:

SPECIAL PROVISIONS

SECTION 1.0 -- SUPPLIES AND/OR SERVICES

- 1.1--The Subgrantee will conduct and maintain the math/science education component, in accordance with its approved "Application for Participation" dated June 1, 1992 (as modified and revised to date), the attached "Guidelines for the 1992 National Youth Sports Program" (the "Guidelines"), and the terms and conditions of this Subgrant Agreement.

Total Direct Cost Reimbursable Ceiling Amount: \$ 24,000

SECTION 2.0 -- PURPOSE

- 2.1--The purpose of this Subgrant Agreement is to provide for an approved Program in support of the 1992 National Youth Sports Program.

SECTION 3.0 -- MATH/SCIENCE PROGRAM OBJECTIVES

- 3.1--The NYSP Math/Science Program Objectives are those objectives stated in the "Guidelines."

SECTION 4.0 -- MATH/SCIENCE PROGRAM SPECIFICATIONS

- 4.1--The NYSP Math/Science Program Specifications are those stated in the "Guidelines" and the approved "Application for Participation" dated June 1, 1992, supplemented by the following specifications and requirements.
- 4.2--Poverty Requirements. At least 90 percent of the enrollees in the NYSP Math/Science Program shall meet the criteria set forth in the U.S. Department of Health and Human Services Poverty Guidelines.
- 4.3--Size of NYSP Math/Science Program. Minimum average daily attendance of youth shall be that figure set forth in the Subgrantee's approved "Application for Participation." A greater average daily attendance figure is desired and should be allowed as facilities and staff will permit. The Subgrantee shall establish adequate procedures to ensure that this minimum average daily attendance requirement is met. Any indication that this requirement is not being met shall cause the Subgrantee to promptly inform the NCAA director of youth programs (Edward A. Thiebe, 6201 College Boulevard, Overland Park, Kansas 66211-2422) of this fact and of the steps being taken to correct the deficiency.
- 4.4--Participants. Participation shall be open to boys and girls of the ages 10 to 16, inclusive, as of the last day scheduled for sports programming. Individuals over or under the age requirement (10 to 16) may not knowingly be included in the Subgrantee's Program Budget. The individual applicant's statement of age may be accepted as proof of age.
- 4.5--Enrollment. All participating youth must be enrolled. Enrollment includes the completion of the NYSP medical examination record and the application form with the parent's or guardian's signature, and attendance in the NYSP project a minimum of one day. A roster must be compiled that records accurately the name, age, sex, address, zip code and telephone number of each participant. This roster must be filed in the office of the activity director. There shall be no fees or incidental charges to participants.

- 4.6--**Medical Services.** Each enrollee must be examined prior to participation in the NYSP Math/Science Program. The procedure shall include examination of eyes, ears, nose, throat, teeth, heart and lungs, plus checks for ruptures, hernias, and obvious orthopedic defects. A youth may be excluded from an NYSP project only if he or she does not possess the physical qualifications necessary to participate or participation can be shown to present an unacceptable risk of injury or illness. An institution may not assume that a youth is too great a risk for physical injury or illness because he or she is handicapped. Such determinations must be made on a case-by-case basis. Medical treatment of injuries and illnesses occurring during the NYSP Project is required, and such services shall be provided on the same basis as they are provided to enrolled students of the Subgrantee. A youth's parents or guardian must be informed of any health problem discovered during the screening process or during the course of the NYSP Project. An appropriate health care agency also will be informed if the parents or guardian consent. When a health problem is discovered, the Subgrantee shall pursue the matter until the problem receives proper treatment or until all reasonable opportunities for such treatment have been exhausted. Institutional responsibility for preexisting medical problems, or for problems related to NYSP participation, ends with the conclusion of the NYSP Math/Science Program.
- 4.7--**Insurance.** The Subgrantee hereby assures the Grantee that sufficient and adequate bodily injury and property damage liability insurance and accident-medical-dental insurance meeting the minimum standards set forth in the "Guidelines" have been obtained. The required liability coverage protecting the Subgrantee and the Grantee, and accident-medical-dental coverage protecting Project participants and staff shall be in effect, and evidence thereof shall be submitted to the Subgrantee before this Subgrant is effective.

