

AGENCY FOR INTERNATIONAL DEVELOPMENT  
**PROJECT PAPER FACESHEET**  
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 FY | 7 | 8 |

7. PROJECT TITLE - SHORT (STAY WITHIN BRACKETS)  
 African Science Education

8. ESTIMATED FY OF AUTHORIZATION/OBLIGATION  
 MO. YR.  
 A. INITIAL | 4 | 76 |    B. FINAL FY | 7 | 8 |

9. SECONDARY TECHNICAL CODES (MAXIMUM SIX CODES OF THREE POSITIONS EACH)

10. ESTIMATED TOTAL COST (\$000 OR EQUIVALENT, \$1\* \_\_\_\_\_)

A. PROGRAM FINANCING	FIRST YEAR			ALL YEARS		
	B. FX	C. L/C	D. TOTAL	E. FX	F. L/C	G. TOTAL
AID APPROPRIATED TOTAL	-	66	66	-	360	360
(GRANT)	( - )	( 66 )	( 66 )	( - )	( 360 )	( 360 )
(LOAN)	( - )	( - )	( - )	( - )	( - )	( - )
OTHER						
1. GOVERNMENT (SEPA)	-	-	-	-	88	88
OTHER						
TOTALS	-	66	66	-	448	448

11. ESTIMATED COSTS/ALL APPROPRIATED FUNDS (\$000)

A. AID/PRP-PRIMARY APPROPRIATION ALPHA CODE	B. PRIMARY PURPOSE TECH. CODE	FY 76		FY 77		ALL YEARS			
		D. GRANT	E. LOAN	F. GRANT	G. LOAN	H. GRANT	I. LOAN	J. GRANT	K. LOAN
EH		66				150		360	
TOTALS		66				150		360	
ESTIMATED EXPENDITURES		-		66		150			

PROJECT PURPOSE(S) (STAY WITHIN BRACKETS)     CHECK IF DIFFERENT FROM PID/PRP

To improve the capabilities of select African countries, through their membership in or association with the Science Education Program for Africa (SEPA), to design, implement and evaluate science education programs that are relevant to the African context.

12. WERE CHANGES MADE IN THE PID/PRP FACESHEET DATA NOT INCLUDED ABOVE? IF YES, ATTACH CHANGED PID AND/OR PRP FACESHEET.  
 Yes     No

15. ORIGINATING OFFICE CLEARANCE

SIGNATURE: *E. Dennis Conroy*  
 E. Dennis Conroy  
 TITLE: Director, AFR/RA

DATE SIGNED: MO. DAY YR. | 05 | 18 | 76 |

16. DATE RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION  
 MO. DAY YR. | | | |

PROJECT PAPER  
AFRICAN SCIENCE EDUCATION  
698-0390

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I. Summary and Recommendations

A. Grantee : Science Education Program for Africa

B. Proposed Amount of Grant: \$360,000

C. Purpose : To improve the capabilities of select African countries, through their membership in or association with the Science Education Program for Africa (SEPA), to design, implement and evaluate science education programs that are relevant to the African context.

D. Project Development Team: J. Carson, AFR/RA  
D. Cox, AFR/RA  
R. Thomas, AFR/DS  
J. Wooten, AFR/DS

E. Summary Description

The goal of the project is to provide the populations of select African countries with a more relevant basic education in science. This project should significantly impact upon this goal by providing continued AID support over the FY 1976-78 period to the Secretariat and three key program activities of the Science Education Program for Africa (SEPA). The program activities are a teacher training materials development program to improve science teacher education materials for teaching science and to prepare the materials for distribution to SEPA member countries; a resident training course to train science educators, evaluators and curriculum specialists in the SEPA methodology; and an out-of-school science education program to provide basic environmental science education in agriculture, health and resource conservation to out-of-school rural youths between the ages of 8-18 years.

F. Project Issues:

An AID sponsored external evaluation team recommended in

November, 1975, that AID support to the SEPA Secretariat be phased-out and that membership contributions be increased to cover the full costs of the Secretariat. The plan is that AID support to the Secretariat will be phased-out in 1978 and that membership assessments and other donor contributions should fully cover the costs of the Secretariat after October 1978. A problem in this regard, however, is the high rate of delinquency in paying the assessments. As of January, 1976, four of the eight member countries were in arrears in transferring their assessments to the Secretariat. As a result of these arrears, activities of the Secretariat have been reduced below projected levels. In the January, 1976 Executive Committee meeting, members expressed grave concern about the failure of member countries to transfer their assessments to SEPA and the resulting difficulties in which the Secretariat was being placed. Representatives of the countries which were in arrears assured the committee that appropriate steps were being taken to make these transfers. However, the members voted to bring the matter before the August, 1976 meeting of the Representative Council for a permanent solution to be found. The Secretariat is an essential element in the success of SEPA programs. Before AID provides continued support to these activities, it should establish an agreement with SEPA that, as AID support to the Secretariat is phased-out, member assessments and effective contributions will be increased to cover the full costs of the Secretariat.

## II. Project Background and Detailed Description

### A. Background

There is a direct correlation between the quantity and quality of education opportunities which are available in a country and the

level of economic development which that country has attained. A better educated populace means a better equipped labor force and, through it, more effective and efficient production. Improving and expanding the educational system, therefore, is a necessary, though not sufficient condition for a country to realize a self sustaining rate of economic growth and development, and provide its populace with higher standards of living. More specifically, the likelihood of a country achieving favorable rates of economic growth and development are enhanced if its populace has a high rate of "scientific literacy." This is evidenced by the fact that the application of the scientific method has provided the basis for all progress in the development of agricultural and industrial techniques which have led to significant improvements in the quality of life. Moreover, science and the application of the scientific method provides solutions to many practical problems which we confront daily. Yet, in most developing countries, the teaching of science, at all levels of education, has been far behind the proven methods of teaching science. This is particularly true in the relatively newly independent nations in Africa.

At the time of their independence, educational opportunities in these countries were available to only a very small proportion of urban residents. With the assistance of international donor agencies, these countries initiated programs which rapidly extended educational opportunities to outlying rural areas. Of necessity, facilities were meager and teachers were inadequately trained. Given the paucity of research from which indigenous education models could be developed, the curricula used in these programs were imported

from the more developed countries and had little relevance to local learning conditions or educational requirements. Consequently, teaching was reduced to the simplest instructional method - rote memory. Science education, when available, consisted of memorizing abstract scientific facts and principles, with little emphasis placed on understanding and application to everyday problems.

