      The articulation of a rationale for Project Africa's instructional program, the
collection of materials for improving inquiry-oriented instruction at the secondary
level about Africa south of the Sahara, and the preparation of teaching and study
guides have been completed. This geographic region, rather than the whole continent,
was chosen to allow for an in-depth study of a unique African region, the
understanding of which "is vital to any understanding of the African continent." The
development of learning materials was based on teaching the student to identify the
purpose for inquiry, to build and test a hypothesis, to draw conclusions, and to apply
those conclusions to new data. The curriculum was divided into three areas of study:
the cultural background of Africans south of the Sahara, the social and economic
forces which have affected them in the past, and the impact of modern ideas and
technology on the African way of life. (The initiatory unit for the study of Africa south
of the Sahara is included.) See ED 030 010, ED 023 692, ED 023 693, and TE 499
919-499 921 for additional Project Africa materials. (MP)

PROJECT AFRICA

AFRICA SOUTH OF THE SAHARA

A TEACHING GUIDE

INTRODUCTION

An Experimental Program Of Study For
Secondary School Social Studies Students

AFRICA SOUTH OF THE SAHARA

An Experimental Program of Study For
Secondary School Social Studies Students

RATIONALE AND INTRODUCTION

PROJECT AFRICA

Carnegie-Mellon University
Pittsburgh, Pennsylvania

1969

CONTENTS

INTRODUCTION

This instructional program has been developed by the staff and consultants of <u>Project Africa</u>, a social studies curriculum development project commissioned by the United States Office of Education. This project was originally located at The Ohio State University. It was moved to Pittsburgh's Carnegie-Mellon University in September 1968.

<u>Project Africa</u> was created on March 1, 1967. It is a 40 month project designed specifically to develop inquiry-oriented instructional materials and guides for use in improving learning about Africa south of the Sahara in grades 7-12 of American schools. The instructional materials contained herein are the first of a number of such materials <u>intended for use in teaching about Africa south of the Sahara in 7-10th grade world geography, world history or world cultures courses.</u> (Materials will be developed later for a senior elective course.) They represent the results of extensive research by teams of experienced teachers, Africanists and education specialists during the summer and fall of 1967 and of limited classroom tryouts during the spring of 1968.

Following nation-wide school evaluations of these materials during the spring of 1969, the results of this research and experimentation, including all materials and guides, will be submitted to the U.S. Office of Education for placement in the public domain. They will then be available to all interested educators. By examining and adapting them to their own situations local schools will thus be able to include a vital, up-to-date, stimulating study of Africa south of the Sahara, its peoples and their culture as an integral part of their secondary school social studies curricula.

The materials included here are based on research conducted by:

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These materials represent the results of the initial phase of Project Africa. They are entirely experimental in nature and intent. They are only approximations of finished instructional materials and are subject to extensive revision and refinement. It is the purpose of the classroom tryouts--for which these have been prepared--to provide the experience and information needed to develop effective and worthwhile materials for use in teaching about Africa south of the Sahara in 7-12th grade social studies programs.

Dr. Barry K. Beyer
Director

Dr. E. Perry Hicks
Associate Director

January 1969

NOTE

It must be remembered that the purpose of Project Africa is to design and evaluate inquiry-oriented materials for improving instruction about Africa south of the Sahara at the secondary level. A draft of these materials follows. It is obviously a tentative draft. There are undoubtedly some errors in substance and many arbitrary forms and procedures. If you note errors of fact, they should be corrected immediately.

However, the entire purpose of these classroom tryouts is to determine the workability of a wide-variety of procedures and materials. IT IS THUS IMPORTANT THAT THE LEARNING MATERIALS AND EXPERIENCES HEREIN BE USED AND CARRIED OUT EXACTLY AS DETAILED IN THIS TEACHING GUIDE. This will be the only way to determine what works and what doesn't, what needs to be changed, omitted or added to, and what alternatives ought to be considered.

Of course, criticism, comments and suggestions are vital. Both teachers and students will be asked to evaluate these learning experiences and materials. A separate packet of evaluative devices will be provided each evaluator for this. But, this guide, too, should be used as an additional evaluative device. You should mark it up freely. Note in it at every opportunity and wherever appropriate:

1. What _should_ have been done.
2. What failed.
3. What the students responses were to each key question.
4. What other questions should have been asked.
5. How much time each activity took.
6. The changes needed in the objectives.
7. ....and so on.

HOWEVER, THESE SHOULD BE DONE ONLY AFTER THE ACTIVITY OR UNIT HAS BEEN TAUGHT AS DIRECTED IN THE GUIDE. Errors in student materials should be noted in those included in this guide and communicated immediately to the students.

In addition, it should be pointed out again that:

1. Each Topic is composed of a number of _units_--an introduction, several special units and a conclusion. Each unit is composed of _activities_--each activity is designed as a one day (40 minute) learning experience.

2. All materials--student and teacher, alike--are to be returned to the project as soon as the classroom trials have been completed. This is very important since most of our permissions to use copyrighted materials stipulate their use only for this limited experimental effort. They may _not_ be copied or otherwise distributed or retained for any other purpose or use.

3. This copy of the Teaching Guide should be used to note all suggestions, corrections and errors. IT MUST BE RETURNED TO THE PROJECT AT THE CONCLUSION OF THE CLASSROOM TRYOUT. It will provide important data for analysis.

PROGRAM RATIONALE

PROJECT AFRICA
CARNEGIE-MELLON UNIVERSITY
1969

AN EXPERIMENTAL FRAMEWORK

FOR THE STUDY OF

AFRICA SOUTH OF THE SAHARA IN AMERICAN SECONDARY SCHOOLS

Practical and effective materials for use in any worthwhile formal
learn
learning experience cannot be developed in a vacuum. They must be directly

related to the realities of the instructional situations in which they are

to be used. They must be part of or capable of being fitted into the curri-

cular framework in which this instruction is carried on.

Before the instructional materials included here could be designed,

a suitable framework had to be identified. Extensive research failed to

locate any programatic structure that adequately reflected the realities

of nation-wide instruction or the requisites of effective learning about

Africa south of the Sahara. Consewuently, such a framework had to be

created. This was the first task undertaken by Project Africa. A brief

discussion of the assumptions and guidelines underlying this framework

follows.

Assumptions Basic to the Development
of this Framework

A number of assumptions underly the development of this framework and

the materials designed to implement it.

First, it is assumed that, for purposes of study at the secondary level,

there does exist a region that can be designated as Africa south of the

Sahara. This is, of course, a designation of convenience rather than a

precise geographical or cultural delimitation. Certainly it is true that

Africa does exist as a single, continental land mass. It is true that the

peoples and lands north of the Sahara and those south of the Sahara have a

history of economic and cultural contact going back at least five millenia

and that, despite the formidable barrier of this desert, the links between them have never been severed.

But Africa is too big to be understood with any degree of accuracy by a continent-wide survey. Such a survey, especially in the brief time available for it at the secondary level, would, in fact, tend to obscure rather than facilitate meaningful insights about its lands and peoples. It is precisely surveys such as this that have, in fact, led to the erroneous stereotypes and misconceptions which typify what most Americans believe about this region today. Given the great territorial extent, numerous cultural groups and other diverse conditions of this land mass meaningful limits must be assumed. One such limit is the immense Sahara Desert as it stretches across the breadth of this continent.

To the north lie a tier of states predominantly Arab and Berber in population, culture and affiliation. In modern times their links with other Arab states in the Middle East have proved stronger than those they possess with the states of black Africa, pan-Africanism notwithstanding. They have always been part of a non-African world--Phoenician, Greek, Roman, Arab, Turkish--in a sense that no sub-Saharan area has been, at least until the modern era. It is indeed virtually impossible to study or understand the history and culture of northern Africa in isolation from the parallel history and culture of the Middle East and the lands of the Mediterranean Basin.

To the south are states which must be regarded as different, culturally, ethnographically and in their historical experience, from those of the north. Sub-Saharan Africa is obviously no clear-cut culture unit. Yet it does, however, possess two clearly defineable traditions which mark it off not only from northern Africa but from the rest of the world as well. "Black Africa" is an amalgam of hundreds of more or less diverse peoples living betwee the Sudan and the southern tip of the continent. These peoples possess their

own languages, political and social organization, and life styles, but they are all "black Africans" and, as such, distinct. "White Africa", the settler region of the south and center, is also clearly different from those parts of the continent inhabited by indigenous peoples and, for that matter, from anywhere else in the world. Together these comprise a region that is unique. An understanding of this region is vital to any understanding of the African continent and, indeed, of the world as a whole.

Secondly, it is assumed that Africa south of the Sahara is worth studying at the secondary level. There are many reasons for this. Accurate, up-to-date knowledge about this region has an intrinsic value for the citizens of today and tomorrow. Present knowledge of this region and its peoples is a lamentable mixture of myth, stereotype and misinformation. Yet, political, economic, social and other decisions are made at all levels of society on the basis of these generally inaccurate half-truths, beliefs and fantasies. Certainly our continued existence in this rapidly changing world requires that decisions which will affect our own future vis-a-vis the peoples of this or any other region be based on the most accurate and realistic knowledge. False and inaccurate notions about all people must be eradicated. Only by a scholarly, up-to-date, in-depth study of this region will our future citizens secure an accurate picture of this part of their contemporary world. Only through such a study will they develop an understanding of its peoples as human beings who, like themselves, have a long past and high aspirations in a changing world, who create things, express themselves in a wide variety of ways and grapple with the same basic problems as people elsewhere in the world. Then and only then will they be able to make intelligent and realistic decisions regarding their future and that of the world as well.