SECTION 5.0 -- PERIOD OF PERFORMANCE

- 5.1--For the Purpose of authorizing expenditure of grant funds, the term of this Subgrant Agreement shall begin on June 1, 1992, and end on May 31, 1993, unless otherwise approved by the NCAA director of youth programs. For all other purposes, this Subgrant Agreement shall continue in effect until such time as all required reports have been submitted, program evaluation has been completed and this Subgrant has been settled and audited.
- 5.2--Preprogram and postprogram materials are due on specified dates as noted on the forms.

Section 6.0 -- FUNDING NATURE AND LEVEL

- 6.1--Expenditures of grant funds under this Subgrant Agreement are limited to allowable direct costs in the total amount of \$24,000. Under no circumstances may expenditures of grant funds in excess of this ceiling be made unless a revised ceiling for direct costs is approved in writing by the NCAA director of youth programs. All expenditures that exceed the approved ceiling shall be responsibility of the Subgrantee.
- 6.2--With the exception of changes of 10 percent or less among the following line items: Wages and Salaries, Operating Costs and Transportation Costs, any change in the Subgrantee's approved Program Budget must be approved in writing by the NCAA director of youth programs. In all cases, reallocations of monies must be accomplished without any diminution of services and Program balance must be maintained.
- 6.3--The Subgrantee shall make a contribution to the direct costs of the Program that shall consist of facilities usage charges, charges for capital equipment being used in the Program, the salary of the full-time Project Administrator whom the Subgrantee must provide at no cost to the project, and the value of supporting services rendered the Program by the Subgrantee but that are not charged against the Subgrant. The value of the Subgrantee's contribution to the direct costs of the Program must equal not less than 20 percent of the sum of that contribution and the dollar amount of this Subgrant as stated in Section 6.1 above.

6.4--Overhead and indirect costs shall not be allowed and shall not be counted toward the Subgrantee's contribution.

SECTION 7.0 -- FUNDING ADMINISTRATION AND ADVANCE PAYMENTS

7.1--Upon receipt by the Grantee of the Subgrant Agreement, properly executed, the Subgrantee may be advanced funds in the amount of \$16,080.

7.2--After the Subgrantee has completed the Program and has fulfilled the reporting requirements of Section 10.1 hereof, the Subgrantee may, upon approval of the NCAA director of youth programs, receive the remaining funds authorized by this Subgrant Agreement, in the amount not to exceed \$24,000. All payments are subject to adjustment after audit by the U.S. Government or the Grantee.

7.3--Payments may be withheld during any period in which the Subgrantee is delinquent in its financial and other reporting obligations under this or any prior NYSP Subgrantee agreement. The Grantee has no obligation to reimburse the Subgrantee for final expenses submitted after the conclusion of the grant period, May 31, 1993.

7.4--Funding Accountability:

7.4.1--The Subgrantee may, at its option, establish a Special Bank Account for Advanced Funds.

7.4.2--If a Special Bank Account for Advanced Funds is not established by the Subgrantee, the Subgrantee hereby certifies that it will establish a segregated account within its established accounting system to control and identify funds provided under this grant.

SECTION 8.0 -- GENERAL PROVISIONS

8.1--The Subgrantee agrees to comply fully with all local, city, state and Federal laws, regulations and ordinances governing performance of services required as set forth in the Subgrantee Agreement, to obtain any and all necessary permits and/or clearances to perform the approved Program and to comply with applicable U.S. Department of Energy directives.

SECTION 9.0 -- SUBGRANT ADMINISTRATION

9.1--Participating Institution's Project Administrator: The Subgrantee has designated the below-listed individual as its project administrator.

Name and Title <pa>, NYSP Project Administrator

Address _____ Telephone _____

Section 10.0 -- REPORTING AND RECORD-KEEPING REQUIREMENTS

10.1--The Subgrantee will submit a properly certified final financial (i.e., audit materials) and daily attendance report, final personnel roster, final attendance report, pre- and post-test survey and evaluation narrative report at the times prescribed by the Grantee.

10.2--The Subgrantee will keep accurate and complete attendance records in order to show its adherence to the minimum average daily attendance requirement and to support direct cost reimbursement where number of enrollees is a factor in computing the amount due.

10.3--The Subgrantee will maintain such financial records (i.e., time sheets) as will enable audit of program accounts during and after the Program ends.