In the early 1960's a series of conferences of African and American educators and scientists, which began with the Endicott House Conference, was held to examine the needs and priorities for education in the tropical Anglophone countries of Africa. These conferences had evolved out of a recognition by these newly independent states of the need for a continuing review and change in the former colonial educational structures. It was part of a general realization of the need to be self-reliant, and an effort on the part of African leaders to pragmatically advance the fundamental importance of the African point of view, in every area, as perceived by Africans. The conclusion of these conferences was that, for education in Africa to be meaningful, the education models employed must be derived from experiences in and contents of African culture itself, not from foreign cultures. As the first steps in revamping education in Africa, the conferences identified two important subjects -- mathematics and science -- which should be radically transformed in content and teaching method. This highlighted the need for research to develop African education models and curricular materials for these subjects. Beginning in 1965, AID provided assistance in these efforts through grant funded

projects with the Educational Development Center (EDC) of Newton, Mass. EDC established a Pan-African science education program, the Africa Primary Science Program (APSP), to develop a science education curriculum that was responsive, relevant and flexible enough to meet the individual needs of the nine participating countries. These countries were: Ghana, Kenya, Liberia, Sierra Leone, Zambia, Gambia, Lesotho, Uganda and Nigeria. The focus of the program was at the primary school level because this was believed to be a more meaningful task which would provide greater potential for innovation, and because primary education was terminal for a high proportion of African children, particularly those children who lived in rural areas.

The major goals of APSP were (a) research and development of new ideas/programs in teaching science in primary schools, (b) production of materials for teacher training, (c) implementation of the program through manpower development, and (d) the eventual Africanization of the program and phasing out of external technical and financial support. During the first phase of AID assistance (1965-1970), a science education curriculum was developed. In addition, 52 prototype science units and six films of teacher training materials were developed for use in primary schools.

With continued AID support through EDC, APSP became the base for the establishment in 1970 of the Science Education Program for Africa (SEPA). This second phase of AID support to improving science education in Africa lasted from FY 1970 through FY 1975. The establishment of SEPA represented the partial fulfillment of the original goal that program administration would become a responsibility of the participating African nations. SEPA provided the needed African leadership in coordi-

nating and furthering science education in Africa. SEPA's organizational structure consists of (a) a Secretariat which is headquartered in Accra, Ghana, and which is administered by an Executive Secretary, two auxiliary staff members and (b) an Executive Committee and Representative Council which function as the main direct links between the Secretariat and the member states, and also between the member states themselves. In addition the Secretariat supports about ten project activities related to various areas of improving science education (e.g. projects in education evaluation, resident teacher training, in-country workshops, environmental science, concept formation, and out-of-school science education). The program is financially supported by membership dues of participating countries and grants of international donor agencies. (e.g. UNESCO, Carnegie Foundation, and UNICEF). Currently there are eight member countries: Ethiopia, Ghana, Kenya, Liberia, Nigeria, Sierra Leone, Uganda and Zambia. Associate member countries are Gambia and Lesotho. Recently SEPA has been supporting science education programs in five Francophone countries which are interested in becoming active members. These countries are Congo-Brazzaville, Ivory Coast, Mauritius, Senegal, and Togo.

The APSP/SEPA approach to teaching science is revolutionary, innovative, and promising. The program is a complete break from traditional science education, in which courses consist of scientific laws and endless facts, with no selection or system for practical use by the students. The traditional method of teaching these facts is by rote learning, with little or no attention given to purposeful meaning. APSP has developed and SEPA has refined a science curriculum by which students receive a systematic, sequential presentation of scientific concepts that relate to the daily problems which they face. The SEPA

method is to present this information through discovery/exploratory/ problem-solving techniques in which the students are mentally and physically active in seeking answers and improving their understanding of the world about them. Learning science via the SEPA approach will provide the students with a better understanding of science and improve their ability to influence their environment.

During this second phase of AID support, the basic curriculum and teacher training materials which were produced under the APSP - phase, have undergone considerable modification as they were tested and adapted to local needs. Several additional units have been developed or are in the process of being developed. For example, a SEPA Handbook has recently been completed, which fills a communication gap regarding the SEPA approach to science education, which existed between the ministry/ university level and the teacher in the classroom. A sourcebook on teacher training is expected to be completed in April, 1976. The curriculum materials have been developed and tested in thirty schools throughout five test countries. These materials are the prototype for science education materials currently being produced by the Ministries of Education in Ghana, Kenya and Sierra Leone. By June 1976, the materials which have been completed should be in final tested form and be ready for wider dissemination. Also during this phase (beginning in 1973) SEPA has begun to develop and conduct programs of training the core manpower necessary to implement its curriculum on a wider scale. This is being done through workshops, university-based pilot programs (e.g. a Resident Training program in Sierra Leone and an Evaluation Project in Nigeria), and by encouraging the establishment of local teacher centers. To date SEPA has trained about 26

teacher trainers and evaluators in these pilot programs. These trainers/educators have represented all of the member states.

The second phase of AID assistance represented a transition from a greater focus on curriculum and materials development to program implementation and dissemination. In FY 75 AID provided a grant directly supporting the SEPA Secretariat, as a pilot attempt at direct funding. This grant was concurrent with AID/EDC support to specific SEPA projects. Whereas the establishment of SEPA was viewed as the first step in turning program administration over to the African states, a direct AID grant was yet another step in this process of Africanization. In late CY 1975, AID provided for an external evaluation of its support to SEPA since 1973.\* The evaluation concluded that:

"...SEPA is one of the most successful enterprises of its kind. Similar attempts in other areas have not succeeded in achieving the level of support, prestige or effectiveness that presently characterizes SEPA. With full recognition that is not in the business of producing a, 'continental science curriculum', it has encouraged innovative and local adoption while at the same time enhancing the role of the ministries, as well as that of classroom teachers. SEPA has also demonstrated its ability to recognize new directions in which it may assume leadership (e.g. a concept formation

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\*Benjamin, T. and Koran, J. "End of Project Review - SEPA/EDC/APSP", November 1975. An earlier review was undertaken by the American Institute for Research, "The African Primary Science and African Mathematics Programs: Evaluation and Recommendations", 1973.

and evaluation project, environmental projects, etc.).