Finally, study about selected aspects of Africa south of the Sahara can build insights that will enable us to see ourselves as others might see us, to understand ourselves better in relation to other people in our own society and to other societies as well. And, at the same time, it can also serve as a medium through which can be examined problems similar to ours but which, for a variety of reasons, are closed to dispassionate, rational analysis and study.

A third assumption is that selected concepts and generalizations rather than a catalog of factual data should be the prime knowledge objectives of any learning experience. Factual information and data are best _used_ only _as a vehicle_ for the development of broadly applicable conceptual knowledge. The study in our secondary schools of Africa south of the Sahara should point toward the development and application of selected analytical concepts and generalizations applicable to and revealing of human behavior everywhere. Data about this region and its peoples ought to be used to build conceptual structures that will serve to organize and make meaningful later learning about people and institutions in other cultures, in other times.

Fourth, it is assumed that inquiry-oriented teaching and learning strategies are the most creative, rewarding and valid instructional strategies for the secondary social studies. Deliberate, conscious utilization of the skills and processes of inquiring lead not only to the development of more meaningful knowledge but to knowledge that is retained longer, that has greater transferability and that is more relevant and useful to the learner. Employment of these skills stimulates intellectual curiosity and promotes active involvement in the seeking of knowledge. It makes possible a creative dealing with value-laden questions and issues. Learning and applying the techniques of asking questions of data, hypothesizing, verifying hypotheses and drawing conclusions and the myriad of their associated skills helps develop

better than any way yet devised the skills of learning how to learn, skills

of critical importance in a world whose most important feature is rapid,

almost unlimited and unpredictable change.

Finally, the study of Africa south of the Sahara at the secondary

level, or any topic for that matter, cannot be planned in isolation from

the broader educational program of which it is a part. The study of this

region is merely one small segment of a much larger social studies curriculum.

This curriculum is, in turn, only one of many that comprise the formal educa-

tional program of our schools. It is the ultimate purpose of this entire

program to prepare students to participate effectively in a changing world.

It is the role of the social studies in this program to assist in developing

those behaviors that will enable youngsters to function as effective citi-

zens in this changing world. In order to accomplish this the social studies

today aim to develop:

a) Knowledge of our own and other cultures;

b) Understanding of selected conceptual knowledge drawn
from history and the social sciences;

c) Intellectual skills and abilities; and

d) Attitudes and values supportive of these skills and
behaviors.

The study of any body of information should be viewed as something

more than an end in itself. It must serve the ends of the course and of

the broader social studies program of which it is a part; it must aim to

introduce, develop and/or reinforce the generalized and conceptual knowledge,

intellectual skills and attitudes and values that are the basic objectives

of the entire social studies sequence. The proper role of content is as a

vehicle for accomplishing broader goals as well as an object of learning

itself.

Realities of the Teaching-Learning Situation
Basic to the Development of this Framework

Design of this framework has also taken into account relevant charac-
teristics of the secondary social studies curriculum as it now exists and
is evolving. Foremost among these factors are those related to the structure
and conduct of the programs in which the study of this region is normally
included. There are few schools, indeed, that offer courses exclusively on
Africa south of the Sahara. There are, however, a small but increasing
number of schools that do offer some type of course on selected aspects of
the non-Western world in general, including Africa. Yet, all of these
courses are commonly reserved for the senior year of school and usually only
the better students gain entrance to them.

If the study of Africa south of the Sahara is found anywhere in a social
studies program today, it is generally as part of world geography or non-
western studies surveys customarily offered in the seventh, eighth or ninth
grades or in world (European) history or area studies courses offered at
the tenth grade level. There now appear to be several trends affecting
these particular courses--on the one hand a trend toward the globalization
of the European or world history course and on the other a trend toward
creating a regional studies approach to replace the world geography survey.
In all of these courses, time allotted to the study of Africa south of the
Sahara may vary anywhere from two to twelve weeks.

The study of this region in grades 7-10, regardless of the title of
the course in which it is presently found, usually follows a common pattern.
It is introduced with a geographical survey followed by quick surveys of the
people, economy, government, culture, history and current problems. The
traditional world (European) history course usually touches on Africa south

of the Sahara only when it figures in European history, which customarily is
during the "Age of Exploration," the "Partition of Africa," and the problems
associated with twentieth century nation-building. In general, the content
selected for study in all of these is basically descriptive and emphasizes
things rather than people. In most instances, too, its acquisition represents
the principal goal of the learning experience.

In many schools the content about Africa south of the Sahara included
in these courses usually is determined largely by whatever textbooks the
schools use and/or movies they can afford to schedule. The vast majority of
teachers have little or no academic preparation in the history, geography or
culture of this region; only a few have any significant academic training
in the disciplines of anthropology or geography. Opportunities for indepen-
dent study about this region are quite infrequent. Consequently, instruction
about Africa south of the Sahara tends to be that of "covering the text" with
little deviation at all from it. And, in most instances, these texts are
considerably outdated, superficial and didactic.

A second group of factors which are reflected in the design of this
program are those related to the nature of the subject matter to be studied
and used--in this instance, facts and information about Africa south of the
Sahara. This region is one of vast size and diversity. It consists of over
three dozen independent nation-states in which live at least eight hundred
distinct cultural groups each speaking a language and observing a set of
customs and laws of its own. The various facets of its political, economic,
cultural and social development and life that could be studied are virtually
unlimited. Yet, the time available in most schools for the study of this
region may vary from two to a dozen weeks, hardly enough time to get more than
a smattering of knowledge about it.

While there is an increasing amount of knowledge and information available about Africa south of the Sahara, it is by no means complete. There are significant gaps in what is now known about this region and its peoples. Scholarly research, however, is narrowing these gaps, and each year vast amounts of new information become available. Not only does this add to what is already known--it very often challenges what was thought to have been true; not only does it help answer questions that already exist-- it also raises new questions. Africa south of the Sahara, as a body of content, is in essence an immense amount of information that is being daily enlarged in both quantity and quality.

A third group of factors relate to the nature of the learners and of learning. Many students who take courses in which this region is studied are not there because they elect to be so; their attendance is required. Furthermore, many learners in these courses are of average or below-average academic ability. This is especially true in many world geography courses which are customarily required of the "slower" students while the college-bound are channelled into European history instead.

Moreover, these learners are rarely intellectually involved in these courses. Learning in most secondary school geography courses often consists almost solely of coloring maps, outlining boundaries and memorizing capital cities, major products and the names of famous people. Learning in many other social studies courses consists largely of memorizing what teacher or text asserts is meaningful, significant, true or just to be learned! There seems to be little purpose in these courses beyond that of mastering the facts; consequently most learning is rote and retained barely beyond the unit exam. It is neither transferable to other similar situations-- nor even applicable a few years later. Indeed, there seems to be very little relationship between it and the real concerns of thirteen, fourteen and fifteen year-olds.

A considerable amount of classroom instruction in social studies today is essentially expository. Teachers, textbooks, and audio-visual media <u>tell</u> students the essential data, interpret it for them, and explain its significance. In all this the learner is a passive receptor of someone else's knowledge. Because of this, he often fails to learn the content that is assigned him--and he rarely learns how to learn on his own. Many are especially rebuffed in their efforts to learn by the heavy emphasis on reading assignments; many "slow" students are "slow" because they cannot or don't want to read. Yet, they are curious, inquisitive and fully capable of learning if they so desire.

A final group of factors relate to the types of materials and equipment--media--available for use in the social studies classroom. Traditionally, of course, the textbook, teacher monologue, globe and wall map have been the media most frequently employed. In many classrooms they still are. However, teachers in increasing numbers today have access to and use a wide variety of audio and visual media including filmstrips, slides, 16 mm and 8 mm films, tape recorders and record players, picture cards, models, artifacts, works of art and overhead transparencies. In addition, programmed materials, simulations, collections of source data, documents and even literature are finding increasing use in the social studies classroom.

Use of these media is rapidly increasing as publishers produce more and better materials for them and as federal, state and local funds for their acquisition become increasingly available. Teacher training institutions, too, now usually provide training in the use of these media. School systems are now moving in the direction of utilizing the services of full-time audio-visual personnel and even of specialists in the preparation of graphic materials for use with audio-visual equipment. Facilities for large group audio-visual instruction have been included in school buildings for over

a decade and even special facilities for individual and small group learning,
utilizing a wide variety of educational media, are being included. Clearly,
there is a definite trend today toward the use in learning of a wide variety
of educational media to give variety itself, to individualize instruction,
to secure a closer approximation of reality and to involve students more
actively in the process of learning.

Guidelines Basic to the Design
of this Framework

Consideration of the preceding assumptions and factors gave rise to the
following propositions for use as guidelines in the development of a frame-
work for a study of Africa south of the Sahara in secondary school social
studies courses:

1. This framework and its constituent materials should be
   immediately useful. They, therefore, must be capable
   of being used within existing world geography or non-
   western studies courses in grades 7-9 and/or world
   cultures or world history courses now being offered in
   the 10th grade.

2. Each unit should be complete in itself and at the
   same time part of a sequential whole so that teachers
   having limited amounts of time available for the study
   of this region may select individual units most appro-
   priate to their own teaching objectives.