10.4--The Subgrantee will submit such supporting data when rendering bills as will facilitate Grantee processing of any payment of amounts claimed.

10.5--The Subgrantee will maintain such financial records as will enable audit of Program accounts during and after the Program ends, and will make such records available during normal business hours for inspection by the Grantee or its designee.

11.0 -- PROJECT MODIFICATION AND EVALUATION

11.1--The Subgrantee agrees to comply with any request by the Grantee that the Math/Science Program be redirected to conform to the "Guidelines" and the Subgrantee's Program plan.

- 11.2--Where Program modification appears desirable to better achieve Program objectives, the Subgrantee agrees to discuss such modifications with the Grantee and U.S. Government representatives, through the NYSP committee, and to devote its best possible efforts to make modifications mutually agreed upon. In the event any such Program modifications are made, the Subgrantee's Program Budget will be subject to recomputation to take into account any changes having monetary implications.
- 11.3--The Subgrantee agrees to cooperate with the Grantee and/or the U.S. Government in their unilateral or joint monitoring of this Program during its performance and to assist in any project evaluation conducted by the Grantee and/or the U.S. Government.

SECTION 12.0 -- INSPECTION AND ACCEPTANCE

- 12.1--Final inspection and acceptance for all work called for hereunder will be made by the NCAA director of youth programs when it is determined all Subgrant requirements have been satisfactorily met.
- 12.2--Any corrections or adjustments necessitated by the Subgrantee's failure to comply with the Program specifications will be met at no additional expense to the Grantee or the U.S. Government.
- 12.3--Work under this Subgrant Agreement shall be subject to inspection by the Grantee at all times.

SECTION 13.0 -- SUBGRANTEE-FURNISHED MATERIAL AND/OR SERVICES

- 13.1--The Subgrantee shall furnish or cause to be furnished all necessary personnel, facilities, materials, equipment plus any and all other services, supplies, or equipment needed to fulfill the requirements set forth herein.

SECTION 14.0 -- OWNERSHIP OF DOCUMENTS

- 14.0--All papers and documents required to be prepared as reports developed under this Subgrant shall become the property of the U.S. Government. Such papers, reports or other documents may thereafter be used by the Government as it may see fit, without additional compensation to the Subgrantee.

IN WITNESS WHEREOF, the parties hereto have caused this Subgrant Agreement to be duly signed and executed with the intention of becoming legally bound thereby effective as of the day and year first above written.

- 15.0--The Grantee and the Subgrantee hereby agree that by signing this Subgrant Agreement, the subgrantee is providing the attached "Assurances and Compliance" (Enclosure No. 1) and "Certification Regarding Lobbying, Debarment, Suspension and other Responsibility Matters; and Drug-free Workplace Requirements" (Enclosure No. 2) shall be incorporated into, and become a part of, the Subgrant Agreement.

Name of Institution

Date: June 1, 1992

By _____
(Officer Empowered to Make Grants)

Title _____

Signature _____

Date: June 1, 1992

THE NATIONAL YOUTH SPORTS PROGRAM FUND

By _____
Edward A. Thiebe, NCAA Director of Youth Programs

2 Enclosures as Stated

NCAA/rlo/1/24/92

Budget removed.
ok

NYSP Science and Math Survey

This survey was designed to assess students' attitudes toward science education, and if those attitudes were changed after involvement in an NYSP program that stressed science and math. The same survey was given to the same students at 12 institutions both before and after the enrichment program was conducted, in an effort to assess the possible changes in attitude.

The survey instrument was designed with 25 statements related to a student's attitude toward science in school. They were asked to respond in one of four ways to the statement: 1) "strongly agree," 2) "agree," 3) "disagree," or 4) "strongly disagree". The survey was scored so that the most favorable response related to a given statement received four points and the most unfavorable response received one point. If a student left a response blank, it was given 2.5 points as a neutral response. Thus, an individual student's score could range from 25 points to 100 points, with 62.5 points representing the dividing line between a positive and negative attitude toward science.

The results showed that, overall, the attitude of the students surveyed increased slightly on the post-test portion of the survey. The pretest revealed an average score of 70.6 points, or slightly leaning toward a positive attitude about science. The average on the post-test was 74.6 points, so the average student was a little more positive about science after the enrichment program was conducted. This difference was found to be statistically significant using a paired-comparisons T-test.