SEPA merits support particularly for new activities from as many sources as possible...."

The project proposed herein, the third phase of AID support, will support the SEPA Secretariat and three project activities, two of which are extensions of on-going activities -- the Resident Training and Teacher Training Materials Development activities, and one of which is a new activity -- science education for out-of-school youths. AID assistance provided hereunder will be in the form of a direct development grant to SEPA and, therefore, represents the third significant step towards total Africanization of SEPA. The last AID evaluation report recommended, and SEPA agreed, that external assistance to the Secretariat be phased out over the next 2 years (FY 1977-78), to be replaced by increasing contributions from its member states. The report made several additional recommendations which have been incorporated into the project design which is discussed below.

B. Detailed Description

The goal of the project is to provide the populations of select African countries with a more relevant basic education in science. The project proposed herein will significantly contribute to the realization of this goal, as it proposes to improve the capabilities of these countries, through their membership in or association with SEPA, to design, implement and evaluate science education programs that are more relevant in the African context.

In view of SEPA's past performance while working with EDC, and given the need for continued external assistance as it moves further into the implementation dissemination phase of the program, this

project will provide direct AID grant support in the amount of \$360,000 over the FY 76-78 period to four key activities. They are: (a) improving SEPA administration and organization, (b) institutionalizing the Resident Training course, (c) continuing the development of teacher training materials, and (d) extending the SEPA methodology to out-of-school youths. For the most part, this project represents support of continuing activities -- i.e. (a) - (c) above, and, in that respect, is not a "new" project. The novelty of this project is in providing support to all of these activities through a direct grant to SEPA, rather than through an intermediary such as EDC. The original goal of APSP/SEPA was to develop an African capability to design and implement on a wide scale, projects to improve science education. With past AID assistance, such a capability has been developed in SEPA. Basic prototype student and teacher training materials and pilot teacher training programs have been designed, tested, and are being refined. As they are refined, SEPA will implement its program on a much wider basis.

1. Secretariat - The Secretariat is headquartered in Accra, Ghana and consists of an Executive Secretary, a Representative Council, an Executive Committee, and its administrative staff. The Executive Secretary presently serves as the administrator, manager and program developer/coordinator. The Representative Council consists of two representatives from each of the eight member countries, with five countries holding associate membership. The two members per country consists of a Ministry of Education representative and a curriculum development specialist.

The Council meets every other year to determine priority activities. From this council, six persons are nominated and elected to function as the Executive Committee. This committee meets annually and includes two persons each from West, East, and South/Central Africa.

Currently, financial accounting for SEPA is contracted to Cape Coast University, which is located in Cape Coast, Ghana, about 75 miles from SEPA. This office manages the entire SEPA budget. A part-time bookkeeper and members of the stenographic staff at the Secretariat are responsible for the AID/SEPA/EDC accounts.

Much of SEPA's success has been due to the unique qualities that the present Executive Secretary, Dr. Hubert Dyasi, possesses. As of January, 1976, he will be on a six-month leave of absence. In order to assure continued success during this period and, indeed, over the longer run, the AID evaluation team made several recommendations for reorganizing the Secretariat to increase its efficiency and effectiveness. The recommendations have been reviewed by SEPA and it is currently seeking external assistance and increased membership contributions to implement these recommendations.\* They include: (a) dividing the position of Executive Secretary into two positions in which the Executive Secretary would assume administrative and fiscal responsibility (e.g. public relations to member countries), while a Program Specialist would assume program development and management responsibility; (b) establishing three additional positions for Regional Project Coordinators who would be responsible for decentralized project coordination in East, West

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\*More detailed information on financing of SEPA is provided in the Financial Analysis section.

and Central/South Africa; (c) centralizing the accounts Section in Accra; and (a) providing the staff at the Secretariat and project centers with a constant source of up-to-date U.S. literature in science education, enabling the staff to keep abreast of latest developments in the teaching of science.

AID support to the Secretariat in the amount of \$105,602 will enable SEPA to improve the efficiency and effectiveness of its Secretariat by supporting the establishment of a new position of Program Specialist, by supporting the establishment of an Accounts Section, and by providing a source of U.S. periodicals and other professional literature on science education. More specifically, this project will provide funds over the FY 76-78 period for: (a) support for the salary, housing and travel costs of the Executive Secretary (\$28,437, \$7,875 and \$5,666 respectively) and the Program Specialist (\$35,999, \$10,125, and \$16,000, respectively); (b) and other costs, including subscriptions to professional journals and commodities (safe and calculator) for Accounts Section (\$1,500, (c) support costs for the August 1976 Representative Council Meeting and Council follow-up activities in 1977 (\$26,770).

2. Resident Training Program - The purpose of this activity is to provide a minimum critical mass of manpower trained in the SEPA methodology/materials, who could significantly influence local science education curricula. The program began with a training workshop held at the Secretariat in Accra between April-October, 1972. This workshop trained six participants from three countries (Kenya, Liberia and Ghana). A review of the workshop concluded that a survey of other member countries should be made to assess the needs for continuing such a program, and that if warranted, the program

should be institutionalized within one or several participating countries (Gambia, Zambia, Ghana, Kenya, Liberia and Sierra Leone)\*. It revealed that, in spite of the fact that APSP/SEPA materials had been available for modification, adoption and implementation in these countries, these efforts were hampered by the shortage of trained manpower (curriculum developers, teacher educators and in-service organizers). As a result, SEPA initiated a pilot training course in January-September, 1975 at the Njala campus of the University of Sierra Leone. This first pilot course involved nine participants from eight member countries. Staffing for the program consists of one full-time and three part-time science educators. Two of the latter have been volunteers. Occasionally, the staff has been supplemented by local consultants, partially provided by the British Council and the Government of Sierra Leone.

To date, a total of 24 students have been trained and have been posted to positions in their home countries as teacher trainers. Projections for a minimum cadre of appropriately trained manpower necessary to significantly influence program implementation indicate that each country would require at least one trained individual at its local Curriculum Development Center, one in each of its Teacher Centers, and one in each of the Teacher Training Colleges. As indicated in Table I, this would imply a minimum of 168 science teachers, evaluators and curriculum developers trained through the program.