3. These units should be constructed for use by students
   of average ability but also include materials for use
   by students of lower as well as above-average ability
   levels.

4. These units should include as integral learning materials a wide variety of media, especially media which communicate visual as well as auditory images. Those with which most teachers are or soon will be familiar and will have the greatest likelihood of using in the immediate future should be emphasized. These materials should be constructed for use in inquiry-oriented learning experiences. Teaching and explanatory guides must be prepared to accompany all such materials.

5. These materials should include activities suited to large-group, small-group and independent study experiences.

6. The content included and the cognitive objectives sought should be highly selective. Care must be taken to avoid covering everything. Content and objectives selected must be relevant to and consistent with the broader objectives of the course of which the study of Africa is a part as well as of the overall goals of the entire social studies program. Teaching complex ideas with too little knowledge and teaching too much about too many places in too short a time must be avoided. The content selected must be studied in depth.

7. Africa south of the Sahara should be considered only as one of many culture regions. Moreover, it should be viewed as a "world" within itself and be divided for purposes of study into a number of culture regions or groups. The primary emphasis should be on people, the

inhabitants of these regions. Study should focus on various aspects of four or five sub-cultures (selected to represent different regions, different cultures, different forms of government and so on). The students should generalize about their common features and note significant differences, explore how and why these exist and examine the current problems, changes and trends which affect these people. Such a study should lead to the development of understandings which, when evaluated, should lead to the development of generalizations valid for Africa south of the Sahara. These generalizations should then be considered tentative hypotheses and used as tools to investigate other world regions in the quest for valid generalizations about people of other cultures including our own.

8. Emphasis should be on contemporary Africa--who Africans are, how they got to be that way and what they are becoming. Overemphasis on the colonial past should be avoided. A strict chronological survey should be omitted; instead, history should be used as a resource from which to secure insights into the origin and development of the peoples, problems and prospects of Africa today and tomorrow.

9. This region should be studied from the inside--not through the eyes of other cultures. Students should experience first-hand contact with the people of a society, and its culture by using art, literature, music, folklore, artifacts, visual and audio materials and all other materials that reflect or express these people and their way of life. This study

should also emphasize the similarities of people. It should

avoid:

    a) overemphasizing as typical the exotic, unusual
       and strange.

    b) giving the impression that Africans are
       inferior to other cultural groups.

    c) treating the region only as it relates to
       the United States.

    d) making invidious comparisons.

10. A multidisciplinary approach should be used. No single discipline can paint a complete picture of a culture.

11. This study should not convey any sense of utter finality; it should not appear to offer the ultimate truth about this region. Rather, it should strongly suggest the limitations on what is known as a certainty about Africa. It should suggest open-mindedness and uncertainty. A spirit of inquiry should be reflected and fostered.

12. The learning experiences included in this framework should be learner-centered. Students should be directly involved in developing knowledge by active intellectual inquiry and investigation. The major role of the teacher should be to facilitate learning by guiding, questioning, stimulating, and challenging the students' inquiry. Inquiry strategies of teaching are required to do this.

A Framework for the Study of
Africa South of the Sahara in Grades 7-10

The framework that has been designed by Project Africa to structure the learning materials on Africa south of the Sahara is built directly on these aforegoing assumptions, factors and guidelines. It has been designed to facilitate the achievement of the objectives noted above. It is intended to be of immediate use to schools seeking to improve instruction about this region now. It is neither a totally new nor a complete one-semester framework.

Implementation of this framework will not require any drastic revision of an entire social studies curriculum nor even any extensive remodeling of existing courses within that curriculum. It is rather, a program of study on this region that is complete in itself but whose components are each self-contained so that the entire program or any part thereof can be readily plugged into any relevant course that may already exist.

It should be noted further that, for practical reasons, this framework as a whole has been designed to be the first unit in any year-long or sequential study of world cultures at the secondary level. It not only seeks to develop basic understandings about this culture region, but it also builds basic analytical concepts and generalizations which can be used in the study and analysis of any other culture group--including our own. It is derived directly from a consideration of the assumptions, factors and guidelines delimited above. It consists of three topics:

TOPIC I

WHO ARE THE PEOPLES OF AFRICA SOUTH OF THE SAHARA?

This study focuses on a variety of contemporary peoples--
including the Hausa, Suku, Bushmen, Ganda, Galla, Kikuyu and Somali .
Each of these peoples has been selected to represent a region, a
kinship system, a specific way of life, a type of cultural pattern, a
form of government or some other feature which, taken together, are
characteristic of contemporary Africa south of the Sahara. Emphasis
is placed on the study of the habitat, traditions, customs, behavior
and institutions of each people in order to identify their fundamental
values, mores and beliefs and to make hypotheses about just who these
people are and how they are similar or dissimilar to other peoples.

Study of this topic is designed to develop a number of generali-
zations about human behavior and culture in Africa, generalizations
that can serve as hypotheses and organizational structures for later
study of other peoples living in other cultures, with the ultimate
objective of developing broad generalizations applicable to and
descriptive of human behavior in general.

TOPIC II

HOW AND WHY DID THEY GET THAT WAY?

This topic focuses on the social, economic, political and other
forces that have been operative in this region over time to shape the
way the various pepples studied in TOPIC I now live. It is designed
to provide an awareness of the African's awakening sense of history
as well as to give an insight into the sources of his feelings and
actions today.

Study of this topic is intended to develop insights into and generalizations about the _forces_ that shape contemporary human behavior and institutions in this region; these will then serve as hypotheses and organizational structures for later study of other peoples with the ultimate objective being to develop broad generalizations about the sources of culture and culture change in our world.

TOPIC III

WHAT ARE AFRICANS BECOMING?

Study of this topic is intended to provide an understanding of the nature of forces presently shaping the way Africans live, to understand the move away from individual or family self-sufficiency in the local setting to interdependence in an ever-enlarging world-wide setting, and to understand the continuity in change. The focus of the topic is on what happens to an individual as a result of the operation of these forces; it is a study, in essence, of the impact of change on individual human-beings and on their culture as a whole. The content deals with nation-building, urbanization, education, rising economic expectations, intergroup dynamics, international affairs and creative self-expression. Generalizations developed in the study of this topic will be useful both as hypotheses for further testing and as tools for analysing and structuring similar later studies.

In sum, the framework of study proposed here for use in grades 7-10 in American schools is one which focuses on people, contemporary culture, and individual and group problems relevant to life in the latter part of the Twentieth Century. It is an inquiry-oriented, multi-disciplinary, in-depth study of topics selected because of their intrinsic worth as knowledge as well as their utility in serving as a vehicle for the development of the broader cognitive and affective objectives of the total program of which the study of Africa is but one part.

The framework of study described above is designed to develop
meaningful knowledge about the peoples of Africa south of the Sahara
with the ultimate goals of developing and refining skills of intellectual
inquiry and conceptual knowledge about human behavior and cultures. To
do this well requires the use of inquiry-oriented teaching strategies.
Basic to the effective use of these strategies, however, is an under-
standing of the elements and processes of meaningful learning.

Learning and Knowledge

Meaningful learning is a function of the interaction of three
separate phenomena--the stimuli or raw data in the environment with
which we come in contact, the intellectual skills by which we process
this raw data and the conceptual framework of ideas, concepts and
generalized knowledge in the mind which gives meaning to this data.

Each individual lives in a multitude of overlapping environments--
the environments of family, church, peer group, nation, world and so on.
Each of these varies in extent, composition and complexity for each
individual. Each consists of a mass of stimuli which are perceived via
the audio, visual or other senses. These stimuli or data have no
meaning inherent in them--they do not speak for themselves. Rather,
they are given meaning only in the mind of the perceiver, by the way
in which they are selected, processed, arranged and stored.

The mental processes by which an individual perceives and gives
meaning to the stimuli bombarding his senses have been assignated by
many terms--discovery, reflective thinking, critical thinking, problem

solving, inductive learning and so on. In essence, however, they all involve various mental operations by which selected stimuli are pulled apart, put back together in new combinations and related to each other or to past experience. In this way, these stimuli are given meaning in relation to other stimuli and thus knowledge is formed, refined or elaborated.

But meaningful learning involves more than just data and a process of handling it. It involves also the past experience of the learner, organized conceptually--in terms of basic ideas, generalizations and concepts. These are arrangements of previous sense perceptions structured into meaningful relationships. They serve many purposes. They act as frameworks or categories into which can be directed new data or stimuli from the environment; they compose a frame of reference which not only guides the interpretation of what is perceived but also directs the selection of the exact stimuli on which to focus; they serve as a source of questions by which the environment is probed for relevant meaning. They make what is perceived meaningful by connecting it to previous experience.