When breaking down the results from individual institutions, one can see that the overall result was driven by just a few institutions. Only five institutions showed significant changes in the attitudes of students before and after the enrichment program. Of those, two showed a negative change in students' attitudes.

Institution number 2 showed the greatest increase between the pre- and post-tests, as the average at that site increased a full 15 points between the two sittings. Institution numbers 16 and 13 were the other two that showed significant positive effects, jumping by 4 and 8 points respectively.

The negative changes were seen at institutions 1 and 8. The averages at both of these institutions dropped approximately 5 points between the pre- and post-tests. All other institutions remained statistically equal on the survey between the two testing sessions.

SCIENCE ATTITUDE SURVEY

Please use the following scale to respond to the statements below. Darken the correct letter on the answer sheet using a No. 2 pencil.

SCALE

A - Strongly Disagree

B - Disagree

C - Agree

D - Strongly Agree

STATEMENTS

CIRCLE ONE

1. I daydream during science class.	A	B	C	D
2. I dislike science class.	A	B	C	D
3. Science lab equipment confuses me.	A	B	C	D
4. I enjoy using science equipment.	A	B	C	D
5. I am afraid of my science teacher.	A	B	C	D
6. Scientists lead interesting lives.	A	B	C	D
7. Science is my favorite subject.	A	B	C	D
8. If given the choice to take another class in place of science, I would NOT or will NOT take science.	A	B	C	D
9. I would like to visit a science museum.	A	B	C	D
10. In my opinion, science is NOT important.	A	B	C	D
11. I like television programs about science.	A	B	C	D
12. Science requires too much work.	A	B	C	D
13. My science teacher was good.	A	B	C	D
14. If I do well in science, I am afraid that my friends won't like me.	A	B	C	D
15. I would like to be a scientist someday.	A	B	C	D
16. I enjoy discussing science topics with my friends.	A	B	C	D
17. I enjoy taking science classes.	A	B	C	D
18. Science is very difficult for me to understand.	A	B	C	D
19. Science ideas and facts have no place in my personal life.	A	B	C	D
20. I wish that I had more hands-on experience in science.	A	B	C	D
21. Science has no impact on society.	A	B	C	D
22. Scientists do interesting work.	A	B	C	D
23. In science classes, I enjoy lab period.	A	B	C	D
24. My science class has been boring.	A	B	C	D
25. My science teacher has increased my interest in science.	A	B	C	D

PAIRED-COMPARISONS T TEST

6

14:33 Friday, September 18, 1992

N Obs	Variable	Mean	Std Error	T	Prob> T
661	DIFF	4.0052950	0.4848652	8.2606358	0.0001
	TOTALPOS	74.6505295	0.5126607	145.6139200	0.0
	TOTALPRE	70.6452345	0.4628822	152.6203145	0.0

PAIRED-COMPARISONS T TEST

7

14:33 Friday, September 18, 1992

----- INST=. -----

N Obs	Variable	Mean	Std Error	T	Prob> T
5	DIFF	6.9000000	7.1491258	0.9651530	0.3891
	TOTALPOS	79.2000000	6.4140471	12.3478981	0.0002
	TOTALPRE	72.3000000	8.4522186	8.5539671	0.0010

----- INST=1 -----

N Obs	Variable	Mean	Std Error	T	Prob> T
57	DIFF	-4.9035088	1.4168936	-3.4607459	0.0010
	TOTALPOS	68.5877193	1.4137772	48.5138090	0.0001
	TOTALPRE	73.4912281	1.2411019	59.2145014	0.0001

----- INST=2 -----

N Obs	Variable	Mean	Std Error	T	Prob> T
132	DIFF	15.5984848	0.8501275	18.3484054	0.0001
	TOTALPOS	85.7500000	0.6189594	138.5389830	0.0001
	TOTALPRE	70.1515152	0.9165842	76.5358095	0.0001

----- INST=3 -----

N Obs	Variable	Mean	Std Error	T	Prob> T
30	DIFF	-0.5833333	2.2710172	-0.2568599	0.7991
	TOTALPOS	66.7166667	1.5182195	43.9440193	0.0001
	TOTALPRE	67.3000000	2.0688716	32.5298093	0.0001

----- INST=6 -----

N Obs	Variable	Mean	Std Error	T	Prob> T
1	DIFF	9.0000000	.	.	.
	TOTALPOS	80.0000000	.	.	.
	TOTALPRE	71.0000000	.	.	.

