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ABSTRACT

In order to live and prosper in both natural and social environments, humans need to understand their origins, composition, characteristics, and life-sustaining processes. Education is a way to increase understanding of those worlds. The introduction discusses the common existence and interdependence of man and nature. Chapter 1 describes the development of a social ethic by the individual that dictates thoughts and actions. The lower elementary grades are the place to begin nurturing a personal code of conduct. Students can study issues, ponder alternatives, design strategies, implement solutions, and make critical decisions regarding problems that effect humans and nature. Chapter 2 focuses on education with multi-grade (K-12) programs on natural and social environmental awareness. A proactive action model illustrates an approach to inquiry. A discussion of programs and teaching approaches precedes a critique of three curriculum designs and management styles. Chapter 3 looks at utilizing natural and social surroundings for K-12 students to provide for experiential-based learning and skill development. Chapter 4 highlights several instructional strategies, learning experiences, sample concepts, activities, and resources for students in K-12. Chapter 5 explores the common experiences in elementary and secondary level preservice training that is required, the different specializations that are needed, and implications for teacher education. A reflection on teaching students to be proactive related to the natural and social environments precedes biographical information on the author. (CK)

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# environs

LIVING IN NATURAL AND SOCIAL WORLDS

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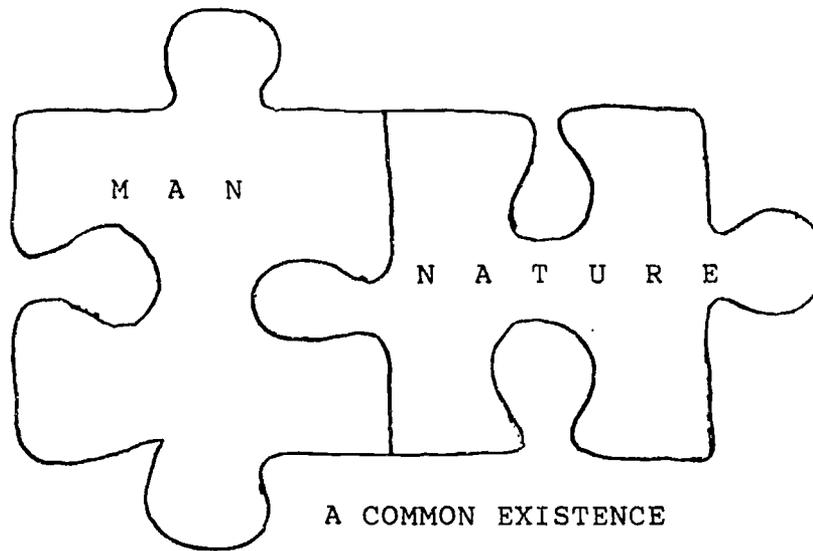
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## INTRODUCTION



Because MAN and NATURE are inextricable entities sharing a common lifespace, natural and social (human-made) environments are interactive and interdependent for maintenance of processes and prosperity of species. Environmental phenomena, e.g., people, places, things, and events, exist in a perpetual state of interlocking dependency.

MAN constantly intrudes upon NATURE, and at times the two seem to be on a collision course -- resulting in their mutual destruction. In order to live and prosper in both natural and social worlds, MAN must know something about them; their origins and composition, characteristics and traits, and life-sustaining processes.

MAN must understand and acknowledge his dependency upon NATURE for sustenance. We must become environmental constructionists; individuals seeking to safeguard earth's lifespace environment, and building for tomorrow.

MAN must learn to intelligently conserve, manage, and protect natural and social/human resources. No matter where MAN lives on the surface of the earth, the unique characteristics of surrounding natural environments have a dramatic impact upon his lifestyles. The culture traits of diverse social groups greatly influence our relationships with nature and fellows.

What is MAN's role in NATURE? How do we, as individuals, fit into established culture patterns and social schemes? Each generation of MAN must ask these questions of itself, and must seek to find its place in the global biosphere. How we answer these questions, and how we choose to act upon those answers will determine the inevitable fate of MAN and NATURE on earth.

As the human species developed, intellectually and socially, over the course of centuries, MAN developed a technological capability to alter natural ecosystems;

to change the course of rivers, to mold the terrain, and to reclaim land from the seas. Our goal, as a species, must be to create and maintain cooperative living habitats within which MAN and NATURE coexist and prosper.

Too often, in the past, MAN has looked to the forests and viewed bounteous trees of gargantuan proportions -- CUT THEM DOWN! He next turned his attention to ...

the churning seas and discovered fishes galore -- CATCH THEM ALL!

the blue skies and witnessed the migration of countless numbers of birds -- SHOOT THEM DOWN!

nature's finite mineral resources -- DIG THEM UP!

the rolling hills and majestic mountains -- TEAR THEM DOWN!

the sparkling, rushing waters of mighty rivers -- DAM THEM UP!

the kaleidoscopic hue of wild flowers aglow in the sunlight -- PLOW THEM UNDER!

Wherever MAN looked he saw NATURE and had an insatiable urge to master it -- even to destroy it!

Within the global community of MAN exists a lack of understanding about- and an intolerance of those who are different; individuals and cultures that act in different ways, those who worship in a different style, those who speak in different tongues, those who dress in different costumes, those who eat different foods, and those who hold beliefs different from our own. Because we don't truly know each other, individuals, cultures, and nations are mutually fearful and suspicious.

If the human species is to survive and prosper in earth's lifespan, we must come to know and respect one another.

MAN must protect fragile natural environments so that every human being - present and future - can benefit from the Four Freedoms of Humankind:

Freedom to recreate, and to enjoy clean/  
safe environments;

freedom to survive, as individuals and  
as a species, within natural and social  
environments;

freedom of self-determination as a species  
to plan for the future by practicing  
stewardship today; and

freedom from want -- guaranteeing clean  
air and water as well as living space.

Truly, MAN and NATURE do lead a common existence  
on earth. We must remember that fact, and exhibit  
that understanding, each-and-every day, through our  
thoughts and actions.

CHAPTER I      MAN'S PLACE IN THE WORLD

If each of us is to define our identity, and then relate our 'self' to others and nature - in our daily lives, we must develop a social ethic that dictates our thoughts and actions.

The place to begin nurturing this personal code of conduct, and concern for nature and human beings, is in the lower elementary school grades.

Students' attention should be focused on the origins and characteristics of diverse natural and social environments. They must be provided ample opportunities to interact with, and learn from, natural and social phenomena. During this interactive process with environments, students will begin to develop a sense of 'self' -- in relationship to the global lifespaces.

To isolate children and youth from the lifespaces environment of the local community and the world-at-large is to diminish the relevance of formal education to the real world that surrounds the school -- and of which the school is a part. Students come to school from the real world. They are a part of it, and they know about it.

It is the responsibility of schools to relate classroom-based instruction and students' learning to the real world in which students live and interact with nature and other human beings.

Students must be exposed to concepts, content knowledge, and subject-related skills representative of the several academic areas of the curriculum. Knowledge acquired and skills developed must relate successful functioning, on the part of the individual, in natural and social settings -- now and tomorrow.

Today, the traditional view of the world as being made up of separate nations or armed camps squaring off against one another, as did happen during the Cold War period, is being replaced with a focus on the role(s) of individuals in a world system. Attention must be paid to ecological, economic, political, and social issues and situations to a greater degree, now, than ever before in recorded history. With the demise of the Union of Soviet Socialist Republics (USSR), MAN's cultural and political boundries are realigned; resulting in an upheaval that has taken its toll of human life and the wanton destruction of nature.

If we should ever doubt our individual and collective involvement in the global community of MAN, all we need to do is pick up a daily newspaper, scan the pages of any news magazine, listen to the radio, or turn on the nightly TV news to realize that other human beings and the forces of nature impact our daily lives -- often times in ways and of a magnitude that we cannot readily comprehend.

We must become global citizens who are:

NATURE SENSITIVE . . .

aware of the natural world around us;

informed about past and present conflicts, issues, problems, and situations related to natural environments;

empathetic with the plight of nature - locally, regionally, nationally, and internationally;

understand the character of diverse natural environments both nearby/close to home and distant/far-removed;

exhibit attitudes and opinions about  
ecology-related issues in contemporary  
life through proactive action;

perceive and understand relationships  
between humans and nature.

CULTURE LITERATE . . .

aware of the social world(s) around  
us;

informed about past and present conflicts,  
issues, problems, and situations related  
to social environments;

empathetic with the plight of diverse  
culture/ethnic groups;

understand the character and origins of  
social environments both nearby/close to  
home and distant/far-removed;

exhibit attitudes and opinions about  
social environment-related issues in  
contemporary life through proactive  
action;

perceive and understand relationships  
among/between culture/ethnic groups;  
  
recognize the differences and  
similarities among the traits of  
diverse cultures.

Earth Summit's AGENDA 21 (1992) is a prime example of how students can bring their nature sensitive/culture literate attitudes and opinions to bear on issues confronting the lifespace that exists locally -- as well as the global lifespace. Going out into the community to collect data will focus students' attention on the issues confronting assembled delegates in Rio de Janeiro, Brazil.