None of these, it should be noted, operate in isolation from the others. Selecting stimuli to which to respond or to use involves the combined interaction of all three phenomena--stimuli or data, a mental process and a conceptual framework. Moreover, this is a continuous process. Each element feeds on and gives substance to the others Meaningful learning cannot take place in a vacuum. It requires .data either directly from the environment via observation, reading or other direct experience or from remembered experience. And it also requires some type of framework by which these stimuli can be ordered, can be made

meaningful. The purposeful interaction of these phenomena produces
meaningful learning.
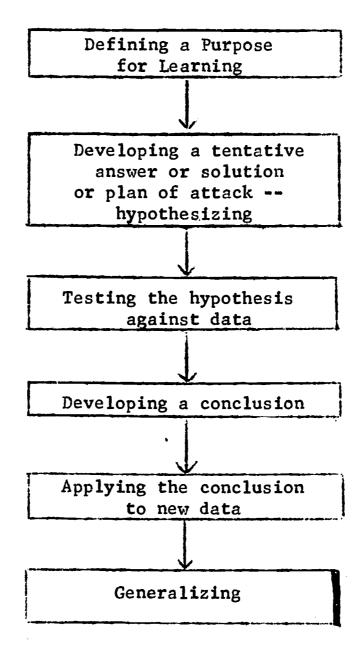
The Process of Inquiry

Meaningful learning implies--indeed, it requires--the active,
intellectual involvement of the learner. Knowing, in the sense of
truly understanding, cannot be <u>given</u> <u>to</u> an individual; it must, rather,
be <u>developed</u> <u>by</u> an individual. It is not a result of passive reception.
It is the result of deliberate and continued interaction with data. It
is something the learner, not the teacher, does. The process by which
it is done is best described by the term, <u>inquiry</u>.

Inquiry is essentially finding out for oneself. It is both an
attitude and a process. As the former it involves a probing,
questioning challenging mind, a lively imagination, a respect for
evidence and an open-mindedness, a flexibility of purpose or intent.
It involves, too, a persistant and stubborn desire <u>to</u> <u>know</u>, to under-
stand completely. The process of inquiring grows out of this frame
of mind and is guided and shaped by it.

As a process for giving meaning to data, inquiry relies on certain
tools. These tools are intellectual operations--processes by which the
mind manipulates the data which it receives from the senses; they are
most commonly referred to as the tools of analysis and synthesis. However,
describing precisely how these tools are used is a task not lightly under-
taken. Much research remains to be done before anyone can speak with
finality on this. Nevertheless, certain aspects can be identified that
seem, for the present at least, to represent the major components of this

process. Familiarily with these is necessary if a teaching strategy is to be employed that will facilitate this way of learning and the use and development of the intellectual skills associated with it.

The major steps in the process of inquiry can be diagrammed in terms of what the learner does, consciously or unconsciously, as follows:

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┌─────────────────────────┐
│   Defining a Purpose    │
│     for Learning        │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│  Developing a tentative │
│    answer or solution   │
│   or plan of attack --  │
│      hypothesizing      │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│  Testing the hypothesis │
│      against data       │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│ Developing a conclusion │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│  Applying the conclusion│
│       to new data       │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│      Generalizing       │
└─────────────────────────┘
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This process involves a number of ways of thinking. It utilizes analytical-deliberate, step-by-step, logical--thinking and intuitive thinking--guessing, hunching, jumping to conclusions. It also involves inductive reasoning, moving from the specific to the general, and deduction--moving from the general to the supporting specifics. It is,

in essence a process consisting of a complex series of acts, some
conscious and deliberate, some haphazard and almost automatic. It
usually starts with a question, problem, curiosity or some unsettled
condition and moves at varying rates of speed to some type of a
resolution or conclusion.

Each of the steps in this process, of course, includes numerous
other, more precise, intellectual operations--such as evaluating and
translating data, classifying and comparing information and making
logical inferences or identifying relationships, trends and other types
of patterns. The process of inquiring is not linear--it does not proceed
uniformly from a simple beginning to a neatly drawn generalization and
then stop. On the contrary, it is a continuous process that builds on
itself. Its two most important elements are a _learner_ who inquires and
the _data_ with which he inquires. Inquiry is a process of learner
interaction with data that proceeds thusly:

This is an ongoing process that leads to an ever-expanding and deepening framework of conceptual knowledge--knowledge that is both the origin and final repository of learning. It involves essentially four basic operations, repeated over and over again--the formulation of questions, hypothesizing (developing tentative answers or solutions), testing hypotheses against the data, and drawing conclusions or generalizing on the basis of this testing. It involves working with data to give it meaning. It is an active, learner-centered way of learning.

In the structure of this framework of study on Africa south of the Sahara, inquiry serves as both a means for and an end of learning. The techniques and skills of inquiry are the prime learning tools used with the data contained in these materials. Learning how to use these tools is, at the same time, a major objective of the entire instructional framework.

An Inquiry Strategy for Teaching

There are, of course, a variety of strategies for facilitating learning--for teaching. A teaching strategy is merely a way of arranging specific instructional techniques (such as map work, class discussion, group research, making a bulletin board) into a composite learning experience so as to accomplish predetermined objectives. Most instructional strategies involve the primary techniques of reading, telling and discussing. Inquiry teaching also utilizes these, but it arranges and manipulates them in a way far different from expository teaching.

The inquiry strategy employed in this framework of study is designed to provide for as much learner interaction with the raw data

of the learning environment as possible. It is designed to provide

the learner an opportunity to:

    1, Identify and clarify a purpose for inquiring;

    2. Build a hypothesis--a tentative answer or solution;

    3. Test the hypothesis;

    4. Draw conclusions;

    5. Apply the conclusions in new situations to new data; and

    6. Develop meaningful generalizations.

Ideally, inquiry is self-initiated and self-directed. It is

directed by the learner's conceptual frame of reference, his past

experience, which serves as a framework for questioning and ordering

data. However, few secondary school students have either the concep-

tual framework or intellectual techniques required for independent

inquiry. Their previous social studies education has minimized the

development of these, concentrating as it has instead on exposition and

memorization of factual data. Consequently this framework of study in

Africa south of the Sahara is designed to introduce the learners to

the basic concepts and intellectual skills needed for independent

inquiry and to refine and broaden these by providing increasingly less

structured opportunities for their application and development. Each

learning experience in these materials is designed to enable the

students to use the tools of inquiring.

Identifying a purpose for learning: The most effective learning

is purposeful learning. The best purpose is one developed by the learner;

it arises from a question, problem, curiosity or perplexing condition

which he perceives and for which he feels a solution is required. However, since most students using these materials will have had little prior experience in self-directed inquiry and in studying other cultures in depth some initiatory problems and questions must be given to the students. In the materials for this study, some problems are presented in the learning materials themselves, such as those which present conflicting interpretations of the same event, or those which present obviously biased and unpopular accounts of a situation, or even those which suggest a "mystery-type" situation. Only after students have gained practice in perceiving and formulating problems into which to inquire, are they provided less structured opportunities for independent inquiry.

In guiding this stage of the learning experience, the teacher must be careful to provide opportunities for the learners to make the problem meaningful, to clarify it and state it in their own terms. New words or phrases have to be identified and defined in the context of the given situation. The problem must also be made manageable by being broken down into a number of related problems or questions, the answer to each of which will provide clues to the resolution of the entire situation.

Hypothesizing: Once a reason for inquiring has been clarified and made manageable, the next operation is one of exploring alternative solutions and formulating tentative answers--hypotheses. To hypothesize is to guess--not wildly, but reasonably utilizing past experience, present available data and a unique perception of the problem that requires solution. This is essentially an inductive process since it proceeds from bits of data to a generalized statement that seems to explain these.

But it does not usually proceed at the same rate of speed or in the same fashion for everyone. It involves both deliberate, step-by-step analysis and intuitive hunching; it may require considerable intellectual effort to arrive at a tentative explanation or one may suddenly 'pop-up'.

Hypothesizing is a crucial step in inquiring, however. A hypothesis serves two basic functions. It serves as a goal to be reached; when a hypothesis has been validated or refuted, the inquiry is concluded. It also serves as a guide for determining what data is needed, what information should be sought, what evidence is relevant to the problem. Reference to the hypothesis under investigation enables a learner to disregard data that does not bear on it while considering only that which does. If the hypothesis is true, then data supportive of it will exist. The search is thus narrowed to evidence only that bears on the particular hypothesis being investigated. Consequently, a hypothesis must be constantly kept in mind by the inquirer else he will be easily side tracked or perhaps will not know when he has come to the logical conclusion of his investigation.

The learning experiences included in these materials require students to hypothesize answers to problems that are given them or which they develop. The introduction to Topic I of this framework of study is designed to raise the questions "Who are the peoples of Africa south of the Sahara?" and "Why are they the way they are?" Students are then asked to hypothesize answers to these questions and to test their hypotheses. In so doing, there is no stigma of being right or wrong-- there is no such thing as a correct or incorrect hypothesis! Rather, all guesses or hypotheses must be recognized for what they are--tentative answers subject to further proof. Even if a teacher knows or suspects

such a guess is really the correct answer, it should be treated as any hypothesis--it must be tested against the relevant evidence.

Hypotheses are developed by quick examination of the available data. This usually involves relevant data culled from a person's remembered experience as well as the data present in the environment that has created the problem in the first place. Thus the traveller who perceives that the well-dressed stranger seated next to him on the bus is going to the same destination that he is, might guess that he is going to attend a wedding when he recalls that such an event is scheduled to take place there the next day.

Teachers directing hypothesis-building experiences must encourage students to look at what data is availalbe, to guess, to identify alternative ways to test their guesses and to determine the type of evidence needed to validate them. They should ask such questions as "How could you account for this?" or "What might be a reason for this?" or "What would be one possible explanation for this?" Continued practice at hypothesizing will encourage students, now generally unaccustomed to doing this, to "open up" and employ this tool on their own. The concluding activities in these materials give them this opportunity.