Towards the end of the first pilot program at the University of Sierra Leone, SEPA invited a panel of educators to review the program

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\* These are the countries in which the original APSP materials were tested.

and made recommendations for its future development. In addition, the program was reviewed by the AID evaluation team in late CY 1975. These reviews concluded that it is only now that African countries are beginning to move towards universal primary education, and that, therefore, this is the appropriate time to enlarge the program to meet the needs of these countries. Recommendations for improving the program included: (a) establishment of an inter-African Center for Science Education (ICSE) at the University of Sierra Leone for training and research in curriculum development/implementation; (b) establishment of a consultancy fund at the Secretariat to fund supplementary staff to give the program an international perspective; (c) establishment of additional staff positions; and (d) if funds are available for increasing the staff, increase the number of participants per course to 15-20 and concentrate the course into a shorter period, e.g. six months, with a view toward reducing per student costs.

These recommendations have been reviewed by SEPA and the University of Sierra Leone, and SEPA is currently seeking external support to improve this activity. This project will provide support to the program during the FY 77-78 period, including: (a) the director's salary (including 17 percent fringe benefits), housing and travel (\$ 30,126, \$10,125, and \$6,500 respectively), and (b) participant costs and travel (\$88,600 for a minimum of 10 participants for nine months).

Continuation of this program will produce graduates who have experienced the integration of content and methodology of the SEPA approach, and have learned how to effectively employ these in a teaching, learning situation. These graduates will be available to fill the critical need for trained manpower to man the curriculum

TABLE I

Institutions Needing Science Education Manpower Inputs:\*

Country	Minimum Manpower Requirements:		
	Curriculum Development Centers	Teacher Centers	Teacher Training Colleges
The Gambia	1	-	1
Ghana	1	34	40
Kenya	1	25	17
Liberia	1	1	2
Lesotho	1	1	1
Sierra Leone	1	4	5
Uganda	1	-	20
Zambia	1	-	9
<b>Total</b>	<b>8</b>	<b>65</b>	<b>95</b>

\* These are the results of a survey undertaken by the Program Director, Resident Training Program, in late CY 1974. As a minimum, the program seeks to train (at least) the manpower required to staff the Teacher Training Colleges in member countries. The number of trained people needed to man each institution varied according to the level of activity of the center.

Development Centers, the Teacher Centers and the Teacher Training Colleges in their home countries.

3. Teacher Training Materials Development - The purpose of this continuing activity is to develop and improve prototype science teacher education materials, such as handbooks, sourcebooks, monographs, readers, background booklets and teaching charts, and furnish these materials to SEPA member countries for implementation of their science curricula. In this activity science education professionals participate in three two=  
in-country  
week/workshops per year in which they produce or refine these materials.

Under this activity SEPA has recently completed the development of its "Science Education Handbook" and will complete its "Teacher Training Guide" in April, 1976. These publications are crucial to fostering an understanding of the philosophy, psychology, rationale and content of the SEPA program. Both are of very high quality. They utilize the original 52 APSP teacher training units and extensions of them as ex=  
amples within the texts, in a manner which reflects the integration of new points of view which emerge as practitioners and leaders in sci=  
ence education work together and questions existing materials/methodologies.

During the latter half of FY 1976, SEPA will distribute these publi=  
cations in limited quantities to member countries, who will incorporate them into their Teacher Centers and Teacher Training Colleges. The handbook in a bound form. Preliminary editions of the Handbook have been distributed on a trial basis and have undergone some refining. As the handbook and sourcebook are distributed, both should be of signifi=  
cant value to member countries.

The November 1975 evaluation recommended that AID support to this activity be continued. Other materials (e.g. teaching charts) are currently being developed and will be completed during FY 77-78 period. In addition, efforts are under way to initiate further research in

teacher training materials development, to increase instructional effectiveness of workshops on localizing these materials. This project will provide full support of this program, including: (a) salary and travel costs of the program director (\$4,290 and \$2,400 respectively); (b) subsistence and travel for four resource staff members (\$10,832); and (c) other costs, including printing, mailing, office supplies and equipment (\$4,350).

Support of this activity would result in further adaptation and use of SEPA materials in several teacher centers and training colleges; specialist writing on a variety of topics for inclusion in the bibliography of SEPA materials; and production of five textile-base charts per year on science topics, to be used as instructional aids.

4. Out-of-School Program - This is a new activity which will begin in FY 1976. The purpose is to develop programs and materials which will enable young people (ages 8-18) in rural communities to be familiar with the problems of living in their environments and be equipped with relevant cognitive and effective attributes for identifying and solving environmental problems related to health, agriculture, resource conservation. Through this activity, educational facilities in member countries will be extended to out-of-school youths, and strategies for developing a constructive environmental awareness will be evolved.

Recognizing that the population of children who can be reached through formal school programs is relatively small, most SEPA member countries have instituted a variety of out-of-school programs. Most of these programs provide for youth centers, voluntary service, physical education and sports activity. Very few out-of-school programs focus on improving the understanding of these youths of their environment and providing them with tools to solve environmental problems. SEPA member countries have been seeking means by which the SEPA

approach to relevant science education could be extended to out-of-school youths in rural areas. They have decided that this could best be accomplished through an environment-based science education program which applied the SEPA method of teaching science to basic health, resource conservation and agricultural education.

In July, 1976, SEPA will hold a planning meeting involving about 13-15 science education specialists to examine the status of existing programs designed to reach out-of-school youths in member countries, and to develop preliminary plans for a SEPA program to improve the environmental awareness of these youths. This meeting will also develop a program of action for exploratory activities in several localities, prepare a comprehensive list of issues which require further planning action, identify about 10 suitable participants and select/prepare orientation documents for a materials development and a writer's workshop to be held in FY 1977 and FY 78 respectively. The purposes of these workshops will be to prepare appropriate prototype student/teacher training materials for eventual use in out-of-school science education activities and recommendations to member countries regarding program implementation. The materials development workshop will be held for three weeks. The writers workshop will be held in three two-week sessions during FY 78.

AID assistance in this project will provide full support for this activity, including travel, allowances and administrative support for the July, 1976 planning workshop (\$18,650), the FY 1977 materials development workshop (\$21,900), the FY 1978 writers workshop (\$24,240 and the director's salary and travel expenses (\$5,340).

### III. Project Analyses

#### A. Technical Analysis

There is sufficient evidence to indicate that SEPA has developed the professional and administrative capability to implement the activities of this project. Three of the four activities proposed herein are continuing activities in which SEPA has been successful. The fourth activity, which is the out-of-school program, will consist of planning and developing an out-of-school environmental science program. SEPA's past experience in planning, organizing, implementing and evaluating a variety of science education workshops, seminars and conferences on educational curricula equips it with the necessary skills to implement this activity successfully.