Problems related to earth's atmosphere, forests and land resources, oceans and freshwater resources, wastes, biodiversity, poverty, health, energy, consumption patterns, and demographic pressures will not go away simply because people and their governments choose to ignore them.

Beginning now, in communities and schools all across this nation - and throughout the world, children, youth, and adults can study these issues, ponder alternative solutions, design strategies to implement solutions, make critical decisions, and act in a proactive fashion so as to resolve conflicts and solve problems that effect MAN and NATURE -- today and for all of our tomorrows.

Today, as has always been true through the ages, MAN's place in the world is to coexist with NATURE! Action must be taken to clean-up natural and social environments, establish and enforce policies and programs that guarantee the maintenance of a quality global lifespace, and educate nature sensitive/culture literate individuals.

CHAPTER II                    A FOCUS ON EDUCATION

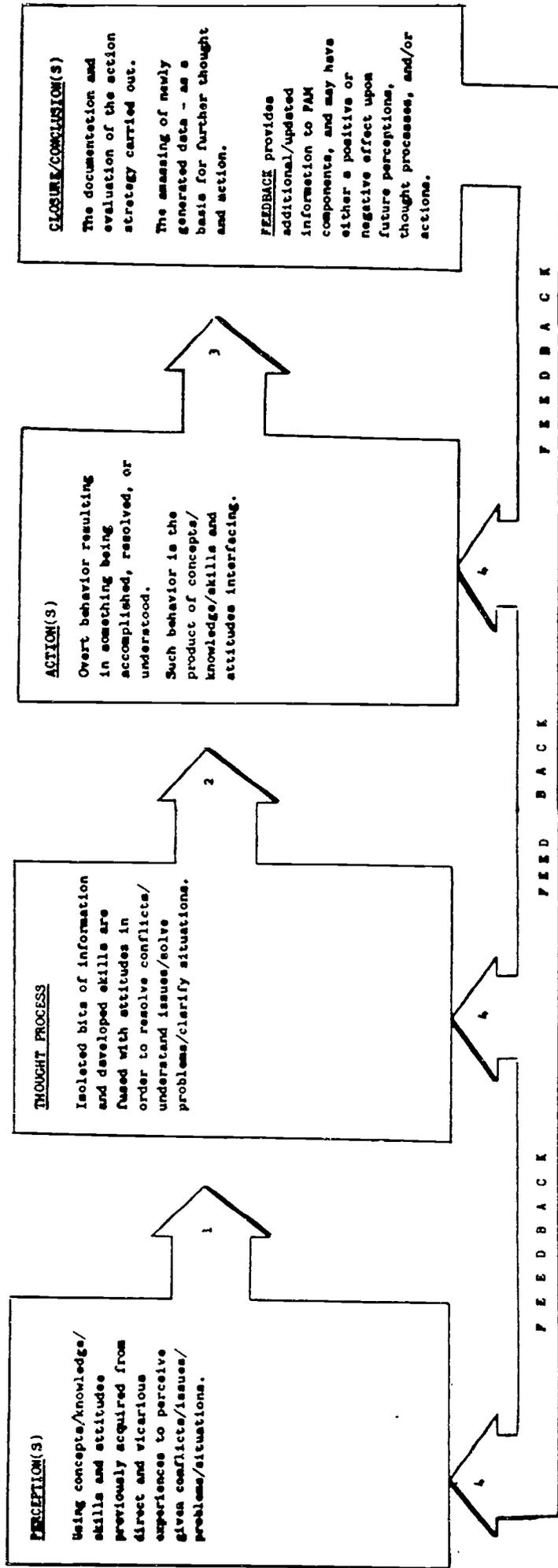
If preparing today's children and youth to become tomorrow's global citizens means developing their awareness and understanding of human population growth and distribution; knowing how to skillfully manage finite and renewable resources; insuring adequate supplies of clean water and food; protecting the quality of the atmosphere; preventing the further extinction of plant and animal species; insuring quality social environments; and creating and maintaining cooperative living habitats, we must begin, now, to educate a generation of 'quality environment' conscious individuals who will intelligently and fairly balance the needs and interests of MAN and NATURE whenever decisions must be made regarding the use of finite and renewable resources as well as exploiting natural and social settings.

Multi-grade (K-12) programs, focusing on natural and social environmental awareness, must be designed to expose students directly, e.g., nature walks, field trips, daytime hiking trips, graphic studies research in the context of the community lifespace,

overnight hiking/camping trips, and vicariously, e.g., films, filmstrips, slides, videotapes, and guest speakers, to natural and human-made phenomena that is nearby/close to home and distant/far-removed. Students must be encouraged to interact with people, places, things, and events that have an impact upon their daily lives.

Students' perceptual awareness of the 'things' around them is enhanced when they notice, study, and learn from real world phenomena found in 'natural' settings -- whether natural or social environments.

The PROACTIVE ACTION MODEL (PAM) can be used with integrated studies curricula to affect students' awareness and perceptions of phenomena as well as their intellectual and research skills development. (See Page 14)



PROACTIVE ACTION MODEL (PAM)

PAM is a modified 'scientific method' approach to inquiry that allows K-12 students to continually apply and refine intellectual skills; to perceive the world(s) around them; to understand the relationships among/between the natural/physical and social sciences; to apply acquired knowledge and skills, repeatedly, to new/different real world experiences without tutorial supervision; and to further inquire and learn on their own.

If things learned and the skills developed in school are to become a part of each student's personality and social style, then they must be provided opportunities to learn on their own -- using a process (such as PAM) that will enable them to perceive situations, think through a process to confront situations, collect relevant data upon which intelligent decisions will be made, and be accountable for their overt actions.

Throughout the K-12 schooling experience, students must be directly involved in a continuous, four-step process of natural/physical and social science concepts, knowledge, and skills:

ACQUISITION through teacher-directed instruction, independent reading and research, watching audiovisual presentations, listening to guest speakers in the classroom and at field-based sites, and discussions and debates.

APPLICATION in classrooms and at field-based sites -- using acquired subject matter content and skills of inquiry to achieve goals, and to become proactive citizens.

REINFORCEMENT of acquired concepts, knowledge, and skills through repeated application in school and throughout one's personal life -- adapting and using that which has been learned in diverse real life and real-to-life (simulated) situations.

REFINEMENT or demonstrated proficiency in the use of acquired knowledge and skills after repeated application.

EAPs

Environment Awareness Programs should be designed for classroom teachers and students alike. In 1982, for example, the ERIC system published this author's Proactive Students in Global Education documents for students (ED 211357) and teachers (ED 211 493).

Most K-12 classroom teachers are well-versed in subject matter content, pedagogical strategies, classroom management, and the assessment of students' learning, but few are versed in knowledge related to science/social studies curriculum integration of selected subject matter concepts, content knowledge, and related inquiry skills. Few understand the nature and characteristics of natural/social life-space environments.

Thus, teachers must be formally introduced to lifespace settings/locations and phenomena prior to designing thematic lessons and units -- to enhance students' awareness and understanding of the real world(s) around them.

MAN and NATURE must be the focus for inservice training of classroom teachers across the K-12 spectrum. They must be taught ways by which they can expand the walls of classrooms to include real world phenomena into the instructional process.

Working with community resource people representing a wide range of experience and expertise related to real world processes taking place in the day-to-day 'life' of the community, teachers visit natural/social environments and conduct studies for purposes of collecting data which will be incorporated into thematic units. Along with teachers, interested parents should be involved in this 'back-to-school' experience.

Teachers and parents must be able to think holistically about the natural/physical and social sciences, and about the composition of the lifespace if they are to nurture holistic thinking in their students (sons and daughters).

Looking at the Kindergarten through Grade Twelve structure of public school education in the United States, as well as the formal training of classroom teachers, typically those in the elementary/lower secondary (or middle) grades (K-8) place a greater emphasis on holistic teaching than do their counterparts in Grades 9-12.

In a self-contained classroom, the teacher maximizes the limited amount of available instructional time that he/she has with students by, first, mentally 'connecting' concepts/knowledge/skills from the several subjects, and then designing lessons/units and learning activities and experiences that introduce students to integrated instruction. Thus, students think and learn in a holistic manner. They begin to make 'connections' or build mental bridges between otherwise seemingly isolated (not discipline-related) bits or pieces of information such as dates, names, events, and even processes that are not logically sequenced or related to one another in ways that make any sense or are perceived as having any importance in children and youths' daily lives -- in the real world.

Often times, in self-contained classrooms, students are provided opportunities to apply, reinforce, and refine acquired knowledge and skills after initial

learning has taken place -- under the guided practice supervision of the teacher who presented the instructional activity from which students acquired content knowledge and skills. Because of the departmentalized structure of many middle grade schools (6/7-8) and high schools (9-12), similar opportunities to apply, reinforce, and refine acquired knowledge and skills are denied -- because of the typical fifty minute period format per subject.