Testing the hypothesis: This is the key to inquiry. It is a learner-centered activity. It is essentially deductive. It requires, first, determining what type of data is needed to solve the problem or answer the question. This is, of course, dictated by the hypothesis itself, as explained above. It then requires an active search for this data. It may be culled from teacher lectures, textbooks, narrative films, picture cards, primary sources, interviews, maps, graphs, charts or other statistical

tables, novels, poetry, biographies or any of the numerous other media
by which information is communicated. This data may be provided by
the teacher or the learners may be required to locate it themselves.

Involving students in this process requires, first, that they be
given experiences and direction in selecting the kinds of data needed
to validate a hypothesis, in collecting this evidence, and in evaluating
it for reliability and validity. They must be led to translate it into
terms meaningful to them; they must then analyse it. This is a very
broad term all too often used without really indicating all that it
includes. Analysis of data requires that learners classify it by identi-
fying similarities, differences, trends, sequences, and patterns. This
pulling apart and rearranging of data is where real learning takes place.
Involvement in the search for meaning by deliberate intellectual
manipulation of data leads not only to familiarity with the data--
the facts--but also to the development of conceptual knowledge, the
ultimate cognitive objective of inquiry.

The analysis of the evidence culminates in a search for relationships,
regularities and patterns of significance. Analytical concepts guide
this process, but students who have as yet ill-defined concepts require
guidance by the teacher. They must be encouraged to make logical
inferences from the rearranged data, to find meanings in it. They must
be asked and learn to ask themselves such questions as, "What does this
all mean?", "So what?", and "In what way is this important?" Important
in this stage of the learning are periodic references to the hypothesis
being tested in order to keep students on the track and also periodic
reviews and summaries of the extent to which the data thus far examined

supports or refutes the hypothesis. Important, too, is recognition of the tentative nature of the hypothesis and of the very real possibility that it might be invalid.

Developing a conclusion: Once the data has been taken apart, it must be reassembled--synthesized--in such a way that it takes on meaning relevant to the hypothesis being tested. This activity concludes the validation step of the inquiry. It is a much more deliberate, analytical process than hypothesizing although the end product is still a conclusion, an explanation that gives meaning to data. But, whereas the hypothesis represents a possible explanation or conclusion, the conclusion synthesized in the process of submitting the hypothetical explanation to the test of the evidence can be held with a far greater degree of certainty. It may merely be a restatement of the hypothesis, although more often than not it represents an elaboration, qualification or some other modification of it. Built as it is on specific but limited data or experience, however, it still tends to be rather restricted in scope and applicability. If a concept, it is usually rather ill-defined. If a statement relating specific concepts together, it is generally limited by specific referents in time and place. Conclusions that result from this stage of inquiry must still be subject to considerable qualification and modification as they are later brought to bear on new data.

In guiding the development of conclusions, the teacher must direct students into learning experiences that require them to arrange identified relationships among data into meaningful wholes. They must be asked to state explicitly the relationships of this rearranged evidence to the hypothesis being investigated. If the results invalidate the

hypothesis, then the student must develop another hypothesis and repeat the testing procedure. If, on the other hand, it affirms the original hypothesis or develops an acceptable answer to the original problem, it can be applied and used as a tool in investigating similar problems and related data.

Generalizing: This involves essentially the same processes as concluding but utilizes a broader range of evidence and experience. In this instance, a conclusion built from a specific set of data assumes the role of a hypothesis. It is quite often modified or broadened in the process of applying it to new data--in using it as a tool to make this data meaningful. As this is done repeatedly it becomes less tied to any one specific set of time and place referents. Instead, it becomes more general, more applicable to a wider variety of data having the same essential characteristics. Thus, it may become a concept or a generalization stating a relationship between several concepts. And in so doing, it becomes part of the conceptual framework of the learner, to be used in structuring future experiences. It becomes knowledge in the deepest sense of the word.

Concluding and generalizing activities are essential to any learning experience based on inquiry. A learner must wrap up his inquiry in order to give it meaning and to provide a springboard for further learning. Those unused to "drawing conclusions", require guidance by the teacher-- via written or oral questions--to do this. Others may be able to do it with little direct supervision. That they all do it, however, is essential-- without concluding meaningful knowledge cannot be developed and effective learning will not take place.

This, then, is a brief description of an inquiry teaching strategy
designed for use in teaching these materials. It is a strategy which
requires the students to consciously and deliberately engage in the
processes of:

1. Identifying a purpose for inquiring.

2. Building a hypothesis.

3. Testing the hypothesis.

4. Drawing conclusions.

5. Applying the conclusions to new data.

6. Developing meaningful generalizations.

This is not an easy teaching strategy to use--but it is most
stimulating and rewarding. Neither is it one that brings instant
success. Students unaccustomed to it will experience many moments of
frustration and disillusionment, moments made tolerable only by the
inner satisfaction of actually coming to know something on one's own.
Teachers, too, will find it most difficult. They will especially have
to guard against the temptation to _tell_ the meaning or significance of
the data being evaluated, against using leading and rhetorical questions
and against steering the learners down too narrow a path of inquiry.
Awareness of a number of essential features of inquiry-teaching, however,
should minimize the dangers of these pitfalls and ensure the successful
use of this strategy.

Factors to Consider in Using
this Strategy of Teaching

Inquiry is very time-consuming. Knowing is not the product of a few minutes of talking or listening. It is the result only of total immersion in data and in the process of making it mean something. Although there are times when much of the process of inquiry can be accomplished in a single forty-minute class, more often than not it requires many days to inquire thoroughly into some problem or topic. Thus, an entire class period may be devoted only to defining a task or clarifying a problem, the following class period to developing tentative solutions or possible answers, several days more to collecting--from books, teacher lectures and other sources--data relevant to these propositions, another class period or two to testing and perhaps modifying these hypotheses and additional time to drawing meaningful conclusions, applying them in new situations and generalizing. Any course of study that utilizes an inquiry teaching strategy must thus be very selective in the content which it uses as the vehicle to present appropriate data for analysis.

Inquiry is also a learner-centered activity. It involves active learner interaction with data. Students must have frequent opportunities to engage singly and in small groups in experiences designed to foster this. Thus, teacher-centered activities must be kept to a minimum. While there is a definite place in inquiry teaching for lectures or sound films or text books--if the purpose is to present data that is not readily available to the students, constant or repeated use of these techniques and media hinder rather than promote inquiry. Instead,

learners must spend less time in large-group instructional situations and more time in small-group, committee, or individual learning experiences.

The type of materials best used in inquiry learning experiences is quite different from that used in traditional, text book-oriented teaching. It must not communicate what someone else feels is knowledge, or is significant, or is meaningful. Rather, it must present raw, uninterpreted data--statistics, first-hand observations, interpretive accounts, maps, artifacts, pictures--unaccompanied by explanations or descriptions that tell the student what it says, what it means, how it is related to something else or why it is significant. These tasks belong to the student. They are in fact, the very essence of inquiry.

Data is not an end in itself--it is not to be memorized; it's absorption is not the major objective of the learning experience. Instead, it is a _vehicle_ for accomplishing something else, for developing higher levels of knowledge such as concepts or generalizations. It is _used_, manipulated, pulled apart and refitted into new patterns by the learner in an effort to develop new meanings relevant to the task at hand. This data can be either presented or given directly by the teacher to the students by a lecture or by a piece of written, visual or audio material. Or, it can be researched by the students themselves.

Data is used at every stage of the inquiry process. A certain amount is required to generate a problem, arouse curiosity or create a question in the mind of the learner. Different or additional data is needed to generate a tentative answer or solution--to hypothesize. More data of a specific type is then required to test that hypothesis. If

it proves invalid, then this entire experience becomes part of the data on which to build a new hypothesis and the process repeats. If the hypothesis appears valid, then the resulting conclusion can be only tentatively held until it can be applied to similar data but in another situation. The more it is applied and it stands up, the less tentative, the more generally true, it can be considered. Data is plugged into and used at virtually every step in this process.

Questioning is the key to successful inquiry. The kinds of questions most useful are considerably different from those commonly used in expository teaching or learning. They do not require a mere repetition or description of the facts being studied. On the contrary, they emphasize the why much more than the what, the so-what instead of the how. In so doing, questioning is the major technique for guiding the process of inquiry.

In expository teaching questioning usually serves only as a check to see if the learners can repeat what was read last night or said yesterday. In guiding inquiry, however, much more is required. Students must first be asked to describe in their own words what they have seen, heard or read. This is purely recall. But the questioning does not stop here. Instead, building on the responses and insights thus developed, questions must then be asked which require the identification of common-alities, similarities, relationships and trends within the data. These are then followed by questions designed to probe for new insights, new meanings and significant ideas in the relationships and patterns thus identified. Thus the questions lead someplace rather than merely seek a recounting of what is already known.

Because inquiry proceeds at different rates of speed depending upon the varying intellectual abilities of the learners, questioning customarily takes a variety of forms. Ideally, the questions should be generated by the student, himself. Failing this, however, they may come directly from the teacher. They may be oral or presented in the form of study guides for use by small groups or individuals as they work with various data. These guides may be written or taped or on film, depending on the nature of the activity being undertaken and the materials involved. For students new to this process of learning, the questions may be numerous and explicit; for the more experienced they may be fewer in number and less detailed. But regardless of the media by which they are communicated, they must be carefully devised and presented in a sequence designed to guide inquiry into the data toward a resolution of the problem at hand.