The technologies required to implement the project (training and materials development) will be adapted to the local situations which prevail in member countries. They will not have any negative implications for employment. The general SEPA approach to science education, however, should have favorable environmental impacts by encouraging the development of environmental awareness and an understanding of problems related to resource conservation.

#### B. Environmental Impact

This project will not have any negative environmental impact, as SEPA's activities are limited to training and materials and curricula development. The project should have a significant long-run, indirect, positive impact on the environment to the extent that SEPA's projects, particularly the out-of-school environment-based science education project, will encourage the development of an environmental awareness by providing basic environmental science education in agriculture, health and resource conservation.

C. Financial Analysis and Plan

1. Recurrent Budget and Analysis

a. Secretariat

Since 1973 the Secretariat has been supported from AID through EDC, and by contributions of member Associate member countries (Gambia and Lesotho) and contributions to the Secretariat, but some do pay the participants in international meetings and workshops. As part of its original objective of Africanization of program administration and support, SEPA has stressed increased member contributions to the Secretariat. Member financial support to the Secretariat has been growing significantly, even though some countries have been delinquent in paying their assessments. At the Executive Committee meeting held in January, 1976 four countries were reported to be in arrears: Ethiopia (three years), Ghana (one year), Sierra Leone (two years) and Uganda (one year). Representatives of these countries assured the committee that appropriate steps were being taken to resolve the problems of late payments and of their assessments. The matter of arrears will be brought before the August 1976 meeting of the Representative Council to determine a permanent solution.

In FY 1974 member assessments represented 29 percent of the secretariat costs. This increased to 51 percent in FY 1975, and is expected to reach 82 percent by FY 1977 and 100 percent by FY 1979 as AID direct support to the Secretariat (provided under this project) is phased-out. As an illustration of the assessed levels of country support to the Secretariat, the following are the FY 1975 country assessments which were voted by the Representative Council:

Ethiopia	\$ 1,200
Ghana	6,200
Kenya	10,300
Liberia	8,000
Nigeria	5,500
Sierra Leone	5,000
Uganda	8,400
Zambia	13,500

Seven additional countries have expressed interest in becoming permanent members of SEPA, although there is yet no indication as to when they will become such. These are: Gambia and Lesotho, which currently are associate members; and the Francophone countries of Congo-Brazzaville, Ivory Coast, Mauritius, Senegal, and Togo. Tanzania participates as an observer country and has no interest now in becoming a member.

As the member countries become more committed to the SEPA approach to improving science education in Africa, as SEPA's membership (potentially) expands, and as external support to the Secretariat is phased out, SEPA should be able to provide 100 percent of the secretariat costs by FY 1979.

b. Program Activities

SEPA has demonstrated its administrative effectiveness by its motivation to seek and its success at obtaining and properly managing external support. Currently, SEPA is implementing nine science education programs which are or have been supported by member countries and seven international organizations: The British Council, the Carnegie Foundation, the Ford Foundation, Mobil Oil Corporation,

UNESCO, UNICEF, and USAID. SEPA is currently seeking continued support from these organizations and from other potential donors. To increase the effectiveness of the Secretariat in obtaining external assistance, the AID evaluation team recommended that the position of Executive Secretary be divided into two positions: The Executive Secretary, who would assume administrative and fiscal responsibility and a Program Specialist, who would assume program development and management responsibility. AID is providing support in this project to implement this recommendation. Given its past performance and the pending administrative reorganization, SEPA should continue to be successful in obtaining the external financial support required to implement its program activities.

## 2. Project Financial Plan

This project will provide an AID grant to SEPA in the amount of \$360,000 to support four SEPA activities over the FY 1976-78 period: the Secretariat, Resident Training Course, Teacher Training Materials Development, and Out-of-School Program. The AID evaluation team recommended that AID support to the Secretariat be phased-out as the contributions of the member countries are increased. Table II presents the detailed financial plan for the project and incorporate this recommendation.

## D. Social Analysis

### 1. Scio-Cultural Feasibility

At the current and projected level of SEPA activity, which is that of curricula development and manpower training, there is no significant indication of social resistance. This is illustrated by the fact that three of the four activities supported by this

project are continuing activities which enjoy the endorsement by the governments of member countries. There may, however, be some social inertia to SEPA's innovative methods of teaching science as the new curricula are used on a wide scale in teaching primary and out-of-school youths.

The need for a relevant African science education program emerges from a historical paradox, i.e. a basically rural population has been receiving an urban education. As a result, the present problem is that Africans in general tend to have a preference for an urban/westernized education. Given this preference, a more relevant science program would have to change African values, motivations and parental resistance to educational reform. SEPA addresses this issue by providing member countries with the capacity to localize their curricula, thereby increasing the probability of local acceptance.

A related issue deals with the procedure used to localize the curricula. The traditional method of selecting a country representative to participate in a Pan-African program, such as SEPA, is to choose the brightest and best prepared student/professional among those eligible. This selection process embodies an urban/westernized bias in that such a person will most likely come from an urban area and will have received a western education. Yet, this individual will be involved in the preparation of curricula for a basically rural population. The bias can be partially offset by requiring an appropriate number of the participants to have an appreciation of the local/rural perspective. This would tend to increase the relevancy of the curricula and increase the likelihood of local acceptance.

## 2. The Spread Effect

As an education activity, the spread effect of this project is inherently institutionalized through the school systems. The purpose of the project is to help SEPA to provide each member country with a cadre of trained science educators, evaluators and curriculum specialists to design, implement and evaluate more relevant science education programs. Each member country will utilize this new manpower in their teacher training and curriculum development centers to sensitize teachers in the SEPA methodology and to localize the SEPA prototype curriculum. The ultimate beneficiary (i.e. primary age students and out-of-school youths) will be reached as the SEPA philosophy permeates the educational institutions throughout member countries.

There are three groups of beneficiaries of this project. The initial beneficiary is SEPA in that it will continue to develop and expand its capacity to train educators and evaluators from member countries. The intermediate beneficiary will be the member countries who will receive a cadre of trained science educators, evaluators and curriculum specialists. The ultimate beneficiary will be the primary school age and out-of-school youths who are studying under the new curricula.