In the typical secondary school grades structure (7-12), students are 'shared' among several teachers who instruct them in many subject matter areas of the curriculum. Each teacher exhibits a different personality style, uses different methods of instruction, values students differently, enforces different rules in his/her classroom, and judges students' achievement in a different light. No wonder many students are confused!

In most high schools, feeble attempts are made, by the several departments and their respective teaching staffs, to team plan (at each grade level) instruction, and to help students make the 'connections' among the concepts/knowledge/skills related to

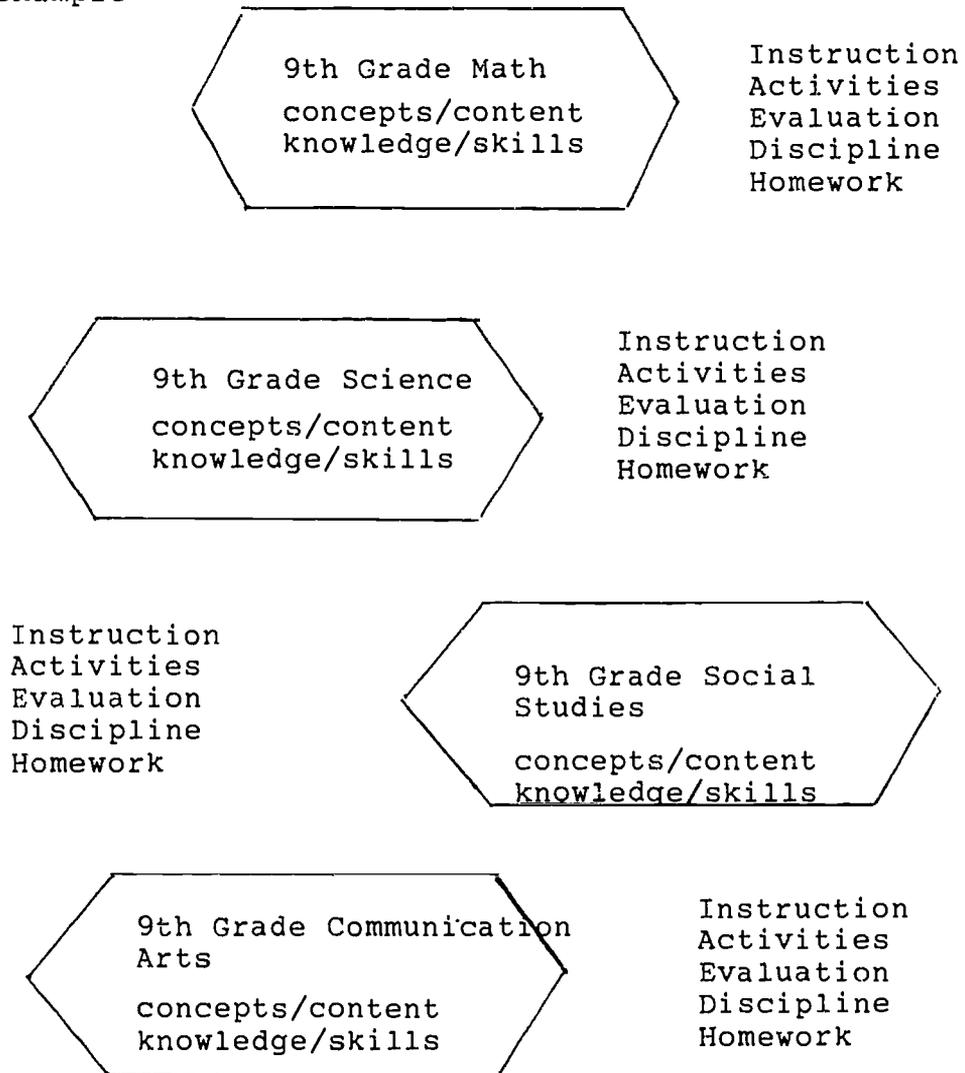
mathematics, the sciences, the social studies, languages, the Humanities, vocational education, etc. There is generally an absence of holistic thinking among the teachers as well as among students!

### The Cellular Structure of Learning

At the high school level, students' attention is focused on learning in the several segregated subjects. Teachers at this level are usually steeped in subject matter content, and related processes/skills development, but pay less attention to differences in students' learning styles, human development theories and processes, and the degree of individualized attention that many youth need. Mass education (presenting the same material - to all the students - in the same way - at the same time) is the order of the day. IF the teacher did his/her job (presenting the information planned for a given day/class period) and the students didn't learn (that is, acquire and comprehend - as well as retain - the content of a specific day's lesson) then there is something wrong with the students -- not the teacher's method of presentation, time spent answering students' questions, reteaching, or guided practice.

Within the confines of the typical high school, teachers are cloistered in small units called departments. During the course of a typical day, these teachers usually interact, in a professional way, only with fellow teachers within their department. Thus this notion of segregating the several subjects (and thus preventing students from gaining a holistic perspective about their learning -- and related experiences) is perpetuated.

For example



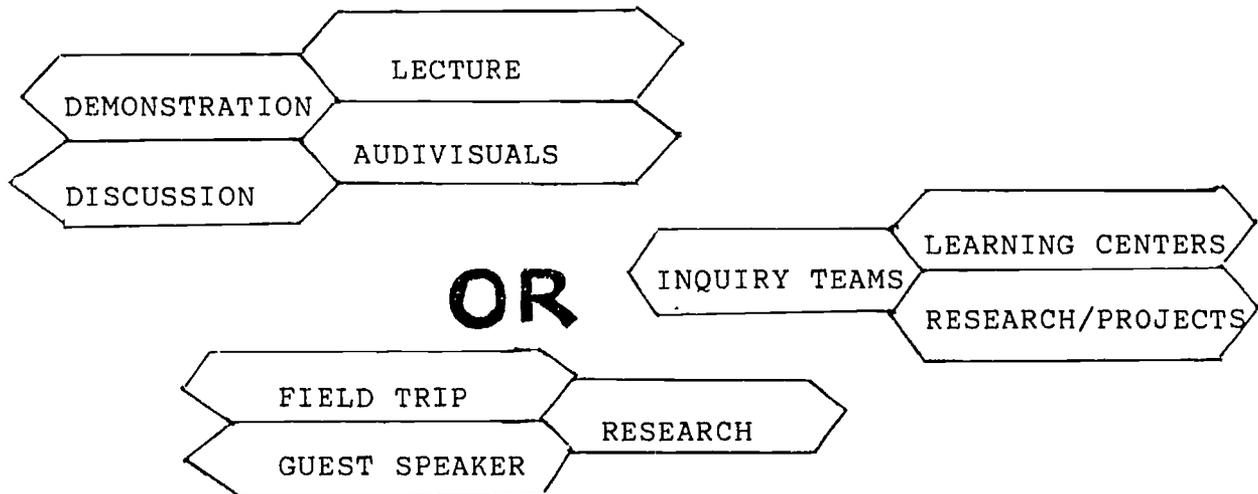
Teachers in the high school grades function as knowledge specialists. Attention is paid to pedagogical strategies, content to be covered, instructional activities, instructional-support materials, and the time required to teach, for example, EARTH SCIENCE separate from WORLD GEOGRAPHY. Because of this policy of subject matter segregation, many students (who would otherwise be capable of understanding) do not readily perceive and understand the 'natural' relationships or connections between EARTH SCIENCE and WORLD GEOGRAPHY. It may be that teachers from the elementary grades should serve as integrated disciplines mentors to secondary teachers.

The cellular learning concept (and construct) applies to instruction as well as to academic subject organization (departments). Often times, teachers do not view the myriad of materials and resources available to enhance teaching/learning in a holistic manner. For example, how the guest speaker, slides about a community resource site, and a field trip to that site relate to one another. Too often, students are exposed to ONLY the guest speaker, ONLY the slide presentation, or ONLY to the field trip experience.

When planning for an integrated natural/physical and social science experience, teachers from these several disciplines need to determine when best to focus students' attention on learning in the classroom as opposed to inquiry in natural/social settings found outside the school. Thus, it may be necessary to have a guest speaker visit the classroom -- with slides that depict the characteristics of the site, prior to the students actually visiting that location. Using this strategy, the guest speaker, the slides, and the actual exposure to the site make sense to students.

Teachers need to pay attention to the impact that different pedagogical strategies, instructional materials, community resources, and technology (when combined) have upon students' learning, knowledge/skills application, reinforcement, and refinement in real world situations and settings.

WHAT WORKS BEST???????????



Of course, the answer to WHAT WORKS BEST???????? depends upon stated goals and instructional objectives, the content/process(es) being studied, the availability of community resources (including people), the time allotted for study, the ability/interests/needs of students, available instructional materials and technology, and the assessment/evaluation criteria.

Writing in the Spring 1993 issue of Schools in the Middle ("Student Self-Scheduling to Meet the Goals of 21st Century Education", p 40-44), this author discussed a menu of student choice. Not all students learn, nor want to learn, the same things at the same time in the same way and to the same degree of proficiency. While some students are more alert and learn more effectively during the morning, others seem to perform equally well all day. The same is true of teachers. The challenge is to match teachers and students of similar styles.