Finally, the role of the teacher in inquiry teaching and in using the materials in this framework of study is considerably different from that of a teacher who utilizes a read-recite-test teaching strategy. The major functions of the teacher using an inquiry strategy are to plan and to facilitate the learning experience--not to tell and test what has been absorbed. Planning is the key. Before the class ever meets, the teacher must select and define the objectives of the experience and then plan the sequence of activities which comprise the total experience. This involves the selection and organization of materials to be used as well as ordering in sequence the activities and techniques such as reading, small group work and questioning to be employed. It involves, in a sense, a complete imaginary run-through of the entire learning experience in order to ensure that the materials and activities are suf-

ficient and properly arranged to help the learner move from perplexity
or doubt to resolution. This is by far the most time-consuming and
difficult of the responsibilities associated with the use of inquiry-
teaching.

Once the experience has been planned, it must be guided to fruition.
This requires that the teacher help the learners move from one stage
to another in the process of inquiry. He must, for instance, make sure
all learners get involved and that all keep on the topic. Moreover, he
must keep the communications channels clear by helping students clarify
their responses and their appraisal of what to do next. He must "keep
them honest" by insisting on the submission of adequate proof for opinions
stated or conclusions reached and by offering contradictory or conflicting
data or criticism when it is needed. He must prevent superficial treat-
ment of crucial problems, correct errors of fact when necessary, and
require periodic summations of the progress to date. At times he may
even provide certain essential but hard-to-find data or suggest alterna-
tive avenues for further consideration.

Above all, the teacher must create a climate conducive to effective
inquiry. This is not done by standing at the front of the room and
requiring students to stand to recite. It is done by creating challenging
problems for the students to solve, using techniques that foster student
interaction and minimize teacher domination and by enthusiastically
joining the process as an inquirer himself. It is not done by giving
answers or by requiring everyone to come up with the same answer. It
is done by providing all students an opportunity to find out for themselves.

The success of inquiry is aided immeasurably by deliberate efforts on the part of the teacher to help the student understand just what he is doing, what mental operations he is involved in, so that he may be more aware of the techniques of inquiring and thus become a more effective inquirer on his own.

In the beginning, the use of inquiry strategies will require rather explicit and continued teacher involvement and even direction, but as the students gain experience and insight into this way of learning, the teacher can become less and less conspicuous as a classroom director. Direction can instead by supplied by the way in which the materials and guides are structured and by the growing familiarity of the students with the operation of a mode of inquiry.

Guiding an inquiry-oriented learning experience is not easy. However, there is no better way to learn how to do it than by attempting it with the aid of instructional guides and materials prepared especially for this type of teaching. The materials and teaching guide included in the pages that follow have been designed precisely for this purpose. Careful reference to these and their adaptation to the requirements of the teacher's students and curricular situation can result in a most stimulating and exciting learning experience about Africa south of the Sahara.

AFRICA SOUTH OF THE SAHARA

AN INTRODUCTION

A TEACHING GUIDE

PROJECT AFRICA

CARNEGIE-MELLON UNIVERSITY

FOR EXPERIMENTAL USE ONLY

1969

I

INTRODUCTION TO AFRICA
SOUTH OF THE SAHARA

A TEACHING GUIDE

This is the initiatory unit for the study of Africa south of the Sahara. Its primary purpose is to arouse interest in the study of this region by stimulating the students' curiosity. It is designed to raise questions which only the further study of Africa south of the Sahara can answer. It is also designed to provide some background about the physical geography of this region.

Specifically, the objectives of this activity are:

To know about selected aspects of the geography of Africa south of the Sahara.

To raise questions about Africa south of the Sahara and its inhabitants.

To create a desire to study more about this region.
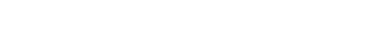
To be able to interpret visual data.

To be able to make inferences from data.

To be able to identify relationships and make comparisons.

To be able to formulate and state hypotheses.

It is important to note that this activity is designed to launch the study of this region by asking the students first, to become aware of some of Africa's major characteristics; and second, to discover the ways in which people are distributed throughout its terrain; thirdly, to speculate why these people are distributed as they are; and finally to become aware of the mode of inquiry to be used throughout this program.

The familiarity with Africa developed in this process is a necessary prerequisite for the learning experiences that follow; it will, at the same time, be expanded and broadened by these subsequent activities. The hypotheses developed in this introductory experience will also be basic to the learning experiences that follow for they will serve as the tools by which the study of Africa south of the Sahara will be given direction and meaning. The units which follow this Introduction are designed to provide data and learning experiences that will be useful in answering the questions raised and in verifying the hypotheses developed in the course of this initial experience. This unit is the springboard to the entire program of study prepared by PROJECT AFRICA.

This introduction consists of four activities:

Activity	Purpose	Materials
1	To raise questions about Africa south of the Sahara	Filmstrip
2	To become familiar with the region of Africa south of the Sahara.	Resource maps Study Guide #2 Filmstrip
3	To become familiar with the physical features of Africa and its climate.	Resource maps Study Guide #2 Filmstrip Study Guide #4
4	To hypothesize about the peoples of Africa and to become familiar with the steps in a mode of inquiry to be used in this program.	Study Guide #4

INTRODUCTION -- ACTIVITY 1

A TEACHING GUIDE

A) <u>Introduction</u>: The purpose of this activity is to provide a common point for "take off" into the study of Africa south of the Sahara. It is also designed to motivate students to verbalize about their impressions of this region and to want to inquire as to the accuracy of these impressions by visually contrasting images of known stereotypes with images of reality.

Specifically, the objectives of this introductory unit are:

To create a desire to learn more about Africa south of the Sahara and its inhabitants.

To raise questions about the real nature of this region and its peoples.

To articulate the students' image of Africa south of the Sahara.

To be able to interpret visual data.

To be able to make inferences from data.

C) <u>Materials</u>: filmstrip: Africa south of the Sahara #2 (see <u>Notes to the Teacher</u>)

C) <u>Suggested Teaching Strategy</u>:

1) Introduce this study of Africa south of the Sahara by projecting the filmstrip <u>Africa South of the Sahara #2</u>. (allow 5-8 min. for this.)	

a) In projecting frame #1 (Africa in the World) have the students describe the <u>location</u> of the African continent in reference to:
     the hemispheres
     equator
     other continents	

Ask: HOW DOES IT COMPARE IN <u>SIZE</u> TO OTHER CONTINENTS? (Emphasize that Africa is a continent, <u>not</u> a nation.)	Africa is big. It is larger than all other continents except Asia. It is four times the size of Australia, almost three times larger than Europe, etc.

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b) Project frame #2.

   Describe why this study
   focuses only on Africa
   south of the Sahara (see
   rationale pp. 1-3) instead
   of the entire continent.

c) Project frame #3. Compare   Africa is about four times the
   Africa in size to that of   size of the continental U.S.,
   the U.S.   or three times larger than all
                                       50 states of the U.S.

.2) To get the students to articu-
    late their image of Africa south
    of the Sahara project frame #4.
   "Which of the following pictures
    were taken in Africa south of
    the Sahara?" Direct the students
    to TAKE OUT A SHEET OF PAPER.
    LIST THE NUMBERS 1-21 ON THE
    PAPER.

    Tell them you are going to project
    the rest of the filmstrip. It
    consists of photographs taken in
    Africa south of the Sahara and in
    North America. Tell them to WRITE
    "A" AFTER THE NUMBER OF EACH FRAME
    YOU THINK WAS TAKEN IN AFRICA
    SOUTH OF THE SAHARA AND "NA" AFTER
    THE NUMBER OF EACH FRAME YOU THINK
    WAS TAKEN IN NORTH AMERICA.
    Point out that it will be diffi-
    cult to tell just where some
    frames were taken.

    a) Project the rest of the
       filmstrip showing each frame
       without comment. Allow stu-
       dents to view each frame for
       3-4 seconds only.

    b) Then reshow the filmstrip
       from the beginning (lion
       picture). As each frame
       is shown:

       -- Have the class indicate
          by voice vote or show of
          hands whether it is in
          Africa or North America.

                 and

-- Select one student (a
   different one for each
   photo) from the majority
   to tell why he thinks it
   is where he said it is --
   why it is in Africa or (if
   in North America) why it is
   NOT in Africa.   ,

Where the class is about
evenly divided over the loca-
tion of a photo elicit one
reason from each side even
if they contradict each other.

c) HAVE ALL REASONS GIVEN LISTED
   ON THE BOARD BY A STUDENT.

   (It is not necessary to go
   through all of the frames nor
   is a concensus required. The
   intent is merely to get on the
   board the students' image of
   Africa south of the Sahara.)

   With 10 minutes remaining,
   stop the filmstrip. Have
   the students tally the number
   of "A's" on their worksheet.
   Ask: HOW MANY THINK MORE THAN
   5 OF THESE WERE TAKEN IN AFRICA
   SOUTH OF THE SAHARA? -- MORE
   THAN 10? -- MORE THAN 15? --
   MORE THAN 20?

   Tell the students that actually
   16 of the photos were taken in
   Africa. Then quickly reshow the
   filmstrip indicating to the
   students which pictures were
   taken in Africa south of the
   Sahara and which were takin in
   North America. (see Notes to the
   Teacher.)

   Let the students talk about . .
   those photos that were not
   taken where they thought they
   vere.

For example, the class will say
the lion photo is in Africa. Ask
one student why he says so. The
reason given may be "It is full
of wild animals." So have the
phrase "wild animals" listed on
the board. If the class feels
the photo of the city (#2) is in
North America because there are no
cities like that in Africa then
list on the board "no large modern
cities." Etc.