PAIRED-COMPARISONS T TEST

8

14:33 Friday, September 18, 1992

----- INST=8 -----

N Obs	Variable	Mean	Std Error	T	Prob> T
45	DIFF	-4.9888889	1.6263680	-3.0675031	0.0037
	TOTALPOS	65.7000000	2.1213442	30.9709294	0.0001
	TOTALPRE	70.6888889	1.9511903	36.2285976	0.0001

----- INST=9 -----

N Obs	Variable	Mean	Std Error	T	Prob> T
51	DIFF	0.9607843	1.4161424	0.6784517	0.5006
	TOTALPOS	70.7843137	1.7403659	40.6720869	0.0001
	TOTALPRE	69.8235294	1.4982227	46.6042392	0.0001

----- INST=10 -----

N Obs	Variable	Mean	Std Error	T	Prob> T
24	DIFF	1.1250000	2.0477210	0.5493913	0.5880
	TOTALPOS	69.6041667	2.2320092	31.1845336	0.0001
	TOTALPRE	68.4791667	2.0517488	33.3759993	0.0001

----- INST=11 -----

N Obs	Variable	Mean	Std Error	T	Prob> T
24	DIFF	0.3333333	1.9663535	0.1695185	0.8669
	TOTALPOS	69.9375000	2.5700886	27.2120967	0.0001
	TOTALPRE	69.6041667	2.8771619	24.1919531	0.0001

----- INST=12 -----

N Obs	Variable	Mean	Std Error	T	Prob> T
48	DIFF	0.2187500	1.5105940	0.1448106	0.8855
	TOTALPOS	71.2500000	2.3536037	30.2727261	0.0001
	TOTALPRE	71.0312500	2.0978610	33.8588920	0.0001

PAIRED-COMPARISONS T TEST

9

14:33 Friday, September 18, 1992

----- INST=13 -----

N Obs	Variable	Mean	Std Error	T	Prob> T
74	DIFF	3.5810811	1.3688510	2.6161220	0.0108
	TOTALPOS	72.4459459	1.3327937	54.3564582	0.0001
	TOTALPRE	68.8648649	1.2881461	53.4604459	0.0001

----- INST=14 -----

N Obs	Variable	Mean	Std Error	T	Prob> T
46	DIFF	0.2717391	1.3275878	0.2046864	0.8387
	TOTALPOS	71.5108696	1.7688590	40.4276826	0.0001
	TOTALPRE	71.2391304	1.6083823	44.2924123	0.0001

----- INST=15 -----

N Obs	Variable	Mean	Std Error	T	Prob> T
40	DIFF	1.4250000	1.4418816	0.9882920	0.3291
	TOTALPOS	73.7750000	1.9453223	37.9243070	0.0001
	TOTALPRE	72.3500000	2.2544969	32.0914165	0.0001

----- INST=16 -----

N Obs	Variable	Mean	Std Error	T	Prob> T
84	DIFF	7.5892857	1.2502771	6.0700830	0.0001
	TOTALPOS	79.7738095	1.3025639	61.2436816	0.0001
	TOTALPRE	72.1845238	1.4645794	49.2868628	0.0001

The Right Start

Southern University

National Youth Sports Program Newsletter

Baton Rouge, LA

Crogers '92

Volume 1, Number 1

Sponsored by the NCAA

June 12, 1992

SU Program Kicks-off With New Program Director

By Carrie Russ
SU-NYSP Writer

Mrs. Brenda Edmond is a native of Clinton, Louisiana where she was such a good basketball player, she earned an athletic scholarship to Southern University. She comes from a solid family background, which shows in her demeanor and treatment of other people. Mrs. Edmond is the mother of two children, Tony Edmond, a Quarter Master of Supply and Service in The United States Army, stationed in Manheim, Germany, and Cindy Edmond Whitehead, who lives in Westland, Michigan.