If teachers are truly meeting the educational needs of ALL students, then their roles (during the course of a typical day at school) will vary from situation to situation, and they will be involved in activities many times that do not require direct contact time with students!

At different times during the school day,  
teachers might be found:

In the media production center working  
with inquiry teams as students develop  
multimedia presentations.

In the library helping students research  
primary and secondary materials.

Meeting with guidance counselors and  
fellow learning enhancement team members  
to discuss students' individual learning  
plans.

Meeting with learning enhancement team  
members and support services personnel  
to design and develop instructional  
strategies and student-centered activities.

Touring community resource sites as part  
of the lesson development process.

Working with students in need of remedial  
help.

Conferring with instructional materials  
specialists.

Meeting with parents.

Working with students in the traditional classroom setting or at field-based sites in the community.

Always in the back of the teacher's mind must be the haunting question: HOW DO STUDENTS LEARN BEST?

When considering an integrated study of natural/social environments and related phenomena, thought must be given to learning situations such as:

field trips into the community  
lifespace;

guest speakers in the classroom;

community resource people serving  
as field-based site guides and  
instructors;

graphic study research projects  
at field-based sites;

anthropological digs;

nature studies at selected sites;

laboratory experiments in school;

viewing audiovisual presentations  
in school and at home on the  
television;

working in small inquiry teams --  
engaged in cooperative learning  
activities;

interviewing community resource  
people;

travelling to foreign lands -- to  
observe diverse culture traits;

hiking trips over the weekend;

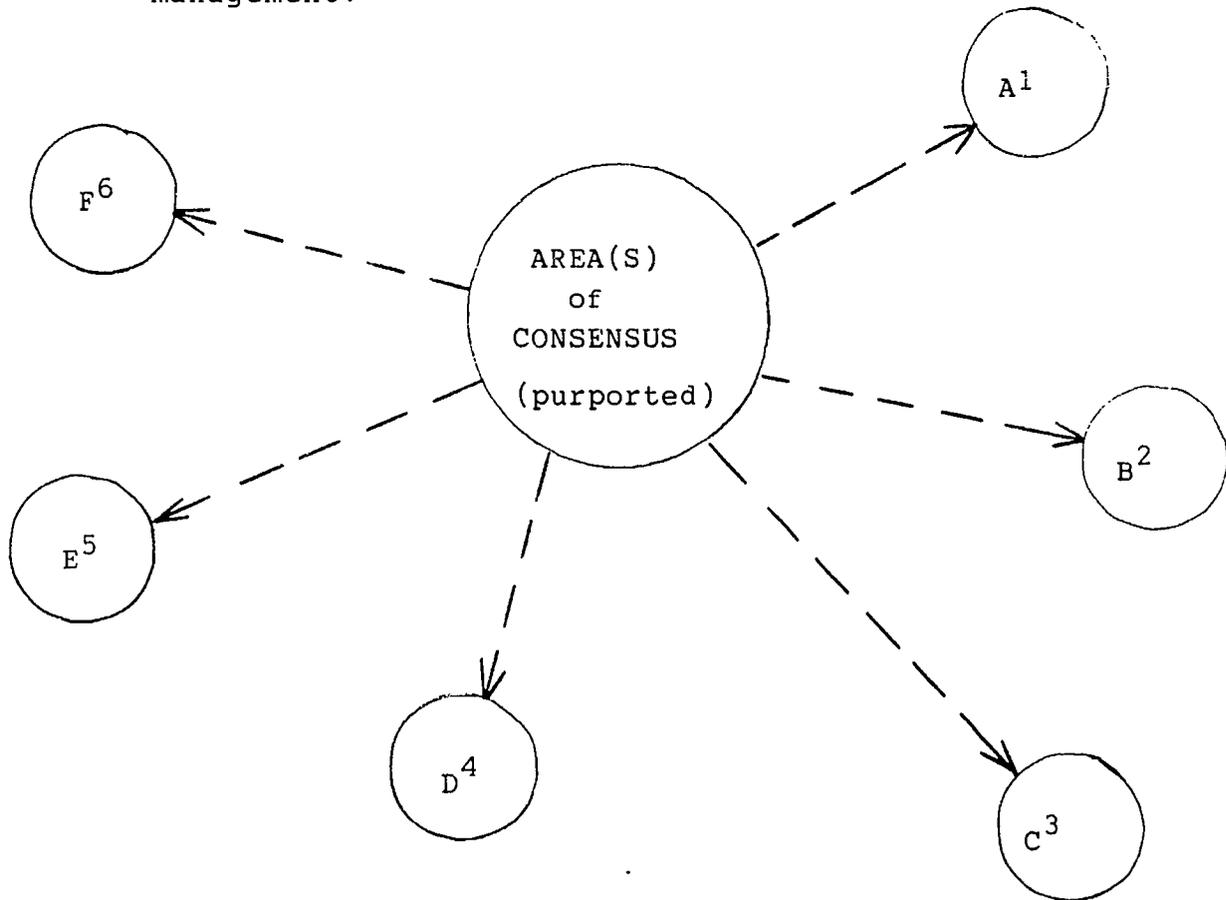
writing to pen pals in foreign lands.

When it comes to the intricate process of learning, not all students learn best in the same way. Not all students learn the same thing at the same time. Not all students want to learn the same thing(s). Not all students have a perceived need to learn the same thing(s) at the same time. Some learn best by listening while others achieve best by observing or as a result of hands-on experiences. Most learn best by combining two or more styles -- such as listening to a videotape dialogue while watching the scene being acted out in natural color -- in native or natural surroundings.

Curriculum Designs

When considering instructional program development or curriculum change, there is a need to pay close attention to the existing curriculum design or pattern found in 1) the system-at-large, 2) individual schools in the system, 3) the several subject matter-oriented departments, and 4) individual classrooms.

EXPLOSIVE MODEL of curriculum design and management.



The degree of distance from the AREA(S) of CONSENSUS to each school in the system (A-F) OR to each teacher in a given school within the system (A<sup>1</sup> - F<sup>6</sup>) is determined by how closely the school and/or teachers within the school adhere to 1) the agreed-upon system wide curriculum, 2) the use of adopted textbooks and instructional materials, 3) incorporating agreed-upon learning activities and experiences into the instructional process, and 4) the agreed-upon assessment/evaluation criteria.

When each school in a system, or when the several teachers in the system schools, is/are allowed to DO THEIR THING -- without regard for system-wide policies and procedures -- chaos in the presentation of learning experiences to students is readily evident. Each unit/every teacher chooses a preferred way to instruct, to have students learn, and to measure students' success -- with utter disregard for the AREA(S) of CONSENSUS.

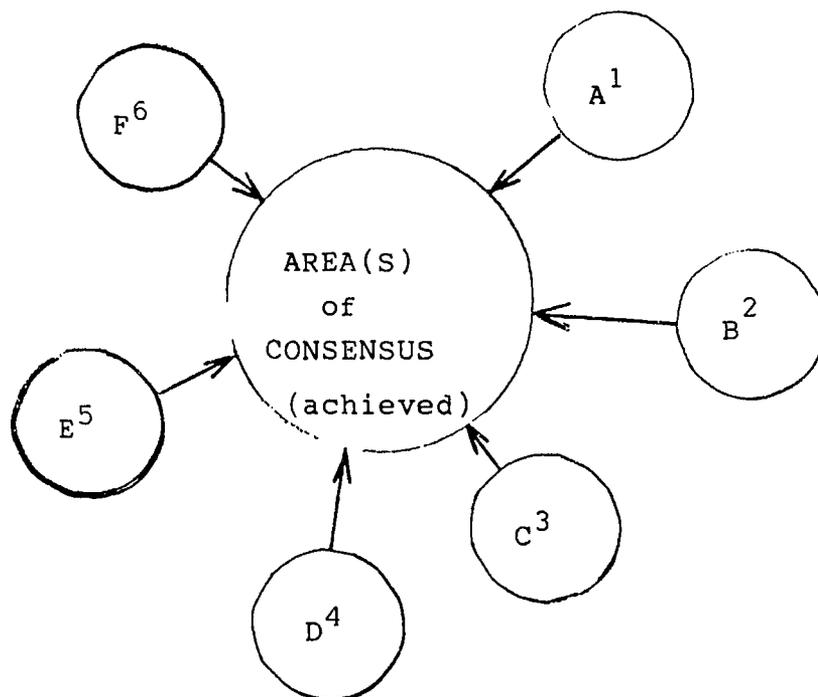
Truly, the EXPLOSIVE MODEL of curriculum design and management has a shotgun-going-off effect; the discharge is scattered in many directions -- without hitting the target every time.

A lingering problem with this model is evidenced when students from different 'feeder schools' come together at a central facility. For example, because students' learning opportunities will vary from school-to-school, some will come to their 6th grade study of natural/social environments with an in-depth knowledge and a high level of skills development -- while others (through no fault of their own) will display a dearth of knowledge and related skills ability.