## 3. The Role of Women

The role of women in the SEPA project is dependent on the policy's and human resources of member countries. Women participate in the SEPA program to the extent that qualified women are available and selected by members countries to be trained as evaluators, curriculum specialist and science educators. The present SEPA policy makes no special effort to insure the

participation of women. While it is impracticable and improbable for SEPA to place sexual quotas on its members, it should be conscious of the extent of male and female participation and should take appropriate steps to encourage female participation where there is obvious disproportionate male participation.

A second area in which there is no specific female consideration in SEPA policy is in the area of curriculum development. There are no indications of the degree to which environmental science will apply to the particular situation of African women. This, too, should be addressed by SEPA through a higher level of consciousness and commitment.

#### E. Economic Analysis

This is a non-revenue producing project and, as such, does not lend itself to structured economic analysis. However, it can be demonstrated that it represents the best alternative, in terms of cost-effectiveness, among others considered.

The project will provide assistance to several African countries, through their membership in or association with\* a Pan-African organization, to improve their capabilities to design, implement and evaluate science education programs. A major concern in this endeavor is supporting the development of "African solutions to African problems" in science education. Alternatives for accomplishing these objectives are to provide: (1) bilateral support for science education projects; (2) support to a U.S. (science) education organization to extend (a) bilateral support to select African countries or (b) general support to a Pan-African (science) education organization; and (3) direct support to a Pan-African (science) education organization.

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\* Several countries contribute to and/or participate in SEPA programs, although they do not hold membership (e.g. Gambia and Lesotho).

If an overall objective of the project is to encourage the development of "African solutions to African problems", the first alternative would further extend this thought process so as to encourage the development of "a country's solutions to its problems", recognizing the vast socio-economic differences which exist between many neighboring countries. This could be accomplished through an AFR/Regional "umbrella" project such as the Women in Development Project. However, given continued favorable developments toward Pan-Africanism, this approach would not be the best cost alternative. Each country would, on the average, receive only a small proportion of total assistance, and would not be able to realize as significant returns to country specialization as may be realized in other problem areas in which a country-specific approach is encouraged (e.g. women in development). Such an approach would be a feasible cost alternative only if these countries were unable or unwilling to transcend nationalistic concerns and support a Pan-African effort to improve science education.

For the same reasons, providing bilateral support through a U.S. organization (part (a) of the second alternative) would not be an appropriate alternative. Previous AID assistance in improving science education was provided through a U.S. educational organization (EDC) which was contracted to develop a Pan-African program (APSP later to become SEPA). This was the most cost-effective approach only until an African capability in science education was developed. An evaluation of past AID support revealed that SEPA has demonstrated its ability to handle administrative and program matters and is

capable of receiving direct AID support. Thus, the third alternative becomes the most cost-effective approach. It will reduce the need to finance the high overhead costs of a U.S. intermediary and will significantly increase the benefits of the project by supporting a concerted effort by several countries to develop appropriate and flexible solutions to the problems they share.

#### IV. Implementation Planning

##### A. Administrative Arrangements

###### 1. Recipient

SEPA is the grantee and has overall management responsibility for the implementation of project activities. A Grant Agreement with SEPA will describe the responsibilities of the organization regarding four activities:

a. The administrative and professional staff of SEPA, consisting of the Executive Secretary, the Assistant Program Officer, the fiscal officer and clerk typist, will be responsible for implementing the portion of the grant agreement that deals with headquarters support.

b. SEPA will also organize the Teacher Training Materials Development activity, supervise and monitor progress, provide professional expertise, evaluate progress, manage and implement fiscal matters according to the grant agreement conditions.

c. SEPA will control the funds, plan, implement and evaluate the Resident Training Program activity.

d. Administration of the budget for the Out-of-School Science Program will be the responsibility of SEPA. The organization will also provide the professional guidance to member countries in the

planning of the sub-activities that are to be carried out in various African communities.

SEPA's demonstrated capacity to implement on-going A.I.D. and other donor supported activities has been adequate.

2. A.I.D.

AFR/RA will represent A.I.D. in the management of this project. This will be done by requiring the implementing agency to submit periodic and special reports, and periodic visits by AFR/RA personnel to activity sites. A.I.D. disbursements methods will be described in the grant agreement to SEPA. The Controller, USAID/Ghana, will provide assistance in providing project disbursements to SEPA.

B. Implementation Plan

<u>Activity</u>	1975/76	<u>1977</u>	<u>1978</u>
PID Approved	8/75		
Info for project design submitted	9/75		
Project evaluation begins	11/3/75		
Project evaluation completed	11/26/75		
Evaluation Report Submitted	12/12/75		
Project Paper Prepared - Draft	1/20/76		
Project Paper Elements Discussed SEPA	1/29/76		
Project Paper Revised	3/16/76		
Project Paper Reviewed Project Committee	3/22/76		
Project Paper Approved	5/76		
PIO/T Prepared/Approved	5/76		
Grant Prepared/Approved AID/W	5/76		
USAID/Accra agree to draw-down procedure	6/76		
Grant Approval SEPA - Funds obligated	6/76		

RESIDENT TRAINING COURSE

Extend invitations to participating governments to send participants (9 mo. process)		1/77	1/78
Course begins		10/76	10/77
Course ends		6/77	6/78
Certificates awarded by University		7/77	7/78

<u>Activity</u>	<u>1975/76</u>	<u>1977</u>	<u>1978</u>
<u>TEACHER TRAINING MATERIALS DEVELOPMENT</u>			
<u>(2 week workshops)</u>			
Workshop Begins		4/77	4/78
Workshop Ends		4/77	4/78
Workshop Begins	7/76	7/77	7/78
Workshop Ends	7/76	7/77	7/78
Workshop Begins	12/76	12/77	
Workshop Ends	12/76	12/77	
<u>OUT OF SCHOOL PROJECT</u>			
Planning meeting to produce prototype materials and program design (2 weeks)	7/76	-	-
Materials Develop. Workshop begins (3 weeks)	-	10/77	-
Materials Devel. Workshop ends	-	10/77	-
Writers Workshop (2 weeks)			
Begin			7/78
End			7/78
Begin			10/78
End			10/78
Begin			1/79
End			1/79
EVALUATION	CONTINUOUS		

C. Evaluation Plan

Continuing evaluation will be built into the project.