After completing her studies at Southern University, Mrs. Edmond went on to receive her Master of Arts degree in School and Public Health Education from the University of Michigan at Ann Arbor. Mrs. Edmond has since completed extensive graduate studies and is a heart

Photo by Christopher J. Rogers
Brenda Edmond

beat away from obtaining her doctorate degree. At present, Mrs. Edmond is the Director of Office Professional Laboratory Experiences, Coordinator of Physical Educational and Recreation Education, an instructor of "Problems in Human Sexuality," and Program Director of the

Southern University - Baton Rouge National Youth Sports Program. Her genuine love and concern for the program shows on her face each time she "snags" another new experience for "our" children. For instance, when she was able to get St. Joseph's Academy School of Baton Rouge, Louisiana to teach Computer Literacy to a group of participants in this year's NYSP program, she literally "glowed" the entire day.

Edmond also is a perfectionist and instills the desire to excel in those who work with her. Her quick wit and easy style of supervision invokes both loyalty and respect from her staff.

We here at Southern University eagerly await the future we anticipate under her leadership. •

NYSP To Celebrate 25 Years in 1993

By National NYSP Headquarters

1993 marks the 25th anniversary for the NYSP program! Special guests, awards and events have been planned to honor

WHAT'S INSIDE ?

- SU-NYSP Advisory Committee
- Multicultural Education Program
- Summer Math/Science Program
- SpotLight

this program and YOU, the people who work behind the scenes to bring our nation's neediest youth sunshine and hope for the future. We don't want to spoil this surprise... more news will come in a later issue of our newsletter, NYSP News & Notes. Just mark your calendars for January 26-28, 1993. •

1992 NYSP Sets Record for Participating Institutions

NYSP set a new record for participating institutions this year. There will be a record number of 173 institutions and 174 projects (Jackson State University operating two programs) participating in the 1992 NYSP Program. Some of the first time institutions joining the family are as followings: University of Southwestern Louisiana, Howard University and University of Notre Dame. Good Luck... •

In our next issue

We will pay a tribute to our former Southern University National Youth Sports Program Director, Mrs. Willie Mae Williams - who served as director for twenty years.

NYSP... the Right Start

**SU - NYSP
1992 Advisory Council**

Dr. Marvin L. Yates
Program Administrator

Ms. Brenda Edmond
Program Director

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Dr. Patricia Baranco
Mrs. Cornelia B. Barnes
Dr. Helen M. Barron
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Dr. Leodry Williams

**Summer 1992
SU - NYSP Newsletter
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Editor-in-Chief

Mrs. Willie Mae Williams
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Christopher J. Rogers
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**St. Joseph's Academy
Assists M/S Program**

On Monday, June 8, 1992, nine fortunate young girls headed for St. Joseph's Academy, in Baton Rouge. They were on their way to SJA's Summer Science Program to be taught a course in Computer Literacy. This program is designed for girls entering 9th grade and integrates computers with Scientific and Mathematical activities. The purpose of the program is to encourage students to develop critical thinking processes and use computer applications that make Science and Math connect. The girls from the SU-NYSP program who are participating in this innovative program are: Janelle Banks, Lorissa Coklin, Brandi Hutchinson, Kizzy Jones, Dawn Kelley, Meisha Monroe, Nicole Moses, Shara Piper and Ashley Scott. •

**SU-NYSP Participates in
Multicultural Ed. Institute**

By: Carrie Russ
SU-NYSP Writer

On Monday, June 8th, five NYSP participants took part in the Institute on Math and Science Seventh Annual State Conference on Multicultural Education. The participants were informed about the deterioration of the earth's ozone layer caused by pollution, and the resulting

greenhouse effect this is having on our planet. Dr. Paul Poydras then demonstrated to the students how to construct a greenhouse. Following his demonstration, the students were allowed to construct their own greenhouse using soil, seeds, duct tape, cardboard, and visqueen. The students from SU-NYSP who are participating in this program are: Jason Beasley, Derrick Johnson, Joseph Lewis, Tonya Rose and Cawanda Swazer.

