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ABSTRACT

This booklet describes the concepts behind the Architects-in-School Program, its objectives, roles and responsibilities. It also provides details on the Program's introduction into 62 public and private schools around the country. The residencies described are presented alphabetically by State. Each description includes information on the architect-in-residence locality and length of residency, resources, and specific activities undertaken. Comments concerning each residency are also provided.

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# Architects-in-Schools 1976-1977

## The Architecture/Environmental Arts Component of the Artists-in-Schools Program of the National Endowment for the Arts

Architects-in-Schools is jointly sponsored by the National Endowment for the Arts (Education Program and Architecture + Environmental Arts Program) and the participating state arts agencies.

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The first year of the Architects-in-Schools component has been an exciting and very busy one. The response has been overwhelmingly positive across the nation, with several states establishing multiple sites.

The success of this year is to a great extent a result of the work of the Artists-in-Schools Coordinators and the state arts agencies and their extensive experience. Of course, without the architects-in-schools and the students and teachers within these schools the program could not exist. It has been exciting to see how the eclectic aspect of the discipline of architecture has found a place to blossom.

The majority of schools that have had the Architects-in-Schools component this year have asked to continue the program next year. We are encouraging this continuation. It appears from this year's results that the process of bringing understanding of the built environment to students and teachers and of insuring continuity by giving teachers the tools to carry on may be enhanced by extended residencies.

The Architects-in-Schools program has received help from various organizations. The National Environmental Education Committee of the AIA spent a great amount of time working on ways of supporting our program. Local AIA chapters have, in some cases, made substantial contributions in the form of money, time, materials and resources. The University of Pennsylvania, through its Graduate School of Fine Arts and the Department of Architecture, has supported us.

The information in this book was taken from the Documentation Evaluation Report submitted to the National Endowment for the Arts. The documentation evaluation was conducted by EFI. We are pleased that Alan Levy, FAIA, was in charge of the evaluation team. We also wish to thank Sanchez, editorial/design consultants, for the major portion of the writing and the design of this report.

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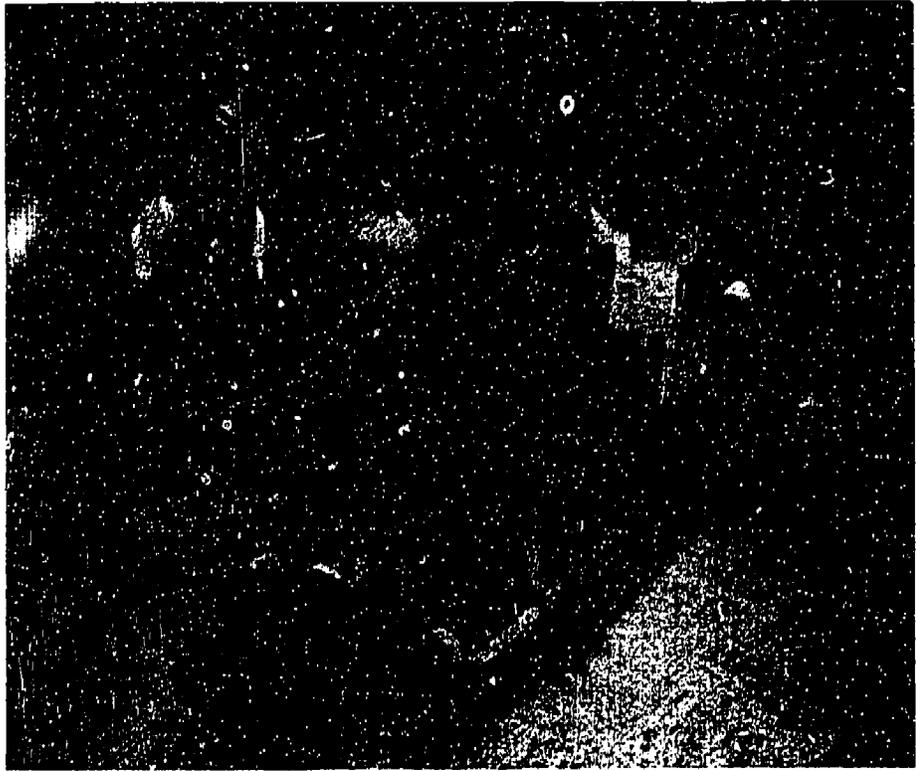
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## Preface

During this year, the initial year of the Architects-in-Schools, architects-in-residence have become partners in education. They have not taught *about* architecture, although many students and teachers now may have a new awareness of the buildings around them — the high-rises, barns, houses, the schools themselves. The mission of the architect-in-school has been, rather, to teach students and teachers to see when they look; to become conscious of the impact of the environment upon them; to understand that architecture involves a process; and to become familiar with that process, which is the process of design.

Thus, there has been the conscious presentation of his tools — defining the problem, developing a program, implementing and evaluating — into the context of this country's educational system.

During this year 38 architects in 62 public and private schools around the country, in cities, suburbs and small rural towns, introduced themselves and what they do to over 40,000 students. This year has been a handshake with the built environment. This is an account of that introduction.



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## Architects-in-Schools Component

**Architects-in-Schools is the new component of the Artists-in-Schools Program of the National Endowment for the Arts.** It places architects in residencies in elementary and secondary schools throughout the country. Similar to the approach of its parent program, the Architects-in-Schools offers a sustained, cross disciplinary interaction that benefits all participants: community, teachers, students and architects.

The architects-in-residence are, in fact, not only architects, but landscape architects, planners and designers who involve students, teachers and interested community members in analyzing their surroundings and participating in the design process. In this program, the architect helps students and teachers to develop an awareness of the built environment and its relationship with the natural environment and to deepen their understanding of the impact of the built environment on their lives. He encourages their participation in the shaping of their own environment through involvement in the design process.

The emergence of this program seems particularly appropriate at this time. As education mirrors a society's values, so the Architects-in-Schools program reflects many of the current and valid directions in the fields of education and psychology, as well as those in architecture itself.

Teachers are attempting to create curriculum relevant to their students' needs and the world they live in. They are trying to shape a classroom environment that encourages students to take an active role in their own learning. They are looking for significant ways for students to learn from the non-school world and to bring that world into the classroom and the curricula. In a changing world, architects are questioning their traditional role and redefining it. Many architects are addressing the needs of the community-at-large — the invisible client — and are seeking to use their skills in meeting larger societal goals. As part of this professional reassessment, these architects perceive themselves as community resource persons, professionals enabling



others to make responsible environmental decisions.

The Architects-in-Schools program then, is a unique fusion of skills. Collaborating with teachers and students, the architect-in-residence contributes his own awareness of space and structure, the ability to analyze the surroundings, and a mastery of the process and tools of design. Although the architect may illustrate the discipline of the profession by working on projects with students and teachers, it is the process itself that is the most important legacy of the residence. The process is the key for the non-professional to make informed decisions about their environment. It is this empowerment that is the far-reaching goal of the program.

**From the inception of the program, Architects-in Schools has had the following objectives:**

To bring about an awareness and understanding of the built environment for itself and as it relates to the natural environment.

To use the built environment as the vehicle for understanding and teaching of the traditional academic subjects within the existing curriculum.

To be a resource to students and teachers, learning and teaching about the built environment.

To help students and teachers analyze their surroundings and to help plan and carry out changes.



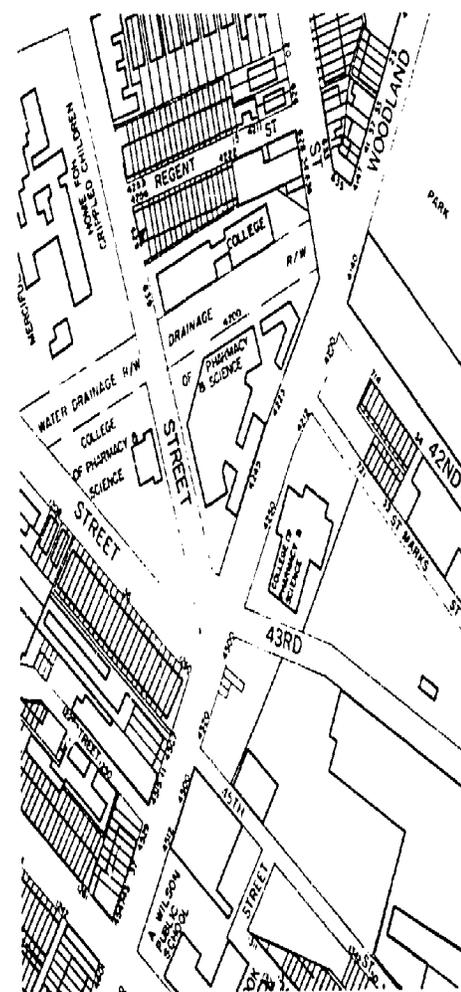
To involve students and teachers in the design process by bringing the methods of design into the school.

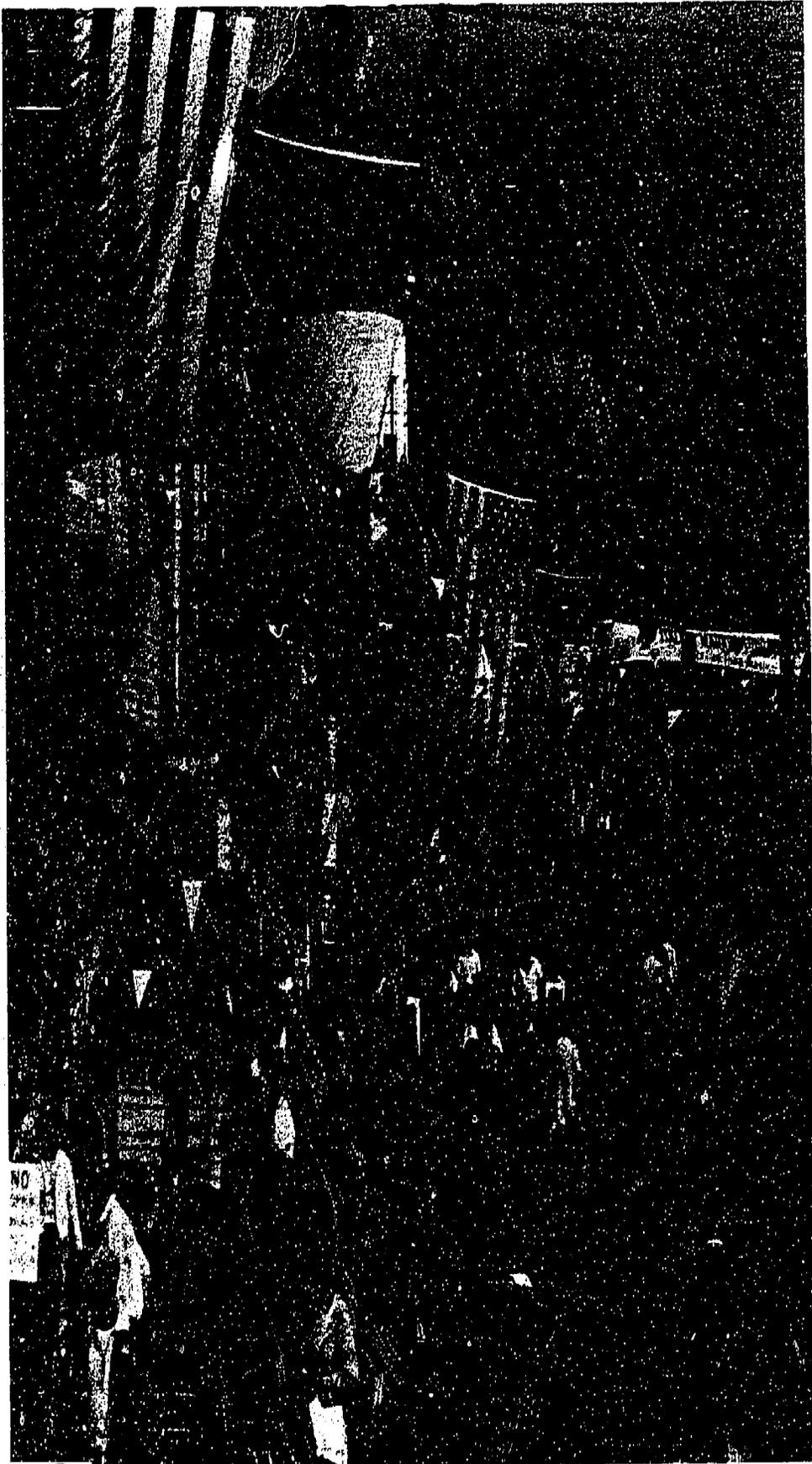
To involve oneself with students and teachers in a project with a visible product.