What are the 6th grade science/social studies teachers to do? Initially, they should conduct a diagnostic assessment of students' abilities and background knowledge related to the course of study. For those students who are ready to undertake planned activities, the learning enhancement team members should supervise their individual and small inquiry group projects. For those students who need to 'catch up' (because their respective teachers did not teach the purported AREA(S) of CONSENSUS), the LET teachers should create small cooperative groups and work with them -- until they are ready to move into tasks/project activities of a more-

demanding nature.

IMPLOSIVE MODEL of curriculum design and management.



The degree of distance from each school in the system (A-F) OR from each teacher in a given school within the system (A<sup>1</sup> - F<sup>6</sup>) to the AREA(S) of CONSENSUS is determined by how closely the school and/or teachers within the school adhere to

- 1) the agreed-upon system wide curriculum,
- 2) the use of adopted textbooks and instructional materials,
- 3) incorporating agreed-upon learning activities and experiences into the instructional process, and

4) the agreed-upon assessment/evaluation criteria.

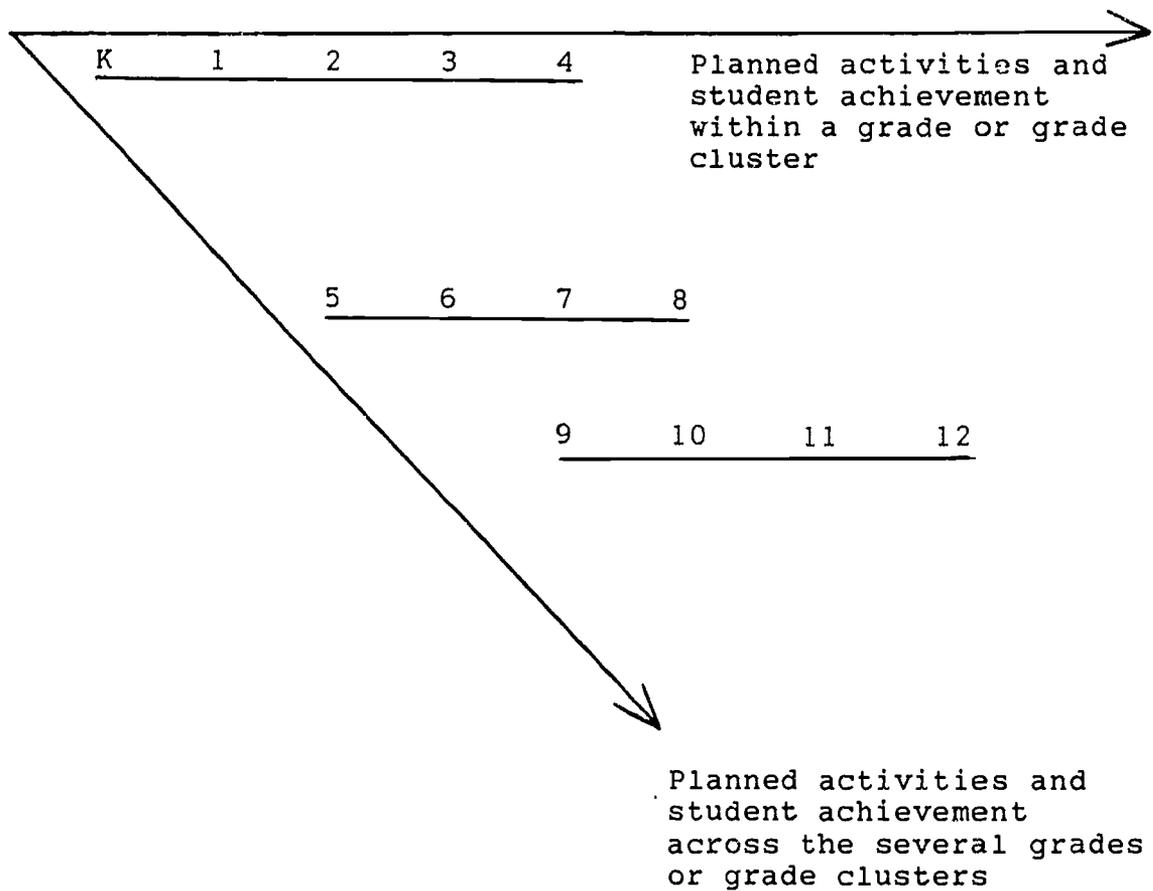
In systems where the IMPLOSIVE MODEL exists, there is evidence of unity-of-purpose among the several schools and teachers. Teachers use agreed-upon strategies and materials, and plan together -- to guarantee that ALL students acquire the prescribed content and develop the necessary intellectual and research skills.

Thus, regardless of the 'feeder schools' from which any/all students come to the 6th grade study of natural/social environments, they will be equally prepared for the tasks-at-hand.

The transition from the elementary schools to the middle grades school will take place without incident, and students will be able to directly involve themselves in planned classroom and field-based activities without any delay or interruption in the learning process; that is, knowledge/skills acquisition, application, reinforcement, and refinement.

C/I/S

A CONTINUOUS (K-12), INTEGRATED (Multi-disciplinary), SEQUENTIAL (Developmental) curriculum provides for the orderly and logical progression of students through the several grades -- as they acquire, apply, reinforce, and refine concepts/knowledge/skills related to diverse subject matter areas.



CHAPTER III ECO/SOCIAL STUDIES

The real world outside the school should become the classroom in which students confront the realities of everyday life. This planned-for introduction to/involvement with lifespace phenomena and situations (using the CONTINUOUS/INTEGRATED/SEQUENTIAL format) provides the basis for reality-based learning and skills development that has application to NOW and TOMORROW.

In the context of natural and social surroundings, students receive sensory stimulation -- which nurtures personal reactions to situations needing attention and resolution.

K-12 students should be introduced to:

the effect(s) that personal/group decisions and actions have upon others and themselves;

developing a sense of responsibility to protect living things in nature that are dependent upon MAN for their survival;

developing a personal environmental  
ethic;

increasing their understanding of  
natural environments;

increasing their understanding of  
social environments;

better understanding the impact that  
MAN has had/is having upon the total  
lifespace environment;

better understanding the impact that  
NATURE has had/is having upon MAN's  
lifestyles, cultures, and value systems;

promoting activism and community service  
for good citizenship;

developing a stewardship attitude  
regarding the conservation and management  
of natural and human/social resources;

developing decision-making and problem  
solving skills;

developing social attitudes, behavior  
patterns, and values;

promoting the concept of perceptual  
self-denial through everyday living;

developing understandings of  
ecological relationships between  
MAN and NATURE;

identifying problems and situations  
affecting natural and social  
environments and related phenomena;

developing personal styles of working  
actively for conflict resolution and  
problem solving.

The goals of ECO/SOCIAL Studies programs should be:

content acquisition and application  
in new and different real world-based  
situations;

intellectual and social skills  
development and application to real  
life conflicts, issues, problems, and  
situations that involve natural and  
social environments;

values clarification and the development  
of a personal social ethic; and  
attitude/behavior modification --  
resulting in overt proactive action  
designed and undertaken to resolve  
conflicts, clarify issues, solve problems,  
and to better understand situations and  
processes found within the context of  
natural and social environments.

A typical ECO/SOCIAL Studies program (K-12)  
is designed to:

introduce students to natural and social environments that are both nearby/close to home and distant/far-removed, and to acquaint them with environmental characteristics and related phenomena;

provide students with experiences that are field-based (within the context of natural/social environments) as well as classroom-based;

introduce students to the inter-relationships and interdependence that exist between natural and social environments;

help students understand the relevance of learning that takes place in the school and at field-based sites to everyday living;

enable students to interact (and learn from) community resource people as well as places, things, and events;

help students develop social living skills;

help students develop life survival skills that can be used in natural environments;

help students develop an understanding of the basic structure and functions of human societies/cultures -- past and present;

help students understand the economic dependence of communities, states, and nations upon natural resources -- both finite and renewable;

help students understand the economic dependence of communities, states, and nations upon human/social resources;

develop within students a sense of cooperation with fellows and nature.

### The NEW Geography

In 1981, the International Activities Committee of the National Council for the Social Studies (NCSS) declared that technological advances, increased trade, tourism and cultural exchanges, environmental concerns, competition for markets and scarce resources will draw nations and people into increasingly complex relationships in the decades ahead.

The day-to-day lives of people in all nations will be increasingly influenced by cross-cultural links. Each of us will be required to understand and interact with people, cultures, languages, lifestyles, and value systems unlike our own!

NATURAL GEOGRAPHY studies should include:

identification of various land forms;

identification of flora and fauna;

investigation of natural resources;

spatial relationships between  
phenomena -- physical distance  
and cardinal direction;

geological studies of rock/soil  
types and the ages of rock formations.

SOCIAL GEOGRAPHY studies should include:

identification of various human-made  
phenomena -- places (structures) and  
things (objects and inventions);

investigation of social resources --  
facilities, structures, processes;

spatial relationships between phenomena --  
physical distance and cardinal direction;

anthropological studies concerning  
diverse cultures/civilizations.

Levels of ..... COMMUNITY

GLOBAL/INTERNATIONAL/MULTI-CULTURAL

Phenomena that is generally distant/far-removed from the individual.