JULIUS THOMAS

Artist

He is the proud son of Mr. and Mrs. Julius P. Thomas, Jr. Thomas is a 10th grader at Baker High School. His drawings reflect beauty and detail. Look for some of his drawings in future issues. •

RAEGAN HIGGINS

Scholar

Raegan is the proud daughter of Mr. and Mrs. Reginald Higgins. She is a 7th grader at Southern University Laboratory High School where she has maintained a 4.0 grade point average. Congratulations Raegan. •

**Personal To
DERRICK WILLIAMS**

*We share your sorrow in the
loss of your father.
We miss you and love you.
Hurry back.....*

SU-NYSP Staff

NYSP... The Right Start

Square One

Mt. Airy resident Curtis Turner, a U.S. Naval Officer and graduate student at Temple University's College of Engineering, Computer Sciences and Architecture, examines a fallen mini-rocket with Thomas Stinnette, 10, of Darby. Stinnette was one of 200 Philadelphia-area youngsters who took part in a new math/science component to the National Youth Summer Sports Program at Temple. Turner, an instructor, helped the group launch their final projects from Temple's Geary Field. The six-week program was supported by the National Collegiate Athletic Association and the U.S. Department of Energy.

RECEIVED

JUN 29 1992

UW-EC RECREATION

Summer Times

June 29, 1992

University of Wisconsin-Eau Claire

Vol. 28, No. 3

UW-Eau Claire sports program one of 16 to use math-science

For the first time, the nearly 500 Chippewa Valley youngsters participating in the National Youth Sports Program will be exposed to a math-science component.

"We were selected as one of 16 out of 174 NYSP projects nationwide to pilot the math-science component," University Recreation Director William Harms said.

"Our goal is for kids first to see that there's a lot of fun in math and science, and it's not just reading a book or doing a work sheet."

Beverly Ogan, Coordinator

Harms, who administers the federally funded NYSP project, said the new math-science component is made possible by a \$24,000 grant from the Department of Energy.

Overall, the sports program, which ends July 10, is designed for ages 10-16 to emphasize instruction, competition, physical fitness and lifetime sports. Youngsters also learn about drugs and alcohol, health, nutrition and careers.

The Department of Energy requires that children in the 16 pilot programs also receive at least 10 hours of science and math activities, said Beverly Ogan, math-science coordinator.

Four teachers work with Ogan to prepare lesson plans that don't seem too much like school and work with the children during the five-week program.

"It's my job to make sure the lessons are age appropriate and successful, and that we are meeting the requirements of the Department of Energy," Ogan said.

One of those requirements is a survey that must be administered before and after the program to assess the impact of math-science activities on NYSP participants. This survey will help the Department of Energy to determine whether or not to continue the program in the future, Ogan said.

To convince the youngsters that camp will still be fun if math and science is involved, Ogan said the first survey was followed with magic card tricks. The children responded positively, she said, but were reluctant to believe that math logic was

actually responsible for the magical tricks. Still, some children were seen using the "magic" card tricks on their own to pass time during a rainy day, Ogan said.

Other sessions throughout the camp are designed to acquaint the participants with math and science to reduce anxiety and build enthusiasm, Ogan said.

These programs turn concepts such as problem solving with limited resources, deer population survival and control, the use of variables in technology and light symmetry into exciting activities such as a raw-egg obstacle course and a poker-chip scavenger hunt.

"Our goal is for kids first to see that there's a lot of fun in math and science, and it's not just reading a book or doing a work sheet," Ogan explained. "We want them to see that there's math and science in everything they do."

The program seems to be generating enthusiasm among participants and positive feedback from parents, Ogan said. NYSP coordinators hope they will be able to continue the math-science activities next summer, she said.

Photo by Kate Burgeson
National Youth Sports Program students counted poker chips they had gathered to determine if their deer population had survived.

skills by calculating averages, ranges, the mode, and more.

WORKING TOGETHER— Courtney Boone, left, and Tony Reed dissect an owl pellet during a morning class in the Math/Sciences Program at the Colvin Center. This is the first year for Stillwater to provide Math/Sciences Program in the

National Youth Sports Program. The educators for the Math/Science Program was a collaboration of Stillwater Public School teachers and Oklahoma State University faculty. (NewsPress photos by Antonio Hansen)

Students Learn The Basics

Who Said Math, Science And Summer Don't Mix?

WHAT IS THE QUESTION — A group of students play a game of environmental jeopardy outside the Colvin Center. Although the students didn't receive any money for correct answers, they were squirted with water guns for incorrect answers.