To develop a continuing involvement of the community and school using the built environment as a focus.

To insure continuity by passing on to the teachers some of an architect's tools, special skills and knowledge.

These objectives indicate the program's close ideological ties with built environment education.





**Built environment is architecture in the broadest sense.** The built environment, comprised of cities, streets, houses, parks and the spaces that connect them, has been built and landscaped by man and is the framework for all his activities and interactions. Surrounding us, it determines the shape of our lives. However pervasive its influence, the built environment remains, nonetheless, generally unperceived except as it approaches the extremes, delighting or offending us. Everyone needs to be awakened to what is around him, to observe the qualities and interrelationships of the colors, textures, noises, objects and spaces that are part of everyday life. This is the first step in understanding the environment and essential to participating in effective environmental change.

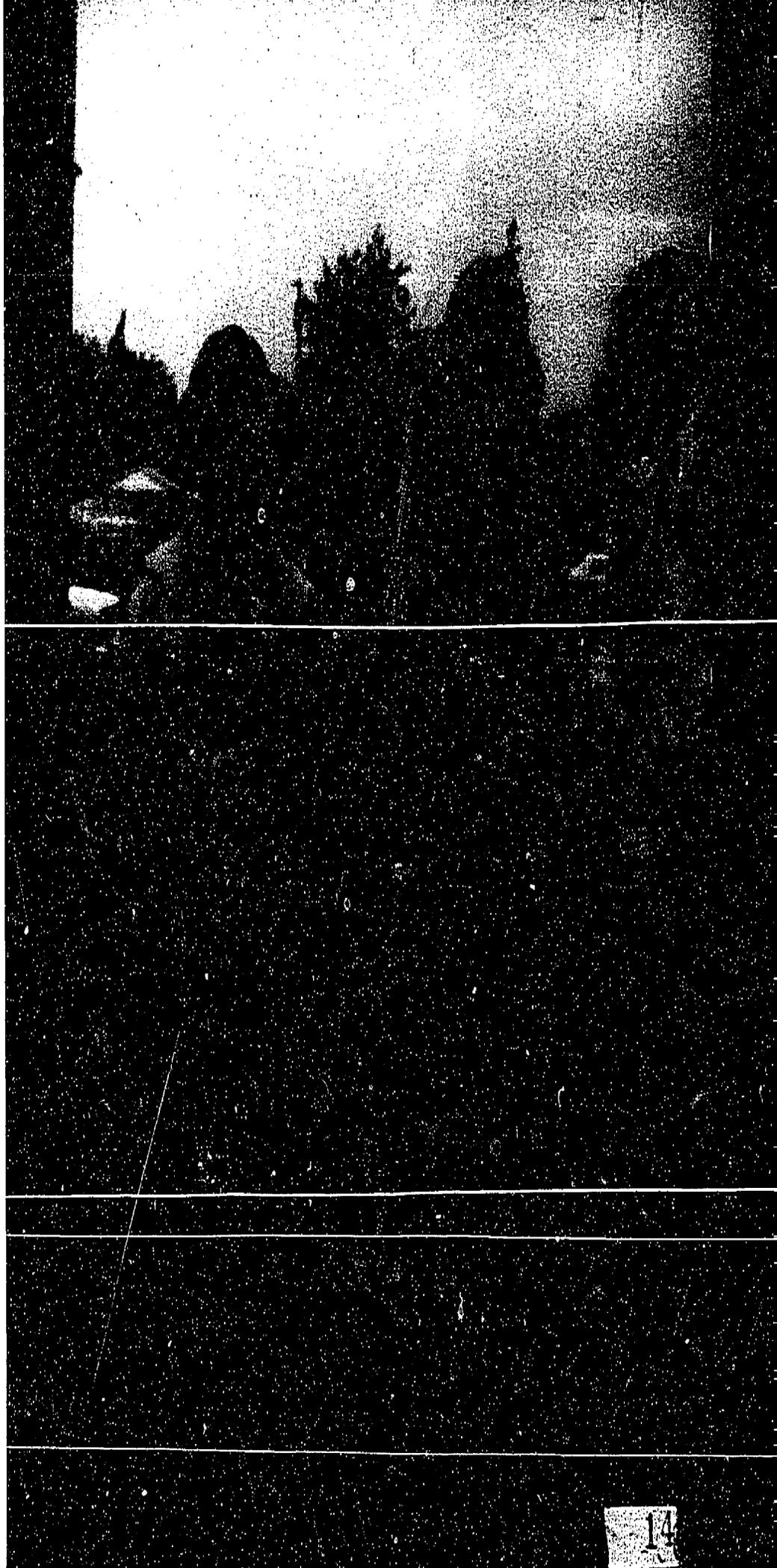
Young people, in particular, must begin to think about the functions of the built environment, how it works and how it influences attitudes and activities. As their understanding grows, they will begin to use the environment to its fullest and will participate intelligently in improving it. They will begin to think about how an environment that is responsive to their own needs and those of others can be created. This is the essence of built environment education. It is a point of view, a series of understanding — not a new discipline — that fits into any subject matter already existing in the schools. Architects-in-Schools has been designed as one approach to realize these goals.

**The Architects-in-Schools component is organized around the following roles and responsibilities.** Architects-in-Schools was formally designated a component of the Artists-in-Schools program in January 1976. At that time, Aase Eriksen was appointed National Coordinator.

The National Coordinator's responsibilities include both the development of the program and the administration of it. The National Coordinator's Office provides conceptual program direction and development; trains architects and teachers involved in the program; gives professional and technical assistance to architects and teachers in the field; confers with the Artists-in-School Coordinators and state arts agencies; and assists in on-going documentation and evaluation efforts. In addition, the office makes available information about materials, resources and methods and information about the residencies themselves, their problems, process and solutions.

The responsibility of transmitting the program from a national to a local level lies essentially with the state arts agencies and their official representatives, the Artists-in-Schools Coordinators. The coordinator is responsible for the Architects-in-Schools program on the state level, selects the site and the professional-in-residence, and generally provides on-going administrative support.

Of all these tasks, one of the most crucial this first year was the selection of site and resident. The Artist-in-Schools Coordinator solicits applicants for residents and school sites and





directs the selection usually through a selection panel. Applicants are asked to submit detailed proposals concerning their objectives and the means for meeting them.

The number of schools wanting to participate in the program is a testimony to the enthusiasm of the coordinators. A wide variety of sites in terms of locale, grade level, size and organization were involved this year. In each case the program was tailored to fit the children's interests, level of development in terms of skills and comprehension, and the teaching methods which related to these different factors.

In each school, the role of the In-School Coordinator (ISC) has a powerful bearing upon the success of the program. A supportive and committed ISC is critical to the effectiveness of the architect-in-residence, as is the time allowed by the administration for this person's involvement in the program.

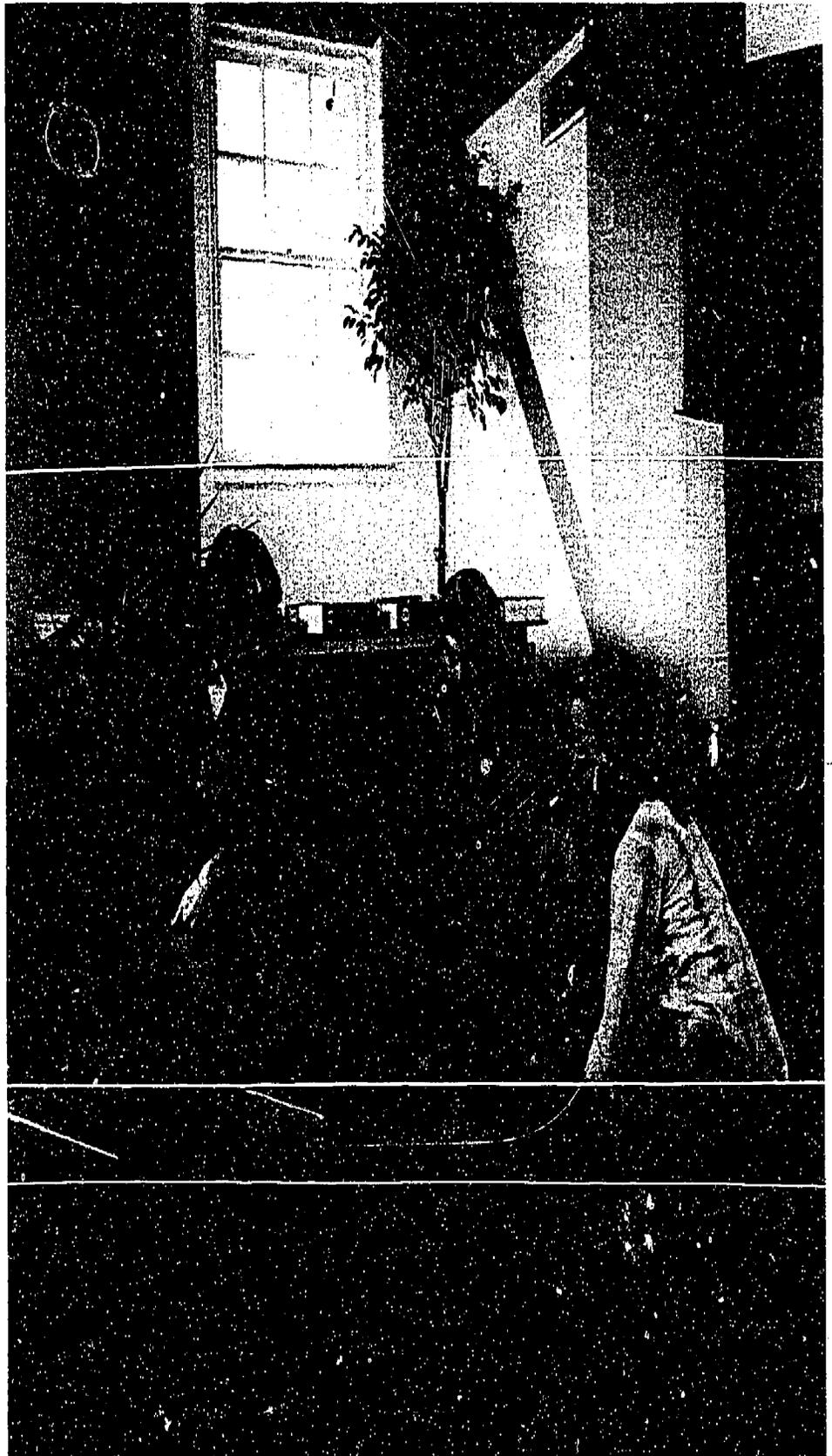
The In-School Coordinator's role is essentially one of bridging the separate worlds of the "outsider" architect-in-residence and the school community, not only in paving the way for the resident's arrival but in being responsible for finding space for the architect, getting him acquainted with the school curriculum, and generally serving as a liaison between the architect and administration.