A typical student list may include:

Africa south of the Sahara:
   full of wild animals
   no large modern cities
   inhabited by black people
   has jungles
   does not have factories
   use hand tools in farming
   do not use farm machinery
   has large cities
   etc.

3) Ask: WHY DID YOU PUT SOME OF
   THESE IN AFRICA (OR NORTH
   AMERICA) WHEN THEY REALLY WERE
   IN THE OTHER REGION?

Students may say they:
   a) were being tricked
   b) had erroneous ideas about Africa
   c) think many photos could have
      been either
   d) don't know much about it

4) Ask: HOW CAN WE FIND OUT?

Study more about this region.

   Point out that the list on the
   board represents what they think
   Africa and its people are like.
   Tell them the purpose of the
   next few weeks study will be to
   see to what extent their ideas
   are correct or incorrect.

5) If time permits, have the students
   copy the list in their notes.
   If there is not enough time,
   copy this list (ditto it and
   distribute it at the beginning
   of the next class).

NOTES TO THE TEACHER

Africa In the World

Africa is the second largest of the earth's seven continents. Although it is connected to Asia by the small Isthmus of Suez, it is virtually an island and has the straightest and longest accessible coastline--over 16,000 miles--of any of the continents. It is also the only continent to straddle the equator and thus has the most balanced climate of any of the earth's land areas. It comprises, with Australia and South America, the only significant land area in the southern hemisphere, which is characterized more by its water than its land masses. Thus, nations in this part of the continent, like virtually all of those in South America, find themselves somewhat far-removed from the northern hemisphere centers of political and economic activity that tend to dominate the world scene today.

Size of the Continents (in sq. miles)*

North America	9,300,000	Africa	11,500,000
South America	6,800,000	Australia	2,950,000
Europe	3,750,000	Antarctica	5,300,000
Asia (inc. islands)	16,900,000		

*Source World Almanac, 1967. p. 274

The western coastline of Africa bears a remarkable resemblance to the Atlantic coastline of South America--almost every bulge on one corresponds to an indentation on the other. There are, in fact, many layers of rock, glacial striations and deposits, and fossilized remains of plant and animal life on both continents that are similar, indeed identical. Even the mountains of eastern Argentina have the same structure as those in South Africa. Such remarkable similarities in the features of these land masses have led some scientists to postulate that perhaps at one time South America, Antarctica, Madagascar, India and Africa were all one contiguous body with Africa at the center. This huge land mass, known to geologists as Gondwana, is believed to have fragmented scores of thousands of years ago, the various pieces gradually "drifting" apart to form the continents and islands in the southern hemisphere as we know them today.

Africa and the United States

While North America contains only two nations, the continent of Africa contains nearly 50 independent nations. This continent is approximately four times the size of the 48 states that comprise the continental United States. Even when the areas of Alaska, Hawaii and

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its other non-contiguous possessions are added to the area of the continental United States to make a total of 3,557,098 square miles-- Africa is still over three times larger. Its 11,500,000 square miles make it larger, in fact, than any continent except Asia, and larger even than Asia without Russia.

While the continental United States reaches barely 2850 miles from coast to coast at its widest point, Africa stretches 4,700 miles from Cape Verde on the west coast of Senegal to Cape Guardafui on the eastern tip of the Horn in Somalia. It is over three times as far from Bizerte, Tunisia to Cape Agulhas in South Africa a distance of over 5000 miles than it is from the United States-Canadian border southward to the United States - Mexican boundary near Brownsville, Texas.

The most populous African nation, Nigeria, while a little over twice the size of California (356,669 sq. miles compared to 158,693 sq. miles) has a population presently estimated at 60,000,000 people. California's 18,600,000 people (est. 1967) make it the most populous of the states but it is not the largest in area--Alaska stretches over 586,400 sq. miles while Texas claims 267,339. Nigeria is bigger than Texas!

INTRODUCTION TO AFRICA

FILMSTRIP

Africa South of the Sahara #2

NOTES TO THE TEACHER

TITLE - AFRICA SOUTH OF THE SAHARA #2
Africa in the World
Africa South of the Sahara
Africa South of the Sahara and the United States
Question: Which pictures were taken in Africa South of the Sahara?

A	1	Amboselli Game Reserve Kenya
NA	2	New York City
A	3	Central Ethiopia
A	4	Residence of a judge, Pretoria, South Africa
NA	5	Okefenokee Swamp, Georgia
A	6	Ruwenzori mountains, western Uganda
A	7	Kalahari desert, South-West Africa
A	8	Near Mweiga, Kenya
A	9	Northern Nigeria, near Kano
A	10	Central Africa Republic
NA	11	Migrant laborers picking broccoli in upstate New York
A	12	Grain fields in Republic of South Africa
A	13	A young Hausa, in Kano, Nigeria
A	14	A Rhodesian farmer
A	15	Market in Ghana
A	16	Store for black Africans near Pretoria, South Africa
NA	17	Near Salt Lake City, Utah, USA
A	18	Cement factory in southern Nigeria
NA	19	Skyscraper in Buffalo, New York
A	20	Bamako, a city on the Niger in Mali
A	21	Oceanfront in Luanda, Angola

PROJECT AFRICA

A TEACHING GUIDE

A) Introduction: This activity is designed to familiarize students with the continent of Africa as a whole and with selected features of the region south of the Sahara. It will serve to focus their attention on areas within Africa south of the Sahara, in which live the various peoples to be studied in Topic I.

The specific objectives of this activity are:

To know the location of specific features in Africa south of the Sahara.

To be familiar with the region of Africa south of the Sahara.

To raise questions about the nature of this region and its inhabitants.

To be able to read and interpret maps and charts.

To be able to make inferences from data.

To be able to identify relationships and make comparisons.

To be willing to work cooperatively with a fellow student in the pursuit of knowledge.

B) Materials: Resource maps (10)
Study Guide for Activity 2
Filmstrip -- Africa south of the Sahara #2

C) Suggested Teaching Strategy:

1) Start the class by distributing to each student:
1 set of 10 resource maps
1 study guide for Activity 2

Pair the students with the person sitting across from them. Have them push their desks together if possible.

INSTRUCT THE STUDENTS TO ANSWER ITEMS 1, 2 AND 3 ON THE STUDY GUIDE USING THE MAPS THEY HAVE JUST RECEIVED. They should work as teams but each student is to complete his own study guide because it will be needed later.

(Do not instruct the students how to read or use the maps. Allow them to discover that they can overlay one map on another; the study guide is designed to ask questions to

foster this. It may be useful, however, to have a large
wall map of Africa at the front of the room and, before
the class begins work, to outline once more the continent
of Africa and that part of it referred to as Africa south
of the Sahara.)

Instruct each student to put all of these maps into his
notebook and to keep them in good condition for they will
need them later in the course. They should be kept in a
loose leaf or similar binder so they can be taken out and
used again just as they are doing today in class.

2) When most of the students
   have completed items 1 through
   3, briefly review the answers
   they have given.

3) Then distribute the dittoed list
   made in the preceding class.
   Have the students identify items
   descriptive of Africa's topogra-
   phy and climate. Underline these
   items. Have them add any other
   descriptive terms they feel are
   accurate.

4) Project the filmstrip (Africa   Frame #3 -- Ethiopia
   south of the Sahara #2) frames   7 -- Kalahari
   3, 7, 8, 9. As this is done,   8 -- Kenya
   discuss with the class what they   9 -- Northern Nigeria
   see in each. Then have the
   students compose a brief descrip-
   tion of each frame. When each is
   agreed upon it should be written
   in the appropriate space in ques-
   tion 4 of the Study Guide.

5) Then reshow these 4 frames.   Climate can be defined as the
   Tell the class these are in   average conditions of the
   different climate zones of   weather at a place over a
   Africa. Make sure all under-   period of time.
   stand what is meant by the
   word climate. (Do not present
   an analysis of the factors
   that comprise climate.)

6) Then direct the students to con-
   tinue working in pairs on the
   answers to the rest of the items
   on the study guide. What is
   not completed in class should
   be finished for homework. Each
   student is to be prepared to read
   his answers to item 5 in the next
   class

INTRODUCTION TO AFRICA SOUTH OF THE SAHARA

<u>STUDY GUIDE</u>

1. Examine the maps. List in the spaces below the number and title of the map or maps that are needed to determine:

   a) The location of Botswana   _____

   b) Areas of Africa lying between sea level and 3000' elevation.   _____

   c) Areas covered by grassland and thorn forest.   _____

   d) The nation in which Kano is located.   _____

   e) The average annual rainfall where the Mech'a Galla live.   _____

2. Draw a circle around the name of the nation that is farthest north from the equator:

         Nigeria   Uganda

         Botswana   Ethiopia

3. Which of the following lies closest to the equator?
   (Circle the correct answer.)

         Chad   Zambia

         Nairobi   The Orange River

4. What type of climate and vegetation can be found at each of the following places?

frame	description	climate	vegetation
#	_____	_____	_____
	_____		
#	_____	_____	_____
	_____		
#	_____	_____	_____
	_____		
#	_____	_____	_____
	_____		

INTRODUCTION -- ACTIVITY 3

A TEACHING GUIDE

A) <u>Introduction</u>: This activity focuses on selected physical features of Africa
south of the Sahara. As an extension of the previous activity, it is
designed to emphasize the essential elements of climate and to illus-
trate these visually. It is also designed to establish the physical
background for the study of who Africans are and why they are the way
they are.