By Lisa Miller
NewsPress Staff Writer

Chances are you never dreamed you would sit in a math or science class during the summers of your youth. Chances are several hundred 10 to 16 year olds never thought they would, either.

They were wrong.

This year the National Youth Sports Program, which has been established at Oklahoma State University for 14 summers now, implemented a pilot program in which children who attended the NYSP program spent one hour daily for three weeks learning about the human body, the environment and the animal kingdom.

And guess what? According to program coordinator Dr. Frank Kulling, the kids were as interested in the math/science class as they were in the other daily activities. In fact, apparently the children were so enthusiastic about the class, they wanted to stay and learn more even after the class period was over.

It was this enthusiasm that led Kulling and other instructors to raise money to extend the class period, which was originally funded for 10 hours, to 15 hours.

"The objective of the math/science curriculum is to increase youth understanding, interest, motivation and opportunities toward math/science and related areas," Kulling said. "This program was

designed to be fun. We were hoping to increase the number of kids interested in participating in math/science courses. This is the impetus of the program."

The children were split up into three groups on the basis of age. The subject matter presented in each class was essentially the same, but the method or approach used in presenting the material was adjusted to fit each age group's level of understanding.

Kulling, the assistant professor of HPEL at OSU, said the NYSP program at Oklahoma State University is one of 20 programs throughout the country chosen to participate this summer in the math/science program which is funded through a grant by the National Collegiate Athletic Association.

"I knew about a month before NYSP was to start that we were going to have the math/science program," he said.

He immediately began contacting teachers within the Stillwater public school system, searching for ones who could help devise and teach a math/science curriculum that would be both fun and informative. The NCAA's only requirement concerning the program was that the NYSP must include an environmental section.

Kulling, along with Dr. Steve Edwards, devised and conducted the human body portion of the program, which includes skeletal anatomy, health- and skill-related fitness testing, and electrocardiogram and heart rate response to exercise. They even developed a math lesson which implemented the use of a miniature golf course that permitted the generation of numbers to explain math concepts such as a mean, median and mode.

Predator/prey relationships, the food chain, and the anatomy and behavior of selected animals were discussed in the animal behavior section of the program. The environmental portion included testing the pH of different household liquids, recycling, creating and cleaning a simulated oil spill, and determining the effects of pollution on plant growth.

Kulling said that instead of having cut-and-dry lectures like the ones so many kids complain about these days, the teachers tried to come up with ways of illustrating math and science concepts which would hold the interest of the class. For example, in order to show one way the human anatomy functions, students were hooked up to an electrocardiogram so they could see how their heart works at different levels of physical activity.

To learn about the effect polluted water has on the environment, children poured contaminated water on plant seeds and then observed the results

SCIENCE AND STUDENTS — Frank Kulling, Math/Science coordinator, shows a group of students how Ikraam Mohiuddin's heart rate changes with exercise.

"They definitely learn more this way," Kulling said. "We think it's a success based on what the students and their parents have said."

"This is the first time I have worked with teachers from the public school system. I was really impressed. They came up with curriculum that was both informative and fun, and that had real application. They really work well with the kids."

Kris Bahr, 11, said this is the first year he has attended the program. However, he said he definitely plans on coming back next summer.

"It's really fun. I get to do a lot of interesting things."

Kulling said that due to the success of the program, NYSP plans to ask the NCAA for more funding for next year's classes.

In addition to the math/science program, NYSP includes enrichment programs which focus on topics such as sex education, drug/alcohol education, nutrition and self esteem, as well as sports activities.

The five-week program is free of charge to any child between the ages of 10 and 16 who fills out a general application form, a family income form, and has the required physical examination. The NCAA requires that 80 to 90 percent of the program's participants be from low-income families.

However, liaison officer Debbie Beattie said that any student who fills out the proper forms is welcome to enroll in the program.

Sunwater (Okla.) NewsPress

News Plus

Section B
Wednesday, July 8, 1992

LEARNING THROUGH FUN - Jenny Jo Smith, age 10, attempts a putt near the Colvin Center Annex. Although it may seem that she is only having fun, the students will use their scores to learn math

WORKING TOGETHER - Courtney Boone, left, and Tony Reed dissect an owl. National Youth Science Program. The educators for the Math/Science Program

Students Learn The Basics

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