NATIONAL/CONTINENTAL

Phenomena that is generally distant/far-removed from the individual.

STATE/REGIONAL

Phenomena that is nearby/close to home AND distant/far-removed from the individual.

AREA/REGIONAL

Phenomena that is nearby/close to home -- in most instances.

LOCAL/AREA

Phenomena that is nearby/close to home.

As an individual matures and accumulates varied experiences (real and vicarious) into a personal frame-of-reference, his/her sense of COMMUNITY expands to include phenomena that is nearby/close to home and distant/far-removed -- which are found within the context of natural and social environments.

CHAPTER IV

INSTRUCTIONAL STRATEGIES AND  
LEARNING ACTIVITIES/EXPERIENCES

Working within the structure of an IMPLOSIVE MODEL of curriculum organization and management, a Learning Enhancement Team (LET) designs a thematic unit that weds selected concepts/content knowledge/subject matter-related skills with communication skills and researching/problem solving skills.

Because students need to know WHERE MAN LIVES (as related to geographical location and natural surroundings) and HOW MAN LIVES (as evidenced by adaptation to natural surroundings, lifestyles, culture traits, and manipulation of natural phenomena), LET members must pay close attention to pedagogical strategies and activities that will be used to formally introduce students (K-12) to the lifespace environment that exists locally, regionally, nationally, and internationally.

SAGE

By fusing elements of environmental education and culture studies into thematic units that provide opportunities for learning in the classroom AND at field-based sites within the context of the

community, the Student Awareness of Global Environments (SAGE) matrix format can be used to enhance students' research skills, and to help them visually compare the traits of diverse cultures.

SAGE is an approach to gathering and displaying data about cultures and natural environments that directly involves students in inquiry team activities, and enhances their ability to organize data and communicate that data to others in a visual form.

CULTURE TRAITS

CULTURES	1	2	3	4	5	6	7	8
A								
B								
C								
D								

- 1 Diet/Food
- 2 Clothing/Dress/Costumes
- 3 Shelter
- 4 Education
- 5 Family Structure/Duties
- 6 Recreation/Leisure
- 7 Government
- 8 Division of Labor

ENVIRONMENTAL CHARACTERISTICS

REGIONS	1	2	3	4	5	6	7
COASTAL PLAINS							
DESERTS							
MOUNTAINS							
RAIN FORESTS							
INTERIOR PLAINS							
POLAR ZONES							
JUNGLES							

1 Flora (vegetation)

2 Fauna (wildlife)

3 Weather (seasons)

4 Temperature(s)

5 Rainfall

6 Natural Resources  
(finite/renewable)

7 Topography (landscape)

Working in small inquiry teams, students research diverse global cultures and natural regions, collect relevant data on cardboard cards, and display their respective team findings on flannel matrix boards. When data from the several teams is collected and displayed, the entire class can share the information.

#### GRAPHIC STUDIES

Assuming the role(s) of inquiring natural/physical and social scientists, students develop investigative strategies related to perceived conflicts/issues/problems/situations related to natural and social environments, and go out into the lifespace environment to collect relevant data on film or video tape. The PROACTIVE ACTION MODEL (PAM) is used to think through and organize an inquiry strategy.

Functioning in small inquiry teams, students visit sites located in natural/social environments and investigate both phenomena and processes. Data collected on film or tape will later be edited and compiled into audiovisual reports. Inquiring students are provided opportunities to experiment with a new medium of communication and artful self-expression.

The post- data collection analysis of visual data collected by students enables them to mentally and visually connect (associate) otherwise seemingly isolated pictures or frames in a sequence (bits), and to arrange these images in ways so as to create coherent thought and sequence and tell a story. Visual data can be presented in slide/tape presentations, films, still picture displays (on bulletin or story boards), or video presentations -- complete with authentic color, motion, and natural sounds.

Classroom/Field-based Activities and Experiences.

Environmental resources form the basis for inquiry team activities in the lifespace environment. Those resources are:

PEOPLE (individuals/groups/cultures)

PLACES (geographic locations and physical sites that exist in natural/social settings)

THINGS (objects and flora/fauna)

EVENTS (happenings/occurrences of natural or social origin)

FIELD TRIPS. Students are taken to natural/social environment sites for purposes of exposure and inquiry. Pre-trip planning and post-trip follow-up activities are part of this exposure process.

NATURE WALKS. Students are taken to natural sites for purposes of exposure and inquiry. Pre-walk planning and post-walk follow-up are part of this exposure process.

DIARIES/LOGS. Students keep records of their experiences, and note their impressions.

FIELD TRAINING. Students participate in community service activities -- working with organizations that protect natural and social environments. This activity is closely-related to career training and skills development.

CAMPING/HIKING. Students are taken into natural environment areas and taught/apply acquired skills.

TIME PERSPECTIVE STUDIES. Anthropological and geological studies in natural/social settings.

FIELD STUDIES. Investigations related to the character and condition of natural and social environments.

NATURE LABORATORY. A physical site is identified and maintained as a learning site. Trails can be created, and the flora/fauna of the region can be marked for student inquiry.

The facility can serve as a:

permanent activity site;

site for leisure-time recreation; and

training site for teachers.

PROJECTS. A variety of individual, small group, or large group activities that can combine classroom/field-based studies. In school, students can research primary/secondary sources for data; they can use maps and globes to locate selected natural/social sites; they can create visual displays; they can create table-top diaramas; they can interact with guest speakers; they can be involved in role playing scenarios, skits, discussions, and debates.

SAMPLE CONCEPTS AND ACTIVITIES FOR  
STUDENTS IN K-12.

THE SCHOOL SYSTEM'S INSTRUCTIONAL  
PROGRAM IS DESIGNED AROUND THE  
IMPLOSIVE MODEL OF CURRICULUM  
ORGANIZATION AND MANAGEMENT.

THE CURRICULUM IS STRUCTURED TO BE  
CONTINUOUS (K-12), INTEGRATED (INTER-  
DISCIPLINARY), AND SEQUENTIAL  
(DEVELOPMENTAL).

CONCEPT	NATURAL RESOURCES: FINITE/RENEWABLE
GOAL(S)	<p>To acquaint students with natural resources found within the context of the local/regional lifespace environment.</p> <p>To acquaint students with ways that natural resources are used to support the local/regional economy.</p> <p>To acquaint students with careers and occupations related to the harvesting/mining of resources, resources conservation and management, and resources utilization in manufacturing processes.</p> <p>To acquaint students with ways natural resources are used in art, to provide food and shelter, and to enhance the quality of human existence.</p>
GRADES	5 - 6 - 7 - 8
ACTIVITIES	<p>Field trips to community/area sites to observe resources in their natural state/location.</p> <p>Tours of community/area manufacturing facilities to learn how natural resources are used to create products for human use/consumption.</p> <p>Field trips to artists' studios, to exhibits, and to museums -- to learn how natural resources are used to create pieces of art or how MAN represents wildlife in his art forms.</p>

Guest speakers in the classroom and at field-based sites discuss the character of natural resources. They also introduce students to concepts such as carrying capacity of earth, finite resources, renewable resources, stewardship, conservation, land use planning, reforestation, pollution (types), cooperative living habitats, interlocking dependency, and biodiversity.

Student inquiry teams research diverse cultures and natural environments to determine human adaptation, resources utilization and exploitation, and conservation policies/practices.

Students collect and use natural materials to create original pieces of art.

Students write poems and songs which reflect the impression(s) that nature has made upon them -- as a result of field trips, walk-throughs, hiking/camping trips, discussions with community resource people.

Students study land use planning and zoning policies -- as they pertain to the local community/area. In small inquiry groups/teams, they propose ways to preserve natural areas, and to manage natural resources.

Students study the plight of endangered species of animals and birds.

CONCEPT	SOCIAL LIFESPACE ENVIRONMENTS
GOAL(S)	<p>To introduce students to the origins and character of the local/area social lifespace environment.</p> <p>To develop within students an awareness and understanding of the interaction/interdependence between natural and social phenomena.</p> <p>To develop within students an understanding of local/area history.</p> <p>To develop within students an awareness and understanding of the positive and negative impact that MAN has had/is having on the natural environment and related phenomena.</p>
GRADES	7 - 8 - 9 - 10 - 11 - 12
ACTIVITIES	<p>Walks and field trips into the community -- to gain exposure to social phenomena, and to better understand the history of the community/area.</p> <p>Guest speakers in the classroom and at field-based sites discuss community/area history, and the impact that nature has had upon settlement/utilization of the land and resources.</p>

Using graphic media devices, e.g., motion picture cameras, still photography cameras, and video tape equipment, students record data about the community/area and develop audiovisual presentations.

Students study architecture, and look for examples in the community.

Students study the characteristics of communities and design community types/layouts that provide for commercial areas, residential areas, open space, recreational facilities, agricultural zones, etc.

Students investigate types/sources of pollution and collect data re: air, noise, sight, and water pollution problems that exist locally. Inquiry teams propose ways by which problems can be solved and situations corrected.