The specific objectives of this activity are:

To know that rainfall, temperature, location
and elevation affect climate.

To know that Africa has a variety of climate
regions.

To know that vegetation is related to climate.

To know some of the distinguishing features of
various African climate regions.

To be able to read a climograph.

To be able to identify relationships among data.

B) <u>Materials</u>: Study Guide for Activity 2
Filmstrip -- <u>Climate Regions in Africa</u>
Resource maps
Study Guide for Activity 4

C) <u>Suggested Teaching Strategy</u>:

1) Start the class by having several volunteers each read one of his or her paragraphs (question 5, Study Guide for Activity 2). Have the rest of the class listen for factors which repeat.	

2) Ask: WHAT FACTORS SEEM TO BE LISTED BY EACH OF THESE REPORTS? Have them examine their own essays to see if these are present. Ask: WHAT SEEM TO BE THE TWO MOST IMPORTANT FEATURES OF CLIMATE?	Students should note:
	  rainfall
	  temperature
	
	A few may suggest:
	  winds
	  elevation
	  location

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3) Ask: WHAT CAN ONE LOOK AT TO
   DETERMINE WHAT A CLIMATE IS LIKE?

Students should note:
  vegetation

4) Tell the students that you have
   a series of pictures which help
   illustrate how vegetation is
   related to and a product partially
   of climate. Project the filmstrip
   (Climate Regions In Africa) stopping
   to discuss where appropriate. Have
   the class orally work out the ans-
   wers to the climograph questions
   on frame #3 . Do the same with
   the legendless map in answer to
   "What are the major climate
   regions in Africa?"

   When the final quiz is shown, have
   each student note on a piece of
   scrap paper the type of climate
   which each of the 5 photos repre-
   sents. Then project the final
   frame showing the answers. Dis-
   cuss or reshow the filmstrip to
   clarify any questions.

Note: Each climograph depicts
   data for a specific station
   located in the climate region
   being illustrated. The photos
   that follow, however, are from
   various places throughout Africa
   having that same general climate.
   (see Notes to the Teacher following.

5) To conclude the class, ask: WHAT
   CAN BE SAID ABOUT AFRICA'S
   CLIMATE?

   a) Have the students copy these
      ideas into their notebooks.

Students should suggest:

   It is influenced by tempera-
   ture and rainfall--perhaps
   even by elevation

   There is a great variety of
   climates in Africa.

   Much of Africa is covered by
   Savanna.

   There is little desert or tropical
   rainforest in Africa south of
   the Sahara

   and so on...

   b) Ask: WHERE DO YOU THINK MOST
      AFRICANS LIVE? Accept a few
      guesses and then distribute
      the Study Guide for Acrivity 4.
      Direct the students to complete
      the items on this study guide
      using their maps and notes.
      They should be encouraged to
      work with a friend, if possible.
      The study guide is to be com-
      pleted for use in the next class.

INTRODUCTION

FILMSTRIP

<u>Climate Regions in Africa</u>

NOTES TO THE TEACHER

NAME_____

INTRODUCTION TO AFRICA
SOUTH OF THE SAHARA

STUDY GUIDE

1. The population of Africa is distributed unevenly over the land. In some places large numbers of people live close together. In other places a few people are scattered over a wide area. In which of the following nations do the people live closest together? (This nation has the most <u>dense</u> population.)

   Botswana   Central African Republic.

   Nigeria   Somalia

2. In which of the following nations do the people live farthest apart? (This nation has the <u>sparsest</u> population.)

   Botswana   Nigeria

   Uganda   Ethiopia.

3. What is ONE reason you think people congregate in certain places in Africa and not in other places in Africa?

4. If this is true, in <u>what kind</u> of places in Africa would you expect to find people congregated in large numbers?

5. Examine the maps and answer the following:

a) List the places where there are large groups of people that are where you expected to find them according to your answer to question 4:

b) List any places where large groups of people ought to be according to your answer to 4 <u>but are not there</u>:

c) What reasons help explain this?

6. a) List the places where there are <u>large groups of people that are not</u> <u>where your answer to question 4 says they should be</u>:

   b) What reasons help explain this?

7. How well does your answer to question 3 explain the pattern of population distribution in Africa?

8. IF YOUR ANSWER TO QUESTION 3 PROVIDES A COMPLETE EXPLANATION, GO DIRECTLY TO QUESTION 10.

9. IF YOUR ANSWER TO QUESTION 3 DOES <u>NOT</u> COMPLETELY EXPLAIN THE WAY PEOPLE ARE DISTRIBUTED THROUGHOUT AFRICA, LIST BELOW SOME OTHER REASON(S) THAT MIGHT HELP EXPLAIN THIS (CHECK YOUR ANSWERS TO QUESTIONS 5c AND 6b):

10. Write a sentence that best explains why the population of Africa is distributed the way it is. Be prepared to explain your reasons for this statement in our next class.

INTRODUCTION -- ACTIVITY 4

A TEACHING GUIDE

A) Introeuction: The purpose of this activity is to add to the student's knowledge of the major physical features of Africa and to become familiar with the way people have distributed themselves over this region. An equally important purpose is to acquaint the student with the mode of inquiry that will be used throughout the following units and daily lessons. The Study Guide for Activity 4 and the student answers thereto serve as the vehicles for accomplishing these purposes.

The specific objectives of this activity are:

To know the variety of physical features existant in Africa south of the Sahara.

To know that in many instances there is a direct relationship between population distribution and various geographic factors in this region.

To know how and where the population of this region is distributed.

To determine relevant from irrelevant data.

To be able to read and interpret information portrayed on maps.

To categorize data, note similarities, trends and commonalities.

To make inferences from data.

To synthesize data into a general statement which explains the data relative to the initiatory problem.

B) Materials: Resource maps
Study Guide for Activity 4

C) Suggested Teaching Strategy:

1) Start class by clarifying any questions regarding items 1 and 2 of the Study Guide for Activity 4. Ask the class to indicate the places where there are large concentrations of people and places where there are none or very, very few.	(In doing this have students check each other. "Correctness" of answers should be judged on whether or not the data on the maps support the answers.)

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2) Ask volunteers to <u>read their</u>
<u>answers' to question 10</u>. List
the essence of these answers
on the board. In case of con-
flicting answers encourage the
students to use the maps to
substantiate or refute the posi-
tions involved. Make appropriate
modifications in the list on the
board.

3) Then ask: WHY DO AFRICANS LIVE
WHERE THEY DO? Have the class
<u>use the items on the board to</u>
<u>develop a generalized statement</u>
<u>that takes all these items into</u>
<u>account</u>. Write it on the board.

4) Then, have the class reflect on
how they arrived at this state-
ment.

 a) Ask: WHAT HAVE WE BEEN DOING?
To assist the students in
answering this, point out that
the statement they just made
grew out of a <u>problem</u> (quest. 3
on the study guide).

 b) Ask: WHAT STEPS DID YOU GO
THROUGH TO GET TO THIS STATE-
MENT--TO SOLVE THIS PROBLEM?
Have the students examine the
study guide carefully to
identify these steps.

 c) Help the students identify the
major steps in inquiry by
referring to the study guide
questions. Help them explain
the nature of each step.

 d) Ask: WHAT IS THIS METHOD
CALLED?   Point out that this
method of inquiry can be used
in social studies and is the
method they will be using
henceforth in the study of
Africa south of the Sahara.

Point out that they have used
this method of inquiry during
the preceding days. They have

The students should identify the
following steps:

Quest. 3 -- <u>The problem</u>
Ans. to 3 -- <u>The hypothesis</u>

Quest. 4 -- <u>if...then statement</u>
             identifying the con-
             sequence of a hypo-
             thesis and telling
             what to look for in
             order to prove it.

Quest. 5 -- the <u>search for data</u>
             to prove the hypothesis

   5a) -- supporting data
   b&c) -- contradictory data

Quest. 7-9 -- <u>evaluating</u> data

Quest. 10 -- <u>the conclusion</u>

a hypothesis about Africa's
geography which they articu-
lated in response to the film-
strip the first day. The home-
work assignments and the film-
strip on climate provided them
data against which to check
the accuracy of their hypothe-
sis. At the end of yesterday's
class they drew some conclusions
about their investigation.

e) Refer to the terms developed
the first day that describe
the physical geography of Africa.
Have the students comment on
their accuracy in the light of
what they now know. Ask the
students to describe the physi-
cal geography of Africa.

(Have them write these state-
ments in their notes.)

Students should note:

It is varied.
Most of it is savanna.
There is little desert south
of the Sahara.
There is little jungle or
rain forest.
Africa is a plateau that slopes
to the west.
It has a variety of climates--
even on the equator.
The climate regions are some-
what symmetrical--in the same
order as one goes north or
south away from the equator.
and so on...

f) Have the students treat the
statement previously made
(in answer to #3 above) as a
hypothesis. Ask them to make
an "if...then" statement based
on it. Have them describe how
they would test the hypothesis.

Tell the students that the
study of Africa using this pro-
cess of investigation will be
continued in the next class.

Distribute the Study Guide
for the next activity--INTRO-
DUCTION TO PEOPLES OF AFRICA.
Direct the students to complete
it and bring it to the next
class.

Africans live where they do
because...

If the reason(s) Africans live
where they do is (are), then...

Select two of the locations listed in question 4 and for each write a short paragraph describing what its climate is like.