Over the initial three year funding period of the SEPA organization, evaluation will be performed routinely by AID/W in conjunction with USAID/Ghana and SEPA according to the PPT schedule. In addition, the grantee will be required to submit semi-annual progress reports to AID/W and annual appraisal reports will be prepared by AID/W, reflecting grantee performance. Periodic visits will also be made to project sites to review project operations.

D. Conditions, Covenants and negotiating Status

1. Funding to cover the four activities mentioned herein will be provided based on the following:

a. \$66,000 will be provided in FY 1976.

b. Three months of funding (October thru December 1976) will be provided in FY 1977 with the stipulation that additional funding will only be provided when member countries have paid at least one half of the total assessments they are in arrears.

2. A provision will be inserted in the Grant Agreement which indicates agreement between AID and SEPA on a schedule for phase out by October 1978 of direct AID assistance for core costs of the Secretariat. Such costs after that time, are expected to be provided by SEPA members and/or other donors.

ANNEX A

PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

Life of Project: 76 to FY 78  
From FY 76 to FY 78  
Total U.S. Funding \_\_\_\_\_  
Date Prepared: \_\_\_\_\_

Project Title & Number: Africa Science Education - 698-0390

(INSTRUCTION: THIS IS AN OPTIONAL FORM WHICH CAN BE USED AS AN AID TO ORGANIZING DATA FOR THE PAR REPORT. IT NEED NOT BE RETAINED OR SUBMITTED.)

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Program or Sector Goal: The broader objective to which this project contributes: (A-1)</p> <p>To provide the populations of select African countries with a more relevant basic education in science.</p>	<p>Measures of Goal Achievement: (A-2)</p> <p>Increasing proportions of the school age populations in these countries are being exposed to more relevant programs in exploratory science education.</p>	<p>(A-3)</p> <p>Reports of Ministries of Education on number and enrollments of schools in which improved science curricula have been instituted.</p>	<p>Assumptions for achieving goal targets: (A-4)</p> <p>Improving basic science education remains a priority of African states and international donor organizations, and that communities accept more relevant curricula.</p>

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PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

Life of Project: \_\_\_\_\_  
From FY 76 to FY 78  
Total U.S. Funding \_\_\_\_\_  
Date Prepared \_\_\_\_\_

Project Title & Number: Africa Science Education - 698-0390

PAGE 2

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Project Purpose: (B-1)</p> <p>To improve the capabilities of select African countries, through their membership in or association with the Science Education Program for Africa (SEPA), to design, implement and evaluate science education programs that are more relevant to the African context.</p>	<p>Conditions that will indicate purpose has been achieved: End-of-Project status. (B-2)</p> <p>With the assistance of SEPA, (member and associate) states are planning and conducting relevant science education programs which range from the development of appropriate curricula and training materials, to the training of science teachers, students, and evaluators.</p>	<p>(B-3)</p> <ol style="list-style-type: none"> <li>SEPA progress reports.</li> <li>Records of the MOE in participating countries on the number of trained science education teachers, teacher trainers, evaluators, and curriculum specialists.</li> </ol>	<p>Assumptions for achieving purpose: (B-4)</p> <ol style="list-style-type: none"> <li>African states will continue to utilize the Pan-African forum, SEPA, to develop appropriate approaches to science education.</li> <li>Trained science educators/evaluators and improved curriculum materials are meaningfully employed in country Curriculum Development Centers and Teacher Training Colleges.</li> </ol>

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**PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK**

Life of Project:  
From FY 76 to FY 78  
Total U. S. Funding \_\_\_\_\_  
Date Prepared: \_\_\_\_\_

Project Title & Number: Africa Science Education - 698-0390

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Project Outputs: (C-1)</p> <ul style="list-style-type: none"> <li>- Establishment of a source of up-to-date reference literature in science education at the Secretariat.</li> <li>- Improved administrative capacity within the Secretariat.</li> <li>- Improved security and efficiency of SEPA accounting operations.</li> <li>- Training of science educators, evaluators and curriculum development specialists.</li> <li>- Continued development of teacher training materials.</li> <li>- Development of a training program and prototype training materials for out-of-school youths (ages 8-18), for developing a constructive environmental awareness.</li> </ul>	<p>Magnitude of Outputs: (C-2)</p> <ul style="list-style-type: none"> <li>- Subscriptions to professional science ed. journals/publications.</li> <li>- Additional staff member (program specialist) assuming full responsibility for program development and management.</li> <li>- At least 20 trained science education participants.</li> </ul>	<p>(C-3)</p> <ol style="list-style-type: none"> <li>1. SEPA reports.</li> <li>2. Inspection of project activities.</li> </ol>	<p>Assumptions for achieving outputs: (C-4)</p> <ol style="list-style-type: none"> <li>1. SEPA will maintain budget continuity.</li> <li>2. SEPA will recruit, select and train qualified personnel.</li> </ol>

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PROJECT DESIGN SUMMARY  
LOGICAL FRAMEWORK

Life of Project: 76 to FY 78  
From FY 76 to FY 78  
Total U.S. Funding \_\_\_\_\_  
Date Prepared: \_\_\_\_\_

Project Title & Number: Africa Science Education 698-039C

PAGE 4

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Project Inputs: (D-1) <u>Obligation: AID Grant for \$360,000 to SEPA</u>  (See Financial Plan)</p>	<p>Implementation Target (Type and Quantity) (D-2)  Expenditures: FY 76 - \$ 66,000 FY 77 - \$150,560 FY 78 - \$143,165</p>	<p>(D-3)  Signed AID Grant Agreement</p>	<p>Assumptions for providing inputs: (D-4)  AID fund and membership contributions will be provided on a timely basis.</p>

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FINANCIAL DATA  
BUDGET - OBLIGATIONS  
(\$000)

<u>Fiscal Year</u>	<u>Amount of Obligation</u>	<u>Period of Expenditure</u>
1976	66	7/1/76 - 10/15/76
1977	150	10/16/76 - 10/15/77
1978	<u>144</u>	10/16/77 - 10/15/78
	360	