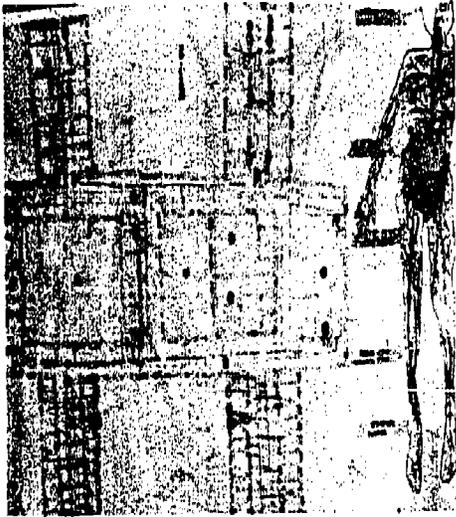
The design professionals who applied to the program and were accepted included architects, designers, landscape architects, architectural historians and planners. They were of different ages and different levels of

professional expertise. Experience in working with children or in education gave a resident an additional advantage in successfully pursuing his goals for the program, but many who did not have that prior experience were successful nonetheless. Surely this was due in part to those persons' openness to learn from a new and unfamiliar situation and their willingness to use the school's faculty as a pedagogical resource.

Architects-in-residence are expected to become part of the school community. This is an opportunity for two professional groups to work together to help each other reach common goals. The architects have much to learn from the teaching staff about child development and learning patterns as well as about the teaching-learning situation in general. They, in turn, have their own skills to exchange. The architect is expected to be a resource person for those teaching and learning about the built environment. He should guide them through the process of observation and analysis inherent in his discipline and pass on some of the designer's tools and skills. He should demonstrate the relationship of different kinds of spaces to need and use.

**The residencies, of course, are the heartbeat of the program.** Each site has its own particular formula and its own unique outcomes. During this first year the residencies were found in urban, rural, suburban and small town locations. They took place in elementary, middle, and senior high schools, public and private, those with traditional programs and those with alternative and open classroom education. In some cases the residency was clearly defined by the host school; in others, the resident was left almost entirely alone to create his own methods and means. In some schools, high expectations were evident; in others, the architect quite literally had to announce his presence. Many schools wanted to utilize the services of the

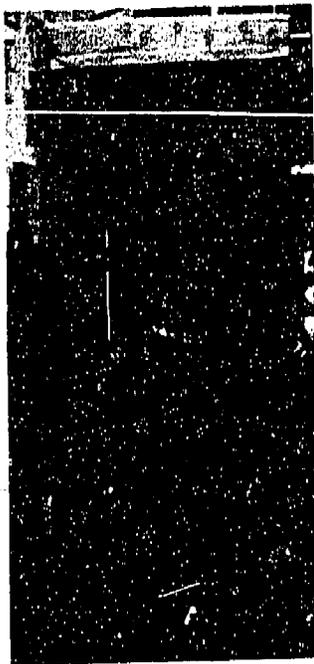




architect as broadly as possible and at the same time not disrupt the classroom routine. In these cases, the resident often participated as a resource person within the regularly scheduled classes. For schools with a traditional structure, particularly high schools or those emphasizing "back to basics," this emphasis was used to advantage to complement and enrich the school's regular program. In these cases, as might be expected, the architect spoke to literature, language and social studies classes. Topics ranged from a unit on the physical environment of the Globe Theatre and its relation to Shakespearean drama, to a discussion of classical architecture in a Latin class, to an inquiry into economic and political factors that affect the built environment in a social studies group. One architect worked with a science teacher to develop a lesson plan comparing the human body's systems with those of a building, drawing parallels, for example, between the respiratory system and the ventilation system of a building. Geometry classes learned how structures are made rigid and the functions of columns, beams, arches and domes.

Awareness exercises, were, of course, one of the most popular themes of the residencies. There were many different approaches here, often determined by whether or not the architect was working in a regular class, in his own studio with students, or as an after-school program director. Awareness exercises range from simple observation and documentation skills (writing, drawing, charting) to more demanding mapping and model building. On another level





they were used to generate sensitivity to the relationship between the built environment and people's feelings, behaviors and attitudes. Students were asked to record what they heard, saw, smelled or felt on the way to school. They were asked to describe familiar places — their neighborhood, home, classroom or bedroom. They were engaged in fantasizing about their favorite environments, their "dream" rooms, a trip to an ideal world and so forth. Some children kept diaries of spaces they entered and how they responded emotionally to those spaces. Some students were asked to imagine a monster and then create an appropriate living environment for it. Children were asked to go beyond make-believe and to consider, for example, the very real world of the handicapped. Blindfolded and/or in wheelchairs, they toured their schools, noting architectural barriers and listing elements which allowed free access. Children became aware, too, of how the physical environment is built, by using sugar cubes and glue, marshmallows and toothpicks, and straws and pins to learn structural principles. Older children visited downtown renewal sites and discussed the impact upon the city. There were role-playing exercises in which students acted out the conflicts that arise when various community interests struggle with environmental issues. Children at all different levels were able to learn something from these awareness exercises.

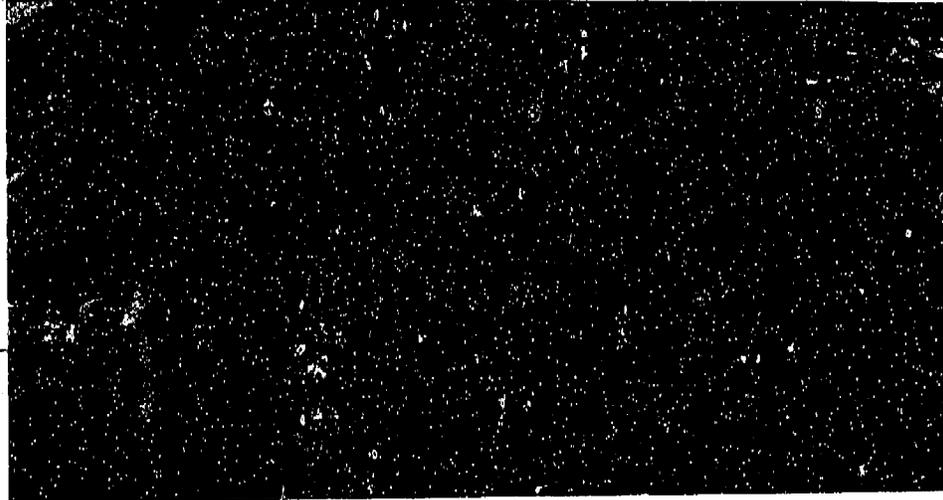
As awareness levels increased, architects-in-residence moved to more ambitious projects resulting in a product that was designed to demonstrate another dimension of our interaction with the built environment.

Some activities were centered in the classroom. Some classrooms were rearranged as a result of earlier awareness exercises. Larger, group-sized tables replaced individual desks; reading corners were created; spatial dividers were constructed; even loft spaces were built. A Home Economics class decided to change that specialized classroom environment. The students embarked on the design process: they agreed on changes, built a model, researched materials, obtained administrative support and approval, and finally, raised money to accomplish their objectives through a car wash.

In many schools, the results of heightened awareness of the built environment encouraged specifically decorative changes. Supergraphics and wall murals, many first reviewed and refined as models, bloomed. Graphic information and signage systems were worked on. One school, after a study of street functions and furnishings, redesigned a hallway to accommodate the variety of uses students discovered it could support.

Environmental changes of this kind give rise to attitudinal changes that can influence learning. The atmosphere of the school can become more positive and constructive.

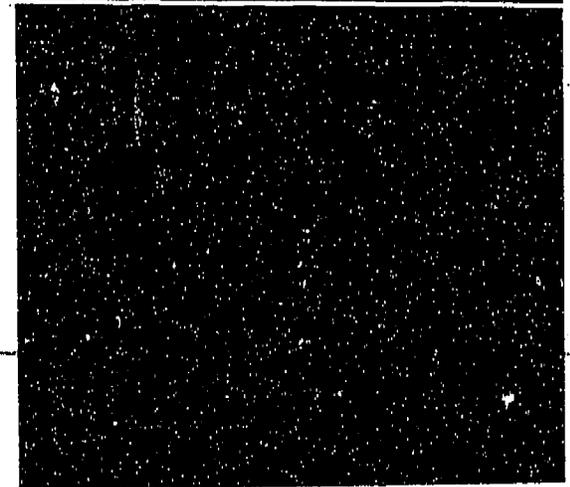
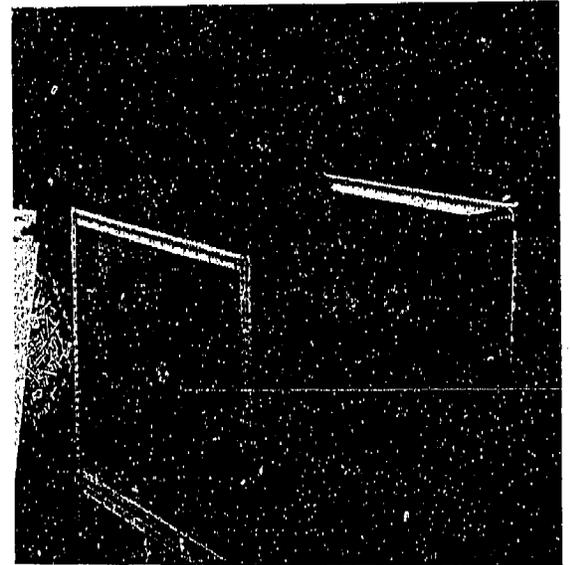
Eventually, students were ready to construct actual objects that met certain criteria and needs. Small children in one school, studying their classroom pets — gerbils — developed "Gerbil City," a built environment that met the specific needs of these animals. One dome-building project exemplifies the use of interdisciplinary effort: trigonometry, physics



and geometry classes were involved with the actual planning and design; shop students fabricated the elements; and classes in ecology and biology managed the dome as a science project.

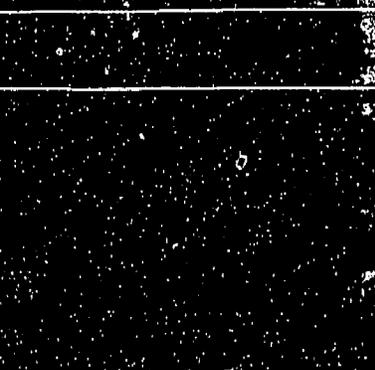
In all of these large-scale projects the emphasis was to involve students in the several steps of the design process in order to develop a functional structure. Identifying the problem, establishing criteria, developing data, choosing among potential solutions, receiving administrative approval, assembling resources, and finally constructing the object were separate steps in the process through which students learned how environmental changes can be implemented. As a result, play areas, outside classrooms, student activity centers, gardens, mini-parks, and nature trails were designed and constructed by students.

Many students learned valuable lessons in achieving goals. In one school, students who had designed a mini-park for senior citizens took their plan before city council to receive approval and funds for the implementation of the project. Another group whose outdoor classroom site



was wrecked by vandals, went back to the drawing boards and redesigned the space to be more resistant to such attacks.

The intent with all such projects, of course, is not to produce a physical improvement per se, however much wanted or needed. Nor is it to teach children to become carpenters, landscape specialists, painters or even architects. That training is best left to others. The purpose here is to give students, regardless of developmental level, the opportunity to learn the pattern of the design process. Even if it were possible to observe an architect solving a design problem, it would be counter to the most sound educational principles to



expect a child to learn anything from that observation than the superficial elements of the process. Students who are involved in “doing design” — planning, thinking, choosing — can grasp much more than can be gained by reading about or even observing the design process. Learning takes place by doing.

**Ongoing support and training was supplied in many ways.** Each residency was underpinned by the support, encouragement, consultation and professional assistance offered by the National Coordinator's Office. The richness and variety of the activities created by individual residents testifies, of course, to their ingenuity and unflagging interest. But the residents were neither expected nor allowed to operate in a vacuum. Throughout the year conferences, regional meetings, workshops, site visits, built environment resource materials and professional consultants were made available to the residents, as well as the state arts agencies, Artists-in-Schools Coordinators and In-School Coordinators who would be working with them.

**The National Conference** New Orleans, March, 1976 brought together 27 Artists-in-Schools Coordinators who would be responsible for the implementation of this innovative program in their respective states. The purpose of the conference was to introduce this unique program and to explain the concepts and goals of the program as well as to familiarize the participants with built environment education. The three-day program involved people in developing an awareness of the impact of the built environment on their lives; in planning and conducting environmental investigations, such as an architect might do in a school situation; and in discussing the concepts and implementation possibilities of the Architects-in-Schools component.

Foreshadowing future workshops, this conference addressed itself to issues raised by the participants themselves. Some of the concerns were conceptual (Should the program's stated objectives include the relationship between natural and built environment?); some of the issues were related to







through direct, hands-on experience; and generally learned more about their forthcoming role as an architects-in-school.

Each participant received a workbook that was designed to be used during the workshop and throughout the year as both a resource and as a guide for documentation and evaluation.

**Four Regional Meetings** were held in January and February, 1977, by the National Coordinator's Office for architects and In-School Coordinators. The meetings took place in Quincy, Illinois; Omaha, Nebraska; Franconia, New Hampshire; and Portland, Oregon. Several Artists-in-Schools Coordinators, consultants and local observers also attended. Participants worked in "job-alike" sessions to develop a set of issues for consideration by the whole group, and, in turn, to develop suggestions for possible solutions to key problems.

**The site visit** was an important mechanism for offering support. By this means the National Coordinator and her staff were able to deliver on-the-spot recommendations, assistance and professional support to each residency in terms of local problems and/opportunities. These visits were also aimed at uncovering school situations which might hinder or limit the architect's effectiveness and ultimately that of the program's.

**Other support was forthcoming from many sources.** State arts agencies and Artists-in-Schools Coordinators gave support to the component over and above their stated responsibilities. They provided information about the format and procedures for existing Artists-in-Schools programs and pointed out the particular concerns of their individual state. Their knowledge and suggestions about potential trouble areas undoubtedly prevented many of those difficulties from arising.

The American Institute of Architects assisted on both the national and local level. The National Environment Education Committee made formal resolutions to support the

Architects-in-Schools and to encourage local chapters to support residencies in their area. Members of local chapters have given time to the program, both in searching out potential candidates for residencies and in offering their services to the program as well as contributing funds or services. The Tulsa chapter, for example, organized a house tour which raised \$1000.00 for the residencies. The Portland chapter raised \$500. And local architects in Little Rock donated \$3,325.00 to the Architects-in-Schools program.

On the community level time, resources, services and financial assistance to the project were contributed by historical societies, preservation groups, professional organizations, individual members of the community and business and civic groups.

**The outcomes for this first year have been both immediate and far-reaching.** Students across the country have created a myriad of products. Some fabrications have almost professional polish. Indeed, if products were the sole criteria of the program this new component should be considered successful. But Architects-in-Schools takes aim at greater and more out-of-the-ordinary results, and the many products that were made are only reminders that a unique program has functioned and even flourished in these schools.

The real results are not immediately visible. The component's goals are to place within the mainstream of our national educational system the concepts of built environment education from the point of view of the design profession. That position stresses the design process as the key to environmental change. The AIS program hopes to empower student, teacher and community to take on environmental challenges by making available to them the instruments for responsible environmental change.

This year has been the first step; in fostering environmental awareness and understanding, a legacy has been created that will continue to be a vital focus for school and community.

## **Residencies**

The descriptions of the residencies contained in this section are based on site visits and reports received from the participants. Unfortunately, in some cases verbal and/or visual documentation was received after production deadlines and could not be included. In those instances the material reflects only earlier reports on completed and projected activities rather than the final account of the residency.

These accounts are listed alphabetically by state. Residents are listed alphabetically within the state. In the cases of shared residencies the listing is, again, alphabetical.

## Resident/Site

## Residency/Resources

## Program

Architect-in-Residence:  
**Hettie Mary Worley**

Gibbs Intermediate School  
Little Rock, Arkansas

Site: Urban  
Population: 400 students;  
16 faculty  
Grade level: 4-5 plus  
kindergarten

In-School Coordinator:  
Don Arick, Principal

This residency was for eight months, five days a week, 20 to 35 hours per week. The resident conducted her own environmental design program on a set schedule, seldom working with class teachers. Many community organizations, people and places enriched the program. Included in these resources were: the Arkansas First State Capital education program, the Little Rock Historical District Committee and the Arkansas Territorial Restoration. Outside consultants included the Curator of Arkansas First State Capital; the director of education at the Arkansas Art Center; an environmental consultant from the Arkansas Department of Education; the director of the Arkansas Ecology Center; an historian from the Quapaw Quarter Association; several architects and photographers.

Special funding was provided by donations from the local chapter of the AIA, local architectural firms, the Department of Natural and Cultural Heritage and in-kind Contributions such as the use of darkrooms and duplicating services. Two mini-grants were received for redesigning classrooms and the school provided money for paint.

The architect works primarily with short-term activities and field trips as part of a process leading toward individual and group building projects.

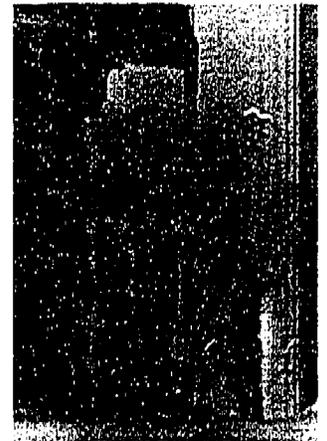
To introduce herself to the students, the architect passed out a questionnaire which she herself answered so that the students would know who she was.

In her environmental design workshop, she began by introducing the children to concepts of the environment. The students were asked to draw their homes, telling what they liked and disliked and articulating important features of their immediate environment. This was then expanded into a mapping project of the entire neighborhood, locating their street on a city map, studying it to find important streets and landmarks, then drawing their own map. The children traced their routes to school and home, what colors and textures they liked, pointing out the elements that made up their environment. Then the students broke up into smaller groups according to their interests and did in-depth analysis of various elements in their environment — the school, playground, bike trail.

Field trips were an important part of the workshop. The class went to the Art Center to examine expressions of elements of form. They went to the Territorial Restoration to see earliest buildings of Little Rock, and to find out what buildings tell about the people who lived there. A trip to the Arkansas State Capitol was preceded by a slide show of the building's history. The class discussed the monumental scale of the building and its domination of the landscape, comparing it to the new state capitol. The architect asked her students' "How does it make you feel" and "How does the feeling relate to the building's design?" She wanted students to determine how architecture reveals what is important to a culture.

After studying habitats, the students on a field trip to a local park were asked to individually provide themselves with the basics of living — water, food and shelter. They built a structure with the materials they found in the woods. They then went back to the classroom and built models of their shelters.

Several guest lecturers were brought in to supplement activities. A photographer showed the students similar concerns of the visual



art process in another medium. And a lecturer from the Arkansas Ecology Center explained geological divisions of land in the community relating the form of the land to how it shaped what and where man built.

The children were also shown a film, "Boomsville," an animation of the history, growth and change in New York City. The architect then prepared her own slide show on Little Rock showing the same concerns.

These awareness exercises led to the final activity of the year, specific design projects done individually or in groups. Areas of study included playground design, kindergarten class changes, school graphics, history of Little Rock, outdoor learning yard, photography, and future spaces. The children made models and picture presentations; painted a mural in the central hall and all the bulletin boards with bold graphics; and built furniture, storage and playhouses for the kindergarten.

Besides the environmental design workshop, the architect participated in other classroom projects. She visited four classes following their environmental education study unit to talk about the built environment. She did sequential questioning about perceptions of the built environment and the natural environment to show that the city is as complex a system as the natural system; and urban systems need to be more responsive to human needs.

Worley also conducted a math workshop to explore concepts of scale. They began with simple drawings and using a grid made them larger and smaller. The students measured their rooms and drew floor plans at a smaller scale. The students, after creating their own architectural scale, then were introduced to the Golden Section and did the modular game from Forrest Wilson's *Architecture: Projects for Young Adults*. Finally the math class began to develop optical illusions. They held a math fair and invited the whole school to view their work.

Several teachers were assisted by the architect to get mini-grants to improve their classroom environment. The kindergarten class worked with the architect on space awareness and building. The architect used playground equipment to demonstrate to them basic concepts of design. The workshop children then surveyed the kindergarten class, and designed and built storage cubes, a

stage, play structures, pillows, banners and puppets for the classroom. The second mini-grant was for hiring Worley as their architect to change their classroom. The class built models of the classroom, studied alternative solutions to their present use of space and finally built storage units and reading spaces.



The resident comments:

The basic element we are dealing with is perception. Environment is defined by each individual's perception of it — so what we must attempt to educate are the senses. I presented the children with a framework with which to evaluate information/perceptions: that all things have form and that form can be described with these basic elements: line, color, texture, rhythm, pattern and shape. We explored these abstractions in the common things around us.

**Resident/Site**

**Residency/Resources**

**Program**

**Comment**

Architect-in-Residence:  
**Thomas J. Goetting**

Redding Middle School  
Middletown, Delaware

Site: Rural  
Population: 620 students;  
34 faculty  
Grade level: 6-8

In-School Coordinator:  
Jack Freeberry, Assistant  
Principal

This residency was for seven months, five days per week or approximately 40 to 50 hours. The activities were generally conducted during class time and on weekends. About 120 students were contacted each week. The resident worked independently with his students and with a teacher in the gifted and talented program.

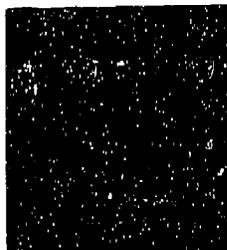
Outside consultants included a representative from the AIA Environment Education Committee who helped run a workshop; a former artist-in-residence; an artist and landscape architect who both worked with students.

The architect-in-school's goal was only loosely defined early on in the residency. Over several months it evolved to be a resource to students and teachers as a general aide in the entire learning process. The resident taught built environment education by allowing the students to design and build their own classroom environments, and using those environments to do curriculum-related activities.

He began by asking students, "How do you want your classroom to feel?" Then he worked with them to create varied environments for learning. The students converted his studio space into a classroom, using found materials such as foam cubes, inner tubes, parachutes and surplus Army cots. They built giant jungle-gym-like structures from the bed frames, fabricated entrances with cardboard and created group and personal spaces. These building activities were accompanied by sensory awareness exercises developed by the resident and another teacher.

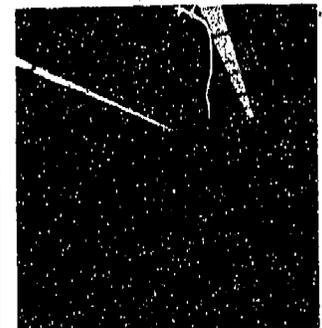
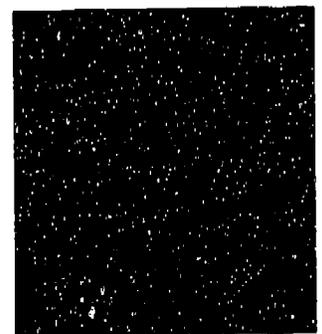
Elsewhere in the school other changes occurred. One group repainted the classroom. They first listed all their favorite colors, voted and chose the top seven. Then they worked out a design and built a model. Finally, they applied graphic designs across blackboards, doorways and windows. Another group arranged forty-five one-foot cubes of foam rubber to create a sitting area for their reading class which met in the hallway.

Students decided they would like an outdoor class area. Goetting had parachute material for a tent, but no way to hold it up. Balloons were suggested by one student. The class calculated the number of 6-foot-in-diameter rubber balloons and the amount of helium they would need to suspend the nylon parachute. During a trial run, they discovered that the helium leaked. Eventually they decided that thin balloons placed inside was the least costly answer; it worked. The tent was used as a giant sunshade at a local music festival and for a church group that needed an outdoor meeting place.



The architect-in-school comments:

The project was a success because we did visible things. We built things that people could see and wonder about. We were hands-on. That establishes credibility with students as well as teachers.



**Resident/Site**

**Residency/Resources**

**Program**

Architect-in-Residence:  
**Thomas Pope**

Key West High School  
Key West, Florida

Site: Urban  
Population: 1773 students;  
96 faculty  
Grade level: Secondary

In-School Coordinator:  
Wayne Hauxhurst, Art  
teacher

May Sands School  
Key West, Florida

Site: Urban  
Population: 30 students in  
special program for gifted  
Grade level: 4 and 6

In-School Coordinator:  
Sue Matheson, Teacher

This residency was divided between two schools: Key West, an eight-month residency, three full days a week, 22 hours per week; and May Sands, a three-month period; one full day a week.

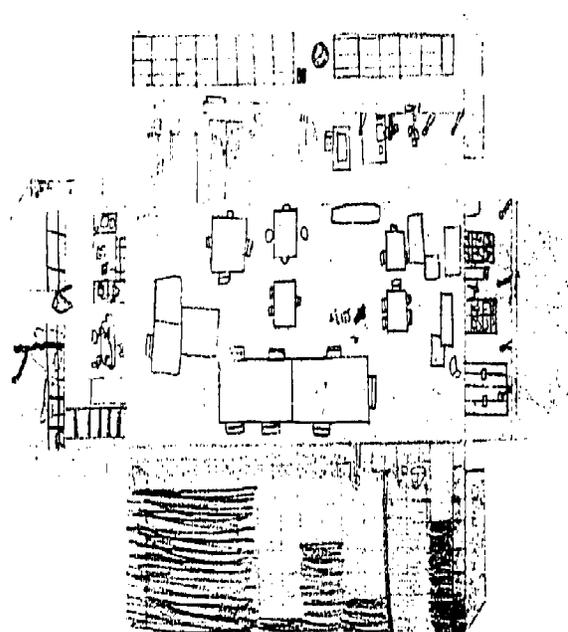
Most of the activities in the high school were carried on outside the classroom with no real teacher involvement. In the elementary school, the resident worked directly with teachers and they planned activities and developed ideas together.

Special funding came from the State Historical Society and materials were donated by the Historic Preservation Commission. The local Garden Club helped at the high school by donating plants and working on the landscape plan.

At the beginning of his residency in the high school, the architect was asked to help teachers in classes with discipline problems. It was hoped that vandalism problems could be solved through advocacy planning. To develop environmental awareness, the architect worked with several classes on a number of activities mentioned in the AIS workshop. They did a "seeing" exercise using image and reality and mapped the existing physical objects in their classroom. They also conducted a "mystery tour" — or tactile exploration — of their room. However, the students' interest waned and the architect abandoned these kinds of activities and concentrated on shorter activities and smaller groups of students working on individual projects.

The next activity was in response to a teacher's request. A geography teacher asked the architect to help her students develop a map mural of the USA and the northern hemisphere on a wall in a major corridor. This was highly visible and the project generated excitement among the students.

Pope next developed core groups from volunteer students in his ISC's art classes. The basic goal of these groups was to improve the visual appearance of the school campus. One group — the map team — measured the school and drew a base map of the high school for use in making design decisions about the landscape. The model team chose areas of the school that needed improving and made scale models of these spaces for study.



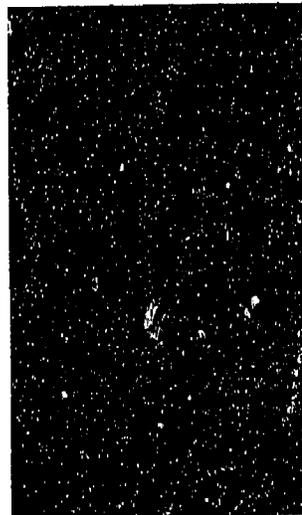
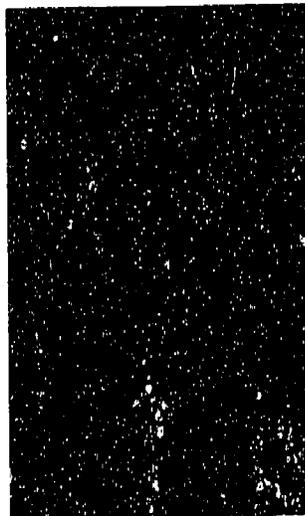
The final result of these teams was a comprehensive landscape map, which was made into posters and displayed in the school. Planting boxes, designed and built by the students, with materials supplied by the architect's budget and plants donated by the Garden Club, were placed on the patio, a major student meeting place.

Another project done with this group introduced the students to the "Conch" houses, a unique architectural style of Key West. After seeing slides, the students sorted them, trying to classify the types of Conch houses. They drew large posters to show the best examples of each. This was followed by a tour of the old city to analyze these houses in the context of their environment.

At the May Sands school, the architect used an advocacy-planning approach. He called on the students to analyze the classroom space based on the activities that occurred there. They then developed a list of the activities that did not have an appropriate space for their function. After building various temporary spaces that were to be prototypes of permanent spaces, they built a permanent platform to house the spaces. The students were just developing their spaces when the school year ended, so the architect will return next year to help them finish.

At both the Key West High School and the May Sands school, major structures were built in the school. The difference between the projects is their location and use. At the high school the planting boxes are a positive element in a student meeting area, but are static elements. At May Sands, the platform structure can serve as a teaching tool by allowing students to develop and change the space it encloses to suit their needs.

Pear Mr. Foley  
thank you  
for helping us  
build the  
structure  
Love, the  
Commission



## Resident/Site

## Residency/Resources

## Program

## Comment

Architect-in-Residence:  
Russ Riley

Lanai High and Elementary  
School  
Lanai, Hawaii

Site: Rural

In-School Coordinator:  
Darlene Mondo, Art  
teacher

Maui High School  
Kahului  
Maui, Hawaii

Site: Rural  
Grade level: 9-12

In-School Coordinator:  
Saburu Watanabe

This residency was a team effort.  
The architect-in-schools worked with  
Thomas Woodruff, a sculptor.

The major effort of this residency was to develop an earth sculpture on the grounds of Maui High School. Utilizing only materials which were present on the site prior to the execution of the piece, and forms which are observable in nature, the completed sculpture is over 280 feet long and 140 feet at its widest point. The piece consists of alternating depressions and mounds creating a wave-like form on the earth's surface. The architect-in-school provided the landscape setting for the sculpture and also produced an irrigation plan to stabilize the soil.

On Lanai, one of the approaches used to develop awareness was to ask the students to document the boundaries of the town — an interesting project — since the town is part of a larger economic unit, the plantation, which encompasses the entire island. Lanai is, in effect, a company town. The school itself is a community resource; the school library is used by everyone, not only the students.

The architect-in-school has also been planning various projects for the coming school year with interested teachers at Lanai which will incorporate built environment education into the elementary and high school curriculum.

This residency represents one of the initial efforts of the Hawaii arts agency to develop a comprehensive plan through which several components of the Artists-inSchools will work jointly in schools in an interdisciplinary approach to the arts.

**Resident/Site**

**Residency/Resources**

**Program**

Architect-in-Residence:  
**Gary Olson**

Kenwood Elementary  
School  
Champaign, Illinois

Site: Suburban  
Population: 633 students;  
35 faculty  
Grade level: 3 and 4

In-School Coordinator:  
Joyce Grusy, Teacher

Franklin Jr. High School  
Champaign, Illinois

Site: Suburban  
Population: 600 students;  
48 faculty  
Grade level: 7-9

In-School Coordinator:  
Norma Thompson, Math  
teacher

Central High School  
Champaign, Illinois

Site: Suburban  
Population: 1350 students;  
85 faculty  
Grade level: 10-12

In-School Coordinator: John  
Scarpetta, Architectural  
drafting teacher

Centennial High School  
Champaign, Illinois

Site: Suburban  
Population: 1105 students;  
80 faculty  
Grade level: 10-12

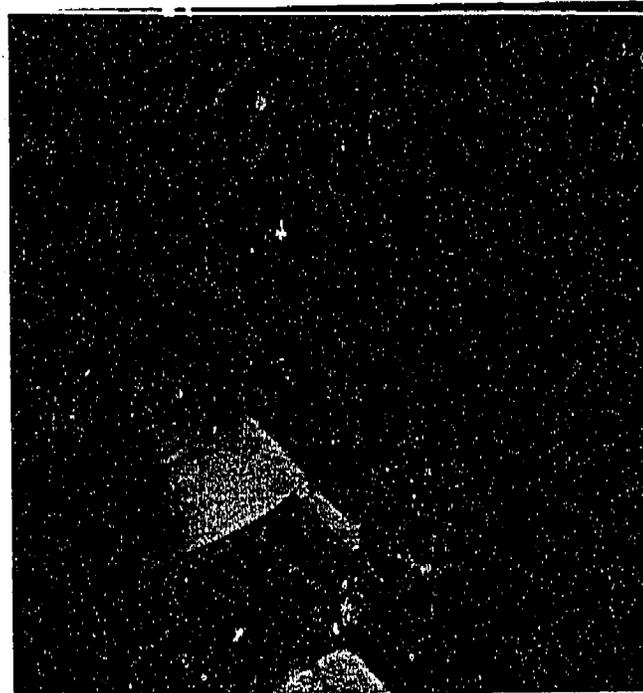
In-School Coordinator:  
Allen Boehm, Architectural  
drafting teacher

This was a four-school, sequential residency; three full days a week; 12 to 18 hours per week. The high schools (Centennial and Central) shared time during the last third of the year. Activities were conducted during normal class time. The resident worked with all third and fourth grade teachers in the elementary school. At the junior high school, the architect worked with six teachers as well as the middle school coordinator and principal. Students were excused from regular classes to work with the resident three times a week. In the high schools he worked only with architectural design and drafting students in their assigned classrooms.

Many community resources were used in this residency: the Champaign County Historical Museum; University of Illinois; local contractors' association; Champaign County Arts and Humanities Council. The resident brought in guest lecturers on architecture and environmental concerns as well as visiting artists — a sculptor and a graphic designer — who worked with students. The local members of the AIA were consultants in this program.

Olsen took the elementary students on many walking tours to study architectural details. They also visited the Champaign County Historical Museum, the World Heritage Museum (where they researched the mound builders of Cahokia), and the Krannert Art Museum. A trip to New Salem and Springfield showed the children architectural styles that ranged from log cabins to the stately capitol building, as well as the importance of preserving old buildings.

In-class activities introduced the students to architectural scale which they proceeded to use in the building of small individual cardboard houses. The students decided that they wanted to build a real house that they could use and get inside of. They constructed a house of cardboard that was large enough to enclose all the students. The house had windows, a door, and a moveable roof which allows for a skylighted effect when students are using the space for reading. This activity was actually completed in one day.



The resident brought two artists to the school to expand the children's understanding of other elements in the built environment. One, a wood sculptor demonstrated his art and then the children created their own three-dimensional sculptures. The other artist was a graphic designer who demonstrated architectural graphics to the class.

At the junior high school, students worked on individualized projects. They designed an environment in which they would like to live with their family. Most of these projects took on the form of single family residences. The students made drawings and built models.

Students participated in walking tours, perception and identification exercises, a month-long project analyzing the community (with thoughts on how to make a good community better), and created a collage which illustrated life in a community. Other subjects such as scale, measurement, texture and architectural history were covered in class presentations or slide lectures.

High school students toured local homes, apartments, architects' studios, and finally took a trip to Chicago where they were introduced to the buildings of Wright, Sullivan, Richardson and Mies Van der Rohe. The high school students were also introduced to principles of landscape architecture, interior design, graphics, presentation drawing, room relationships, scale, urban planning and zoning.

However, the main emphasis of the high school residency was with the advanced architectural design class consisting of juniors and seniors. As a resource person, Olsen brought in several guest lecturers who discussed a wide range of environmental concerns and took the class on at least one field trip a week. A semester-long project to design a residence followed a prescribed program and culminated with a final jury of local citizens who selected a winning design from those submitted. This house will actually be built by the building trade classes.

One of the most successful projects was a neighborhood environmental score, otherwise known as TRIP (Traveller's Response to Imagery Perception). This activity was used as a vehicle to make the students think, experience and perceive rather than just follow an itinerary. The area chosen for the 95-minute exercise was close to the high school. Each student received a score sheet, a meter-length of string and a map of the area, with directions "to observe" (textures, trees, houses, unusual features, fences, sounds, things beneath your feet, vistas, etc.) and "to do" for each of the activities listed. Neighborhood scoring serves as a vehicle for firsthand involvement and can be used as a problem-solving score as well.



Olsen's work with these students prompted the high school drafting teacher to observe that students' awareness had increased and that they were beginning to think beyond drafting itself and to understand it within the larger architectural design process.

**Resident/Site****Residency/Resources****Program****Comment**

Architect-in-Residence:  
**Richard Twiss**

Lincoln Elementary School  
Quincy, Illinois

Site: Small town  
Population: 600 students;  
25 faculty  
Grade level: Elementary

In-School Coordinator:  
Don McKinley, Principal

Adams School  
Quincy, Illinois

Site: Small town  
Grade level: Elementary

In-School Coordinator:  
Al Tervelt, Principal

Senior High School II  
Quincy, Illinois

Site: Small town  
Population: 1500 students;  
100 faculty  
Grade level: 11-12

In-School Coordinator:  
Eugene Johnson, Teacher

This residency was held in three schools. At Lincoln, the resident was available between October and February for three days per week. Activities were generally conducted during class time. At the Adams School, the architect-in-residence was available between February and May for three days per week. In the Senior High School II the residency lasted from November through May.

A Community Advisory Group was formed to assist with the residency and to help it reach the total community. The architect-in-school sponsored and conducted a number of walking tours, house tours and a cemetery walk for the community at large. In addition, the resident worked as a consultant at the Art Center to help initiate an architectural awareness program.

At the Lincoln Elementary School the architect-in-school implemented a course in a variety of built environment related subject areas. One area was community planning. Students used an imaginary site and discussed the relationship of the various components of a new community which could be constructed there. Planning was accomplished through the use of a large drawing of the region and "stick-on" representations of various buildings.

Students were introduced to basic structural concepts through lectures and demonstrations with wooden models. Architectural styles represented in Quincy and their significance were discussed. Slides were used to make the discussions more real.

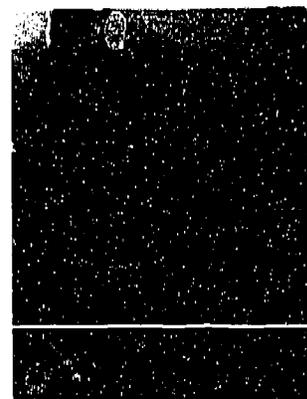
After an introduction to the concept of space perception through discussion, the class visited various spaces in the school. A barrier was placed in a major corridor to help students analyze traffic patterns and their reactions to the barrier.

A special consultant helped to conduct a series of activities on designing playgrounds. After a slide presentation of various concepts of play activity, the students went into the gymnasium and were given chairs, colored paper, boxes and mats, and asked to improvise, creating their own play activities. The activity was photographed and video-taped and presented to parents and community.

The program at the Adams School included outdoor field trips in the form of treasure hunts, one at a cemetery and one at an historic house. Students were asked to record their impressions of each site.

Activities at the high school included a design by an art class of a large outdoor mural for a blank wall in a downtown location; the activity was initiated by a local businessman. The architect-in-school participated in a Community Issues Forum at the high school and gave a presentation on architectural styles represented in Quincy. He also began a seminar on architectural history. Students were led by the resident on an architectural walking tour.

Quincy is a town with an extraordinary architectural heritage representing virtually all American building styles. An architectural historian was chosen for this residency so that the community as a whole could be sensitized to its unique environment through involvement in the program.



## Resident/Site

## Residency/Resources

## Program

Architect-in-Residence:  
**Myrene Taylor**

Northwestern High  
School  
Kokomo, Indiana

Site: Rural-suburban  
Population: 2500 students;  
110 faculty  
Grade level: Middle and  
secondary

In-School Coordinator:  
Thomas McCracken,  
Principal

Residency was for nine months, five days per week, 30-40 hours per week. Activities were conducted generally during class time. This residency was in a school that had a prior involvement with Environmental Education. The resident worked mostly with two art teachers, one on the high school level and the other on the middle school level.

Community resources used included the City Planning Commission and the County Police. Taylor brought several resource people from the community into the classroom: an architect specializing in solar energy; an engineer to lecture and work with construction problems; an architecture instructor from a university; and an interior designer.

Myrene Taylor worked primarily in short-term awareness activities and projects as follow-ups to perceived needs.

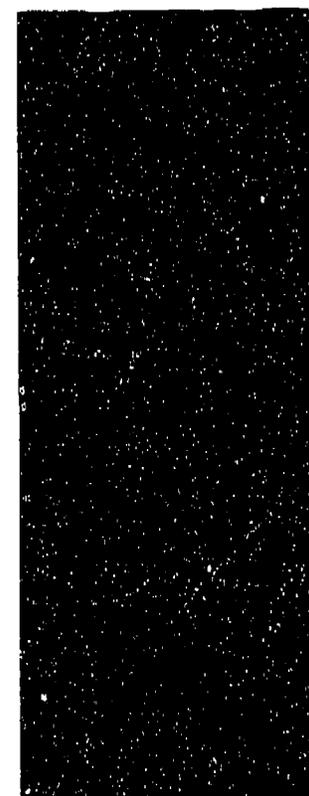
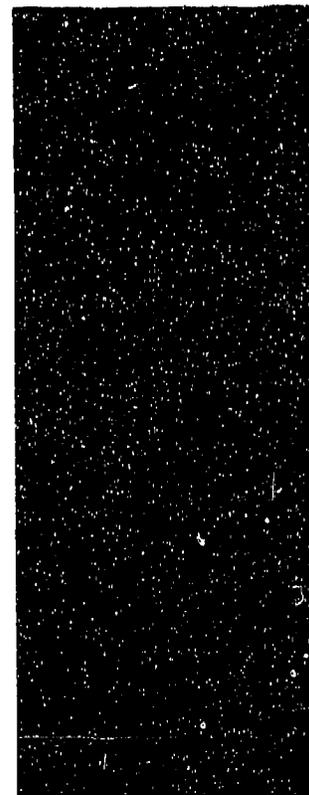
She began her residency with a slide presentation to the teachers, explaining to them the potentials of the program and ideas as to how the architect might fit into their individual classrooms.

The first activity with the middle school students intended to introduce architecture through the art media. The activity began with a discussion of the students' environments, at home and at school. They wrote down the things about the place they liked best, and transferred these verbal accounts into pictorial form. This "favorite environments" project was followed by a discussion on sensory aspects of the environment. The next step was to have the children use their imagination and design a creature or monster with special needs. The students learned about animals and how they exist in their various environments. The students then programmed the needs of their monster and designed a habitat to fit these needs.

The students also worked on a private space assignment. The project began with having the students draw their neighborhood, including the streets, library, parks, personalized with reminiscences. The students then drew patterns of circulation, walks and so forth. Next the students were asked to design their dream room. As a programming technique, they analyzed the good and bad points of their existing room. The architect tried to make the students aware that rooms don't have to conform to standard dimensions and expectations.

In a seventh grade math class, Taylor had the students create their own scale using squares of colored paper. Each student took 10 squares, pasted them on chipboard and labelled them. They used the entire strip as one unit with which they measured the classroom and made models.

In the high school, the resident functioned as a resource person for many different classes. In Latin and classical literature classes, the students learned about classical architecture through both lecture and actual demonstration of domes and arches, town planning and family residences. The architect took the classes to see local examples of these styles of architecture. A similar project was conducted in a German language class, where the students researched different architectural periods and how these styles



related to German culture. They were asked to consider such issues as how the social and political atmosphere resulted in a particular style.

Taylor also gave a wide variety of lectures, slide and film presentations to many different classes. She prepared a slide show with music that was shown to all the H.S. art classes. The show dealt with all aspects of environments; form, space, interior details, and also showed architecture as form, its relation to environments, space, texture/color. Another lecture given to several classes was on vernacular architecture and farm architecture; most of the students grew up on farms but never knew the history of their local architecture. e. Again this lecture was supplemented by a field trip to examine local examples.

Taylor also tried to involve students in changing their environments. She worked with the band students to change their practice rooms, to solve their lighting problems by using lighter paint, and decorating the room with stencils and identifying rooms with plaques.

The Visual Design students worked with three-dimensional spatial definers. Students designed out of large pieces of cardboard large pieces of geometric sculpture. These definers were then installed in the classroom; connected by string yarn and other means to change the classroom space.

The art class did an exercise to create environments that would portray or express a word. The class was divided into two groups, one group creating a scene with found objects in the room — chairs, tables, paint pots, plants, and the other group would try to guess what feeling or word the environment was trying to communicate.

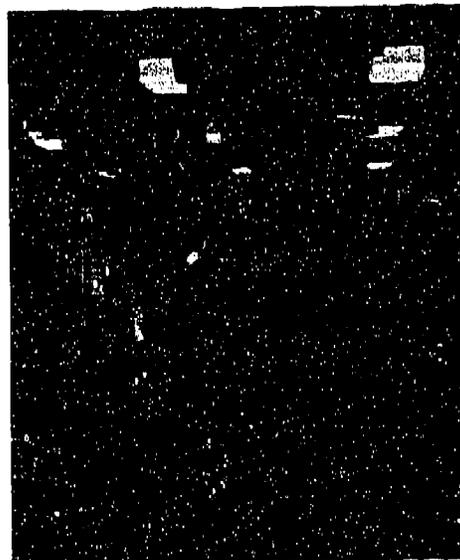
Another art project, intended to create forms to show concepts, analyzed what students did not like about the school environment and why. Noting that the spaces and the color of the school were the worst problems, they tried to experiment with these factors by taping colored tissue paper to the ceiling tiles in color gradation. People were glad to see color and movement in the hallways.

Together with the science teacher, Taylor developed a unit comparing systems of the human body with those in a building. Discussion involved analysis of the spaces within the school,

laying out the building walls on a huge piece of plastic. Students then began a "plan" of the human body. The class first dealt with the respiratory system/ventilation system, adding windows, doors and vents to the school map; lungs and trachea to the body map. Students compared themselves to the cells of the body; the administration was the brain. Other systems mapped this way were the circulatory/heating system, and the waste system.

Taylor also formed a built environment club during activities period where approximately twenty students engaged in discussions and activities on a more personal level with the architect-in-residence.

After a long planning and introductory phase, the residency developed continuously over the course of the year. Great interest was generated in the school population and the residency will continue next year. Planning meetings with resident, teachers and principal were held at the end of the year.



## Resident/Site

## Residency/Resources

## Program

Architect-in-Residence:  
Damon Ohlerking

Eagle Grove Community  
Schools  
Eagle Grove, Iowa

Site: Rural  
Population: Middle School,  
491 students; 27 faculty  
High School, 387 students;  
28 faculty  
Grade level: 5-12

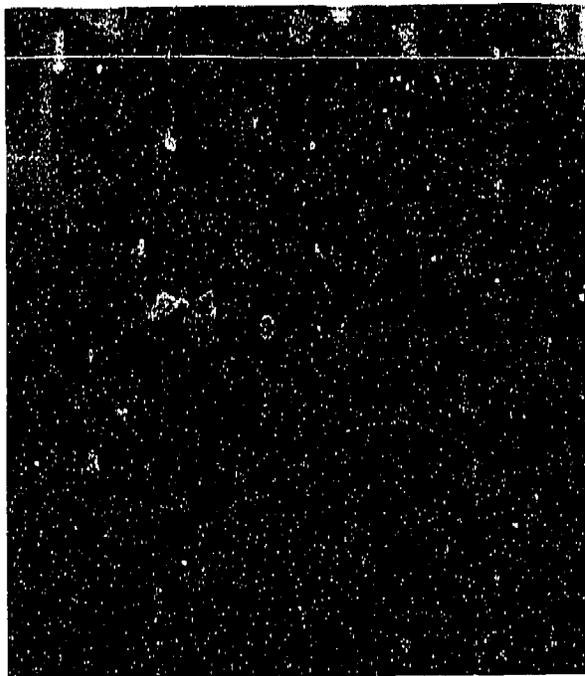
In-School Coordinator:  
Richard Cahalan, Science  
teacher

This was a nine-month residency, three days per week, 20 to 25 hours per week. The resident usually worked with four or six classes per week. There was an after-school group that met once a week. Ohlerking worked extensively with many teachers in all subject areas as well as the principal and a student coordinator.

There was extensive community involvement in this project. Ohlerking worked with the community to develop a five-year project for the upcoming town centennial. Another community project involved students and school. Outside consultants brought into classes by the resident were: a realtor, contractor, banker, electrician and plumber.

The school contributed \$15,000.00 toward the park project. The resident believes that donated services would be equal to that amount.

There were several aspects of this residency. As the architect-in-residence for an entire school system, Ohlerking worked with students in both middle and upper schools, inside and outside of class. Within the classroom he worked with history, language arts, math and art classes. One activity involved taking the eighth grade history and language arts classes on a "mystery tour" of their community. A slide show depicting old houses, roads, and prairie plants and flowers preceded the bus tour, illustrating what students should watch for. On the trip, students examined the remains of an old stagecoach stop, investigated various architectural styles of houses and visited an old cemetery to make charcoal rubbings of details on headstones. After the tour students were asked to write imaginary letters to friends describing the community 100 years ago, today and 20 years from now.



Another awareness exercise used field trips, slides and a review of various architectural details to stimulate compositions, documentation and illustrations about what the group observed.

A math class examined the costs of building a home. First they drew plans and built models of homes. They interviewed several consultants to determine the cost of their plan. Realtors, contractors, bankers, plumbers and electricians gave them information about costs. The emphasis of this project was on measurements and comparative pricing.



At the high school level, urban studies was a focus for several activities. One involved a land-use simulation game. Students assumed different constituencies involved in a development plan for their community and became aware of the complexity of land-use decisions. Seniors were also involved in various surveys on urban land use, housing, types of housing units, recreational facilities and retail trade in their community. Students were divided into teams and assigned several blocks to survey and people to interview. The information was transferred to maps.

In an art class, students were told to find the dimensions of a large space in their school, define its uses and design a mural that related to both the space and the function. Individual designs were submitted by the students, discussed, refined and a final design was agreed upon and painted.

The resident worked with after-school groups as well. A core group of students met weekly after school and worked on individual projects. As a group activity they toured another community and then mapped their impressions of the town.

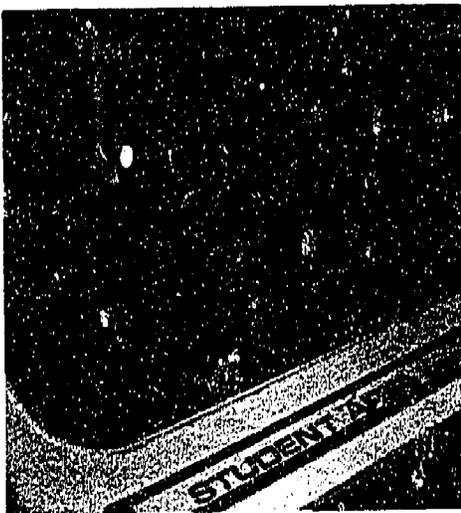
The architect was involved in developing several design proposals for the school. A long-range design for landscaping, involving student participation was created for the middle school.

In the high school, Ohlerking worked with students to develop a design for a park and outdoor classroom. A senior built the model of the design and it was ultimately approved by the school board. Students built the benches, planted trees and constructed waste receptacles.

In addition to this, the resident has been involved in various community projects. He has spoken on preservation to local community groups and has worked closely with a community group to develop a five-year project looking toward the upcoming town centennial. One immediate outcome of this project is a column in the local newspaper gathering and presenting information about the community's built environment.

The resident comments:

The middle school is an ideal setting for built environment education because the students have already learned the basic skills but have not yet begun the heavy concentration in separate subjects. "Problem" students can be involved in activities that demand discipline and perseverance.



## Resident/Site

Architect-in-Residence:  
**Gerald E. Allen and  
Criteria**

The Open School  
St. Paul, Minnesota

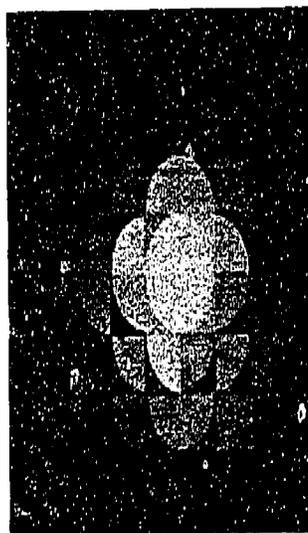
Site: Urban  
Population: 500 students;  
45 faculty  
Grade level: K-12

In-School Coordinator:  
Wendell Carroll, Teacher

Criteria is a collaborative of architects and designers whose work focuses on the built environment. Working in this program in addition to Gerald Allen was Walter Albertson (visual artist), Carol Capistrant (graphic designer), and Robert Staricka (designer).

## Residency/Resources

This residency ran from September to June and was for five full days per week. At least three artists worked in the school at different times each week, each offering a different emphasis and thus creating a varied program. Activities were conducted during class time, after school and on weekends.



## Program

Because the Open School moved this fall into a large, inner city high school building, plans involved using the students to improve the environment. Two of the architects-in-school worked with the students in building activities, constructing furniture, storage and student cubbies. Working within the established curriculum, the architects-in-school and the students worked on the visual aspects of the school, using signage and graphics to turn the corridors into communication media. A logo contest was initiated, and the winning designs, refined with the help of the graphic artist, were used to replace the present identification on the outside of the building.

The activities of the residency are also planned for the needs of the three age groups found in the school — elementary, middle and secondary. For the youngest group, there was a class on "homey abodes," translating from drawings to models prairie houses, castles, self spaces and the city. For the middle age group, there was a class on structures using different materials such as paper, cardboard and wood. The students built the tallest structure they could, the largest structure, and the farthest span. The older students focused on community change and what is architecture. Other activities conducted with the students included: room planning, why homes look as they do, drawing with tools, model building, large scale graphic art, and construction.

Two of the other architects-in-school worked with fantasy art, helping the students to fashion beings as different as their imagination could create. They worked in groups to determine the clothing, architecture and the history of these beings.

Activities have included working with a Theatre in Action class to help design and organize the theatre area. Designing a thrust stage, organizing storage for costumes and props, and setting up a light booth have been some of the projects. Plans are being developed for the playground and the Early Learning Center. The older students are being drawn in to plan and create a useful home base area — a gathering spot for communication and informal interaction.

## Comment

During this residency the school children had an opportunity to observe the members of Criteria working on projects of their own, such as a futures exhibit for the Science Museum, a new underground office space, design and planning of a preschool program and building, and the renovation of an old part of town.



**Resident/Site****Residency/Resources****Program****Comment**

Architects-in-Residence:  
**Robert Close** and  
**Carl Vogt**

Centennial School District  
 Circle Pines, Minnesota

Population: 1500 students;  
 80 staff

In-School Coordinator: Dr.  
**Robert E. Buresh**, Director,  
 Environment and the Arts  
 Program

Project Coordinator:  
 Dr. Robert E. Buresh

This was a team project; the architects-in-residence worked together in all schools for various lengths of time throughout the school year.

The schools' goals for the residency were to design various environmental education facilities. The team worked with teachers as would an architect with clients: developing the planning, design and implementation of environmental education sites.

The team held a pre-planning session in July with school staff, showing a prepared slide presentation. The first part of the residency was spent on site visitations and surveys. This followed with a presentation of site improvement possibilities and the rest of the time was devoted to implementation.

The architects-in-residence were primarily involved in site development activities. After conducting a workshop for staff members on how to teach others basic fundamentals of design and planning, the team worked with an environmental education curriculum planning group, which consisted of 35 parents, teachers and eventually students, to develop school site changes and curriculum. They made a report of proposed improvements, to the School Board during March 1977. The report identified each school site, proposed plans, costs and available funds from various sources. The projects carried out in each school are as follows:

**Centennial Elementary School:** The rationale was to provide children with an opportunity to develop awareness of the out-of-doors, and to improve the physical setting of the school site. Projects included a creative playground, landscaping along the fence and playground, an obstacle course, a nature trail, a courtyard and a softball field. Students participated in the tree and shrub plantings, and staff members and parents helped construct the playground apparatus.

**Centerville Elementary School:** The rationale was to develop natural features on the school site, to expand the existing curriculum into the outdoor areas, and to involve community in development and utilization of these features. Plans for the school included a creative playground utilizing poles, timber, tires and other common things; a nature trail/creek study; an amphitheater; landscaping; and a pond. A plant-a-tree open house involved many parents with their children planting trees and shrubs.

**Centennial Junior/Senior High Schools:** The rationale was to encourage participants to involve themselves in planning and creating their environment and to increase their understanding of the interaction between people and their surroundings. Projects included an outdoor sculpture (designed not only for aesthetics but also to be climbed and played upon), a rooftop meteorological station, an outdoor classroom, a nature and exercise trail, a courtyard, a greenhouse and an amphitheater.

**Golden Lake Elementary:** The goal was to develop more natural vegetation at school site. Plans included general landscaping improvements, a creative playground, and a wildlife feeding area. Staff members participated in construction of playground apparatus and tree and shrub plantings.

**Lovell Elementary School:** The goal was to concentrate on a comprehensive plan for the utilization of the whole area. Projects included a creative playground, fence plantings, and a nature trail.

The projects carried out in this year's residency were part of the school district's long term environmental plans. One administrator commented, "It's really fun to see these things happening, to see parents getting involved. I imagine I'll get my chance to dig too ... at least I hope so."

**Resident/Site****Residency/Resources****Program****Comment**

Architects-in-Residence:  
**Neil Weber** and  
**Steven Weeks**

Bethune School  
Minneapolis, Minnesota

Site: Urban  
Population: 580 students;  
28 faculty  
Grade level: K-3  
In-School Coordinator:  
Carolyn Papke, Teacher

Harrison School  
Minneapolis, Minnesota

Site: Urban  
Population: 420 students;  
19 faculty  
Grade level: 1-8  
In-School Coordinator:  
Sally Lecirire, Teacher

Holland Elementary School  
Minneapolis, Minnesota

Site: Urban  
Population: 330 students;  
24 faculty  
In-School Coordinator:  
Mary Jane Higley,  
Principal

Lyndale Elementary School  
Minneapolis, Minnesota

Site: Urban  
Population: 740 students;  
44 faculty  
Grade level: K-6  
In-School Coordinator:  
Richard Cornwell,  
Principal

Project Director:  
Seymour Yesner,  
Consultant English and  
Humanities, Minneapolis  
Public Schools

Each architect-in-residence was in school half-time during the school year for 20 hours per week. Steven Weeks worked mainly at Bethune and Harrison; Neil Weber worked mainly at Lyndale and Holland.

It was expected that the architects-in-school would redesign and reshape environments for learning as well as serve as resources to specific teachers who might want to include elements of design, theory, form and structure into their courses.

At the Bethune school, teachers and students with the architects-in-residence designed a courtyard which was expected to serve as an outdoor learning environment. The design was brought through the model stage. Construction was, however, contraindicated by an environmental impact study of the school site. Students at Bethune were also involved in building models and personal spaces.



At Harrison, the architects-in-schools were asked to work with teachers and staff to develop the auditorium as a dance demonstration, rehearsal and lecture space for three dance residencies that occurred during the year. There was considerable interaction in this school between the dual AIS components — architecture and dance. A dance platform was constructed and used by the participants in the dance program.

At Holland the initial program was to develop graphics for the school; however, scheduling difficulties and lack of school preparedness presented obstacles. There is interest in developing this program for next year.

At Lyndale, the open school design was perceived by teachers as a problem defined by noise, poor use of space and lack of small-scale spaces. The architects-in-residence worked with the teachers through a series of awareness exercises to help them learn about the impact of space and the environment on the learning process.

The resident comments:

It is important in conducting any project that teachers and architect develop a partnership that combines the architect's design process with the teacher's methodology.

The products are far less important when the process of doing is emphasized.

The worst thing to do is to plunge into complexity without first building a base of personal understanding.

Hypothetical problem-solving enables a teacher and children to begin establishing goals and priorities without the encumbrance of the complicated real world.



## Resident/Site

## Residency/Resources

## Program

## Comment

Architect-in-Residence:  
**Garry Harley**

Arbor Heights Jr. High  
School  
Omaha, Nebraska

Site: Suburban  
Population: 915 students;  
60 faculty  
Grade level: 7-9

In-School Coordinator: Tom  
Brown, American History  
Teacher and Department  
Head

Westbrook Jr. High School  
Omaha, Nebraska

Site: Suburban  
Population: 459 students;  
40 faculty  
Grade level: 7-9

In-School Coordinator:  
Tony Snyder, Fine Arts  
Coordinator

Valley View Jr. High School  
Omaha, Nebraska

Site: Suburban  
Population: 727 students;  
50 faculty  
Grade Level: 7-9

In-School Coordinator:  
Joyce Brader, Art teacher

This resident worked at three sites, each lasting 10 weeks; three days per week, 20 hours per week. Harley worked with art, history and science teachers.

The architect-in-residence used Omaha City Planning Commission for data and maps. He received materials from the Omaha chapter of the AIA.

At Arbor, two major projects were developed. The first was an investigation by the science classes of the potential impact of architecture on the energy crisis. The students studied the potential impact of design on the utilization of solar energy and climate, and this led to building a hot-air passive solar collector. Students at Westbrook worked on a similar project and conducted various table-top experiments. This too led to the construction of a second type of collector.

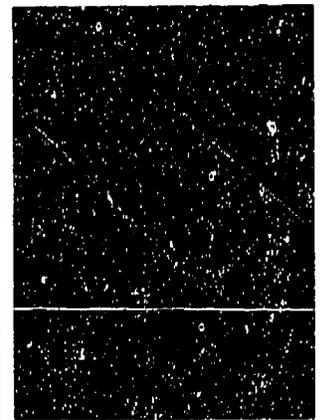
The second major project was a study of the problems of growth in western Omaha. The process of land conversion was observed by using aerial maps. A 1960 map was used to document what lands had been converted from rural to urban use and what structures have been demolished. Another map, from 1972, was used to document all urban additions during the 12-year period. In both projects reading assignments were given, newspaper articles on current relevant growth issues were clipped and discussed, and lectures about urban growth were given by the resident.

The architect-in-school worked with the art class of the ISC at the Valley View School to develop visual awareness and understanding of the environment. Projects included decoration and mural painting in the cafeteria; a Gothic architecture study; color theory studies, involving color observation and recording; and kinetic/graphic designs for blind students. This last activity also included an assessment of physical barriers for the handicapped.

Other activities that led to an understanding of the design process were exercises that used sugar-cube construction to demonstrate basic architectural forms and tracings of school working drawings to make observations about school environment.

In addition to his in-school activities, the resident also held sessions with local architects and educators from the University of Nebraska to explain the goals and progress of the program and what part these persons might play in the future development of AIS.

While his short-term residencies did not allow for in-depth program development, the resident was able through the design and building of solar energy panels to focus student attention on problems of design, energy conservation and environmental issues in a practical and experiential way.



Architect-in-Residence:  
**Ron Haase**

Profile School  
Bethlehem, New  
Hampshire

Site: Rural  
Population: 280 students;  
21 faculty  
Grade level: 7-12

In-School Coordinator:  
Laurie Blaney, Math  
teacher

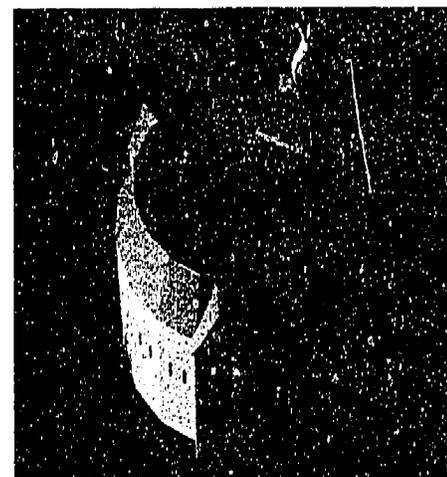
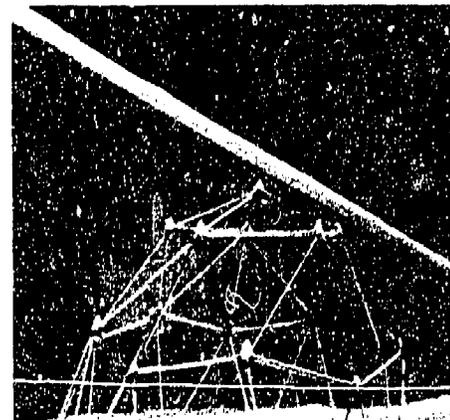
This was an eight-month residency, five mornings a week, 20 hours per week. Activities were conducted during regular classes and during lunch time and Haase worked with teachers in art, math, shop and graphics, and social studies classes as a co-teacher. If required, teachers adjusted class plans to include the architect. Class experiences ranged from single lectures to five-week long projects.

The community was used for field trips and local experts from the community were brought in to aid students on projects.

As the introductory activity to his residency, the architect worked with the high school geometry class on an introduction to geodesics, in preparation for a dome-building project in the spring. This project involved field trips to nearby domes, model making, and construction by the students of a metal-tube climbing structure which was an elliptical dome. The spring dome-building project placed emphasis on a multi-discovery approach. Designed by the geometry class, the dome was laid out with the help of the trigonometry and physics students, fabricated and erected in the school shop classes, and organized and managed as an ecological and biological project of the life science classes.

The seventh and eighth grade art classes worked on what the architect termed as an "Architectonics" project. Students composed sets of paper forms on a cardboard square, making colorful collages. Each paper form was then given a height value, and students drew isometrics of their designs. After this the students worked on making scale models of their designs. This way the students could see the development of their compositions from two-dimensional design to three-dimensional isometric to three-dimensional model. Students became familiar with certain terms: abstract, composition, isometric, and negative and positive space.

Haase also conducted various lectures at the teachers' request. The architect spoke to the music classes about acoustics. He then took the classes on a tour of the school trying out various acoustical phenomena like reverberation, echo, and flutter. Haase lectured to the French class on the transition from Romanesque to Gothic architecture. A presentation to the English literature class on the history of the Globe Theater was accompanied by a scale model of the theater to demonstrate the relationship of architecture to the staging of Elizabethan drama.



In the senior high school, the architect worked with a social studies teacher to develop a unit "Shelter of Cities." First, the architect lectured on primitive shelter as influenced by nature, building materials and life style. Then a three-day exercise was held to analyze the students' homes, discussing the same influences.

In another social studies class, the architect conducted a town planning project that lasted four weeks. The first phase was analysis of the town, recording existing conditions. Students drew maps of their town from memory, then compared their drawings to geodesic survey maps. The students then built contour maps. The second phase was to determine the needs of the inhabitants. The students used a questionnaire to survey the ideas that the people have about their town. The third phase involved solutions and planning for the future. The students saw a film on cities of the future, and the architect gave a presentation on the goals of the town. Students assumed the roles of various members and groups of the community and wrote on the future needs of the community. The students also made zoning and street maps of the future town, which they discussed along with their papers.