CONCEPT

CARRYING CAPACITY OF EARTH

GOAL(S)

To acquaint students with the impact that MAN has had/is having on the capacity of local natural environments to support life and social development.

To acquaint students with the impact that MAN has had/is having upon the capacity of regional/state or provincial/national natural environments to support life and social development.

To acquaint students with the impact that MAN has had/is having upon the capacity of the global natural environment to support life and social development.

GRADES

5 - 6 - 7 - 8

ACTIVITIES

Field trips into natural/social environments of the community to observe and study the impact of humans upon nature's ability to support life forms.

Field trips to natural sites to observe how resources are managed/used to benefit human population growth and social development.

Guest speakers discuss the plight of nature in diverse global settings.

Guest speakers discuss the plight of nature in the local community, the surrounding area, the state/province, and the nation.

Audiovisual presentations are used to formally introduce students to the character and nature of diverse global environments, and to MAN's impact upon these regions -- past and present.

Student inquiry teams research MAN's impact upon nature and earth's capacity to sustain human population growth and distribution.

CONCEPT	POLLUTION
GOAL(S)	<p>To introduce students to various types of natural/human-made pollution that effects natural/social environments.</p> <p>To involve students in the study of pollution situations that exist in the community/area.</p> <p>To develop within students an understanding of the cause(s) and effect(s) of various types of pollution on MAN and NATURE.</p>
GRADES	3 - 4 - 5 - 6 - 7- 8 and 9-12
ACTIVITIES	<p>Field trips and nature walks -- to identify and study pollution problems/situations re: air, noise, sight, water, and wastes.</p> <p>Classroom and field-based study of pollution causes/effects.</p> <p>Guest speakers discuss pollution causes/effects and policies/programs designed to protect natural/social environments -- flora/fauna/people.</p> <p>Students research pollution types and situations. Using PAM, they suggest ways to solve problems and to prevent further pollution.</p>

Audiovisual presentations are used to introduce to pollution on a global scale.

Using graphic media devices, students research pollution in the community and collect data.

Students interview local/area government and agency officials re: programs and policies to eliminate/minimize pollution in natural and social environments.

Students write to environmental protection agencies, groups, and organizations for literature -- later to be incorporated into research reports.

THEME/TOPIC	GOAL(S)	LESSON OBJECTIVES	LESSON CONTENT	ACTIVITIES	MATERIALS RESOURCES	ASSESSMENT EVALUATION
		The Teacher will: The Students will:				

When designing units/lessons, Learning Enhancement Teams (LETs) should identify the component parts of the instructional/learning process that takes place in classrooms, at school-based resource rooms, in laboratories, in libraries, and throughout the community at field-based sites/locations/ places.

SAMPLE MATERIALS/RESOURCES

FILMS

Air Pollution, Encyclopaedia Britannica Educational Corporation, Chicago.

A Tree Is A Living Thing, Encyclopaedia Britannica Educational Corporation, Chicago.

Cities In Crisis, Extension Media Center, University of California, Berkeley.

Face Of The Earth, King Screen Productions, Chicago.

Inheret The Earth, Bay Area Educational Television Association, San Francisco.

Man And His Resources, McGraw-Hill Films, Boston.

Our Crowded Environment, Encyclopaedia Britannica Educational Corporation, Chicago.

Population Ecology, Encyclopaedia Britannica Educational Corporation, Chicago.

Population Explosion, McGraw-Hill Films, Boston.

Seasonal Changes In Plants, McGraw-Hill Films, Boston.

The Changing Forest, McGraw-Hill Films,  
Boston.

Water Pollution, Encyclopaedia Britannica  
Educational Corporation, Chicago.

FILMSTRIPS

An Introduction To Ecology; Six Basic  
Systems, Eyegate House, Inc., Jamaica,  
NY.

Aggradation-Degradation, Eyegate House,  
Inc., Jamaica, NY.

Concepts In Ecology, Centron Educational  
Films, Lawrence, KS.

Different Kinds Of Animals, Encyclopaedia  
Britannica Educational Corporation, Chicago.

Discovering Life Around Us, Encyclopaedia  
Britannica Educational Corporation, Chicago.

Ecology: Exploration And Discovery,  
United Learning, Niles, IL.

Ecology: Land And Water, Eyegate House, Inc.,  
Jamaica, NY.

Our Environment, EMC Corporation, St. Paul,  
MN.

Urban Ecology: Six Microsystems, ACI Media,  
Inc., New York, NY.

Where Our Food Comes From, ACI Media, Inc.,  
New York, NY.

GAMES

Air Pollution, Water Pollution,  
And Noise Pollution, American  
Education Publications, Middletown,  
CT.

Ecology, Urban Systems, Inc., Cambridge,  
MA.

The Economics Of Pollution, Joint  
Council on Economic Education, New  
York, NY.

Environmental Issues: A Courtroom  
Simulation, Bureau of Land Management,  
U.S. Department of the Interior,  
Washington, DC.

Graphigame: Environmental Attitudes,  
Education Ventures, Inc., Middletown,  
CT.

Green River Recreational Project,  
Student Educational Materials, Provo,  
UT.

Wildlife Concentration, National  
Wildlife Federation, Washington, DC.

TELEVISION

WILD KINGDOM

WILDLIFE ADVENTURES

NATIONAL GEOGRAPHIC specials

TBS specials re: Planet Earth

COMMUNITY

Museums

Art Galleries

Play Productions

Manufacturing Sites

Courthouses

Government Agency Offices

Parks

Playgrounds

Ponds, Rivers, and Streams

Libraries

Television Studios

Social Agencies

Airports

Acquariums

Fishing Fleets

Beaches

Mountains

Land Fills

Historic Sites

SAMPLE ORGANIZATIONS

AMERICAN CONSERVATION ASSOCIATION, INC.  
30 Rockefeller Plaza, New York, NY  
10020

AMERICAN FORESTRY ASSOCIATION  
919 17th Street, N.W.  
Washington, DC  
20006

ANIMAL WILDLIFE INSTITUTE  
P.O. Box 3492  
Grand Central Station  
New York, NY  
10017

CITIZENS FOR CLEAN AIR  
502 Park Avenue  
New York, NY  
10016

CONSERVATION FOUNDATION  
1250 Connecticut Avenue, N.W.  
Washington, DC  
20036

ECOLOGY ACTION EDUCATION INSTITUTE  
Box 3895  
Modesto, CA  
95352

FRIENDS OF THE EARTH  
30 East 42nd Street  
New York, NY  
10017

INSTITUTE OF URBAN AND ENVIRONMENTAL STUDIES  
Southern Methodist University (SMU)  
Dallas, TX  
75222

NATIONAL AUDUBON SOCIETY  
1130 Fifth Avenue  
New York, NY  
10028

NATIONAL PARKS AND CONSERVATION ASSOCIATION  
1701 18th Street, N.W.  
Washington, DC  
20036

NATIONAL WILDLIFE FEDERATION  
1412 16th Street, N.W.  
Washington, DC  
20036

NATURE CONSERVANCY  
1800 North Kent Street  
Arlington, VA  
22209

OPEN SPACE, INC.  
423 28th Street  
Venice, CA  
93104

PLANNED PARENTHOOD AND WORLD POPULATION  
810 Seventh Avenue  
New York, NY  
10019

SIERRA CLUB  
1050 Mills Tower  
San Francisco, CA  
94104

SOIL CONSERVATION SOCIETY OF AMERICA  
7515 N.E. Ankeny Road  
Ankeny, AK  
50021

THE CONSERVATION EDUCATION ASSOCIATION  
1717 Massachusetts Avenue  
Washington, DC  
20036

SAMPLE ASSESSMENT/EVALUATION  
STRATEGIES

Commercial/teacher-made quizzes and tests that include objective items, e.g., T/F, matching, multiple choice and completion/supply , and essays/short response items.

Worksheets

Oral reports

Visual reports

Bulletin board displays

Role playing scenarios

Discussions

Debates

Individual/small group projects

Activity logs

Portfolios

Field-based research activities

CHAPTER V                    IMPLICATIONS FOR TEACHER EDUCATION:  
PRESERVICE TRAINING

Each-and-every classroom teacher will only be as good (effective) as the teachers that come before - in the K-12 instructional process!

If the teachers who had your students in the previous grades adhered to instructional AREAS OF CONSENSUS, and provided students with ample opportunities to apply, reinforce, and refine acquired concepts/ knowledge and skills, then that will make your instructional responsibilities easier to accomplish.

If, on the other hand, students come to your class(es) woefully deficient in content background skills development, you must begin instructing them where you find them. This may mean that you will have to back up; that is, teaching the curriculum designated for the prior grade(s), before you can begin working with them at your grade level. Grade-level instructional time will be lost, and you, most-likely, will not be able to achieve the goals/objectives predetermined (at your grade) for you and your students.

If students come to your class(es) steeped in subject matter concepts/knowledge, and are able to perform basic tasks (skills), then you can begin working with them to meet grade-level goals and objectives. The teachers who instructed your students, in the previous years/grades, can make you either look very good or to be a less-than-adequate professional.

For two important reasons K-12 teachers need to know WHERE THEIR STUDENTS ARE COMING FROM and WHERE THEY ARE GOING (what happens to them academically) after they leave your room/grade. First, you must be able to determine if the teachers in the previous grades achieved grade-level goals/objectives when it comes to instruction and students' learning. Second, because you are concerned for the academic welfare of your students, you will want to know what happens to them in the following grades/levels. Thus, every teacher, regardless of the grade they teach, must be interested in the educational process of children and youth, and must safeguard the abilities and talents of ALL students throughout the multi-year process called public school education.

Because you will have touched the lives of your students, you become a part of their lives! YOU have a vested interest in them; in their future success.

Common Experience.

In order for future teachers (K-12) to develop a holistic view of the continuous/integrated/sequential educational process through the several grades/grade clusters, elementary education (K-8) and secondary education (7-12) trainees must receive basic education experiences while enrolled in the courses.

Sitting side-by-side, K-8 and 7-12 trainees must be exposed to skills development re: pedagogical strategies, classroom management, diagnostic assessment of human development (intellectual, social, psychological/emotional, and physical growth), discipline models, individualized and small group learning, and the evaluation of student progress toward goals/objectives attainment.

Elementary education teachers need to know how secondary education professionals function in

discipline-related departments, and how they deal with several classes of students (of differing abilities, interests, and needs) during the course of the typical school day. Secondary education teachers need to know about dealing with student differences, how to organize the classroom so-as-to compliment the diverse abilities and skills of the several students, and ways by which they can get to know/better understand the students enrolled in Period 1 class ... versus Period 3 class ... versus Period 6 class.

After all, K-8 and 7-12 teachers (whether in self-contained classrooms or in departments -- whether dealing with twenty-five students per day or more than one hundred) work with the same children and youth -- as these students progress along the K-12 continuum. In order to deal with students (K-12) all teachers must be versed in dealing with strategies, materials and resources, and processes that enhance students' achievement.

#### ECO/SOCIAL STUDIES.

Elementary education teachers think/teach in holistic terms more than do their secondary education counterparts.

Elementary education teachers are generally trained as subject matter generalists - required to integrate concepts/knowledge/skills from the several subjects of the curriculum into a form of thinking/learning that makes sense to students, and ways that help them think holistically as well.

Secondary education teachers are generally trained as subject matter specialists. Most of their holistic thinking is confined to making 'connections' between concepts/knowledge/skills WITHIN their specialized field rather than ACROSS the several subjects that constitute the formal curriculum.

Because the K-12 ECO/SOCIAL Studies program is interdisciplinary (natural/physical and social sciences as well as elements of the Humanities and languages), teachers involved in teaching about natural AND social environments must be holistic thinkers! Working in Learning Enhancement Team situations, elementary AND secondary teachers must plan and design instructional/learning experiences that will guarantee an integrated subjects approach -- whether instruction takes place in K-6 or 7-12 classrooms.

In ECO/SOCIAL Studies training programs, K-12 trainees must be exposed to/participate in the same classroom, laboratory, and field-based activities and experiences.

Trainees must be formally introduced to the natural and social lifespace environments. They must learn about the unique origins and characteristics of the environments -- and related phenomena.

Trainees must learn how to integrate diverse subject matter-related concepts/knowledge/skills into thematic units; how to compliment each other's teaching AND students' learning in the different disciplines; how to think holistically across the curriculum; how to connect that which they teach at a particular grade-level or grade cluster to the K-12 on-going process; and how to share students' instructional time with other teachers and other disciplines.

K-12 teachers should be generalists, and should help students to 'connect' seemingly unrelated concepts/knowledge/skills into a holistic pattern of thinking. Teachers' specialization in pedagogy, management, behavior modification among students, and assessment/evaluation of students' progress comes from interaction with other skilled professionals -- rather than from

a series of unconnected subject matter-related methods courses. TEACHERS HELP OTHER TEACHERS BECOME GREAT TEACHERS!!!!!!!!!!!!!!

At the college/university level, the teachers of teachers (faculty members) must think holistically, and be skilled in the strategies/methods that trainees are introduced to -- in classrooms on campus and at field-based sites. We get those campus-based faculty members from the ranks of K-12 teachers who are highly skilled and talented in instructional/learning processes. Thus, an important criteria for selection as a college/university faculty member, in departments or colleges of education, is successful K-12 classroom teaching -- with less emphasis on empirical research experience. NOT EVERYONE CAN TEACH, AND AMONG THOSE WHO DO TEACH THERE IS A WIDE RANGE OF ABILITIES AND COMPETENCE. TEACHING IS NOT AN EASY THING TO DO!!!!!! Many college/university-level 'teachers' are good instructors but miss-the-mark when attempting to exhibit true teaching abilities.

There needs to exist among K-12 and college/university-level educators a partnership designed to provide teacher trainees the opportunity to blend the theory of the campus-based classroom(s) with the practice of K-12 classrooms.

For example, in Teacher Education courses trainees learn how to design instructional units around ECO/SOCIAL Studies concepts or themes such as Interlocking Dependency, Cooperative Living Habitats, or Environmental Phenomena and Processes.

Once written, trainees take their units to local/area schools and teach selected lessons from each unit. Thus, trainees have the opportunity to teach before a group of K-12 students, to interact with them as they learn, to assess their performance based upon stated goals/objectives, to receive evaluation feedback from the classroom teacher, to receive evaluation feedback from the college/university faculty member, and to view one's performance -- as recorded on videotape.

After the teaching/evaluation process, students revise/rewrite units and lessons (if necessary) in their campus-based methods class(es). At some future date, they will once-again return to the designated local/area school and 'reteach' the lesson

REFLECTIONS

HAVING TO BE WHAT WE WANT THEM  
TO BE THROUGHOUT THEIR LIVES

Teaching K-12 students to be nature sensitive and culture literate means that their teachers, and the teachers of their teachers, must be nature sensitive and culture literate.

Teaching students to be proactive about conflicts, issues, and problems related to natural and social environments means that their teachers, and the teachers of their teachers, must be proactive.

Teaching students to act as environmental constructionists (ECONauts) throughout their lives means that their teachers, and the teachers of their teachers, must be ECONauts.

## ABOUT THE AUTHOR

Dr. Richard Oakes Peters is experienced in Kindergarten through Grade Twelve education as a former classroom teacher of science/social studies (5-12), social studies department chair (9-12), district-wide social studies curriculum coordinator (K-12), and supervisor of teacher inservice training (K-12). Dr. Peters has also served as curriculum designer for an ESEA Title III inner-city project (7-9), administrator/director of a five year, NIE-funded EXPERIMENTAL SCHOOLS(ES) project for R+D, chair of a minimum competencies curriculum development committee, and curriculum/instructional program consultant (K-12).

At the university-level, Dr. Peters has taught elementary education/secondary education methods courses (social studies), foundations, and strategies of teaching/learning, e.g., pedagogy, classroom management, discipline, time management, unit development, learning styles/human development, and assessment/evaluation. He also supervised K-12 student teachers in social studies education.

Dr. Peters has supervised the development of several ECO/SOCIAL Studies-type programs since the

late 1960s.

#### STUDENT ENVIRONMENT AWARENESS (SEA)

Introduce students to the nature and character of lifespace environments that are nearby/close to home. An emphasis is placed on nature walks, field trips, and anthropological digs.

#### MAN AND HIS ENVIRONMENT (ME)

Students interact with the local/area lifespace environment through hiking daytrips, overnight hiking/camping activities, and canoe trips. Students learn/apply life survival skills. Their abilities are challenged and self-esteem is enhanced through the successful completion of life-oriented experiences.

#### PEOPLE IN THEIR ENVIRONMENTS (PIE)

Students are involved in the study of selected human groups - past and present. Attention is paid to human adaptation to natural surroundings and to the history of cultural development. Working in small inquiry teams, students role play researching social scientists -- using the PROACTIVE ACTION MODEL (PAM) and the STUDENT AWARENESS of GLOBAL ENVIRONMENTS (SAGE) matrix.

#### HUMANS/ENVIRONMENT LEARNING PROGRAM (H/ELP)

Acting as researching natural/physical and social scientists, students investigate conflicts, issues, problems, and situations that impact their singular and collective lives -- nearby/close to home and distant/far-removed. The total lifespace environment (natural/social settings and related phenomena) is studied. Students are engaged in real life and real-to-life (simulated) activities/studies, and the PROACTIVE ACTION MODEL (PAM) is used to apply a modified 'scientific method' strategy to the study of natural and human-made (social) environments.

In 1981, Dr. Peters founded GLOBAL HORIZONS:  
The Center for Applied ECO/SOCIAL Studies to  
promote environmental education/culture studies  
curriculum and instructional program development.



Writing in THE GLOBAL ECOSYSTEM (ERIC, ED 315353, 1989), Dr. Peters coined the term ECONauts -- to describe those individuals who are nature sensitive/culture literate, and who act in a proactive manner to practice stewardship in natural/social environments.