TABLE II-A

FINANCIAL DATA  
BUDGET - ESTIMATED EXPENDITURES

ACTIVITY	7/1/76 - 10/15/76		10/16/76 - 10/15/77		10/16/77 - 10/15/78			TOTAL AID FUNDING ALL YEARS
	AID FUNDED	AID FUNDED	SEPA * FUNDED	TOTAL	AID FUNDED	SEPA * FUNDED	TOTAL	
<b>Secretariat</b>	<u>16,977</u>	<u>50,750</u>	-	<u>50,750</u>	<u>37,875</u>	-	<u>37,875</u>	<u>105,602</u>
Executive Secretary								
Salary & Fringes	4,062	16,250	-	16,250	8,125	8,125	16,250	
Housing	1,125	4,500	-	4,500	2,250	2,250	4,500	
Travel	666	3,000	8,000	11,000	2,000	10,000	12,000	
Program Specialist								
Salary & Fringes	3,999	16,000	-	16,000	16,000	-	16,000	
Housing	1,125	4,500	-	4,500	4,500	-	4,500	
Travel & Moving Costs	5,000	6,000	-	6,000	5,000	-	5,000	
Other Secretariat Salaries								
Office Manager	-	-	2,850	2,850	-	3,000	3,000	
Accountant	-	-	4,950	4,950	-	5,000	5,000	
Typist	-	-	2,000	2,000	-	2,200	2,200	
Maintenance Staff	-	-	1,000	1,000	-	1,000	1,000	
Secretarial Staff	-	-	2,200	2,200	-	2,200	2,200	
Other Costs (including rent, utilities, office supplies & equipment, translation, prof. literature, etc.)	1,000	500	15,550	16,050	-	18,050	18,050	
<b>Representative Council Meeting</b>	<u>24,000</u>	<u>2,770</u>	-	<u>2,770</u>	-	-	-	<u>26,770</u>
International & local travel, per diem & office services of 26 representatives for 7 days								
<b>Teacher Training Materials Develop.</b>	<u>1,532</u>	<u>10,170</u>	-	<u>10,170</u>	<u>10,170</u>	-	<u>10,170</u>	<u>21,872</u>
Director's salary - \$65d X 28d.	650	1,820	-	1,820	1,820	-	1,820	
Travel	-	1,200	-	1,200	1,200	-	1,200	

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TABLE II-A

FINANCIAL DATA  
BUDGET - ESTIMATED EXPENDITURES

ACTIVITY	7/1/76 - 10/15/76		10/16/76 - 10/15/77		10/16/77 - 10/15/78			TOTAL AID FUNDING ALL YEARS
	AID FUNDED		AID FUNDED	SEPA * FUNDED	TOTAL	AID FUNDED	SEPA * FUNDED	
<b><u>Teacher Training Materials</u></b>								
<b><u>Develop. Cont'd</u></b>								
Writers Workshop (3 per year) staff four travel & per diem for 21 da.	632*	5,100	-	-	5,100	5,100	-	5,100
Other Costs, including printing mailing, office expenses, etc.	250	2,050	-	-	2,050	2,050	-	2,050
<b><u>Resident Training Course</u></b>	<u>4,841</u>	<u>64,970</u>			<u>64,970</u>	<u>65,540</u>		<u>65,540</u>
Director's salary & fringes	3,216	12,870	-	-	12,870	14,040	-	14,040
Housing	1,125	4,500	-	-	4,500	4,500	-	4,500
Travel	500	3,000	-	-	3,000	3,000	-	3,000
<b>Participant Expenses</b>								
Travel 10 X \$750	-	7,500	-	-	7,500	7,500	-	7,500
Accommodations 10 X \$10 X 270da.	-	27,000	-	-	27,000	27,000	-	27,000
Other Costs, including materials, books, university fees, etc.	-	10,100	-	-	10,100	9,500	-	9,500
<b><u>Out of School Program</u></b>	<u>18,650</u>	<u>21,900</u>			<u>21,900</u>	<u>29,580</u>		<u>29,580</u>
Planning Meeting, including travel & per diem for 15 participants	17,250	-	-	-	-	-	-	-
Other Costs, including secretarial services, meeting rooms, & supplies and equipment	1,400	-	-	-	-	-	-	-
Director's Salary	-	-	-	-	-	2,340	-	2,340
Travel	-	-	-	-	-	3,000	-	3,000

\* One workshop for the period.

TABLE II-A

FINANCIAL DATA  
BUDGET - ESTIMATED EXPENDITURES

ACTIVITY	<u>7/1/76 - 10/15/76</u>		<u>10/16/76 - 10/15/77</u>		<u>10/16/77 - 10/15/78</u>			TOTAL AID FUNDING ALL YEARS
	AID FUNDED	AID FUNDED	SEPA * FUNDED	TOTAL	AID FUNDED	SEPA * FUNDED	TOTAL	
<u>Out of School Program Cont'd</u>								
Materials Develop. Workshop								
Travel for 10 participants	-	7,500	-	7,500	-	-	-	
Accommodations	-	7,250	-	7,250	-	-	-	
Other Costs, including printing, mailing, materials & supplies	-	7,150	-	7,150	-	-	-	
Writers Workshops (3)								
Staff (6) - travel & subsistence	-	-	-	-	22,140	-	22,140	
Other Costs, including printing and mailing	-	-	-	-	2,100	-	2,100	
Totals	66,000	150,560	36,550	187,110	143,165	51,825	194,990	359,725

\* From member country yearly contributions as follows:

Ethiopia	1,200
Ghana	6,200
Kenya	10,300
Liberia	8,000
Nigeria	5,500
Sierra Leone	5,000
Uganda	8,400
Zambia	13,500

(Rounded) 360,000



PPT Form  
(May be Expanded as Appropriate)

	Country: Afr. Reg.	Project No: 698-0390	Project Title: African Science Education												Date:	/ X / Original / / Revision #	PPT appr								
or FY: CY	FY 1976												FY 1977					FY 1978							
Month:	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	
0																									
Prior actions	1 PII approved	2 Project Design Completed	3 Project Evaluation Begins	4 Project Evaluation Completed	5 Evaluation Report Submitted	6 Draft Project Paper Submitted	7 PP Elements Discussed SEPA	8 PP Revised	9 PP approved	10 Grant Agreement signed	11 PIO/T approved	12 Out of School Planning Meeting	13 Representative Council Meeting	14 TTMD Workshop Begins	15 RT Course Begins	16 TTMD Workshop Begins	17 Evaluation	18 TTMD Workshop Begins	19 Out-of-School Workshop	20 RT Course Begins	21 RT Course Participants Receive Certificates	22 TTMD Workshop Begins	23 Evaluation	24 Writers Workshop Begins	36 Post Action
Financial Plan:																									
Evaluation Plan:																									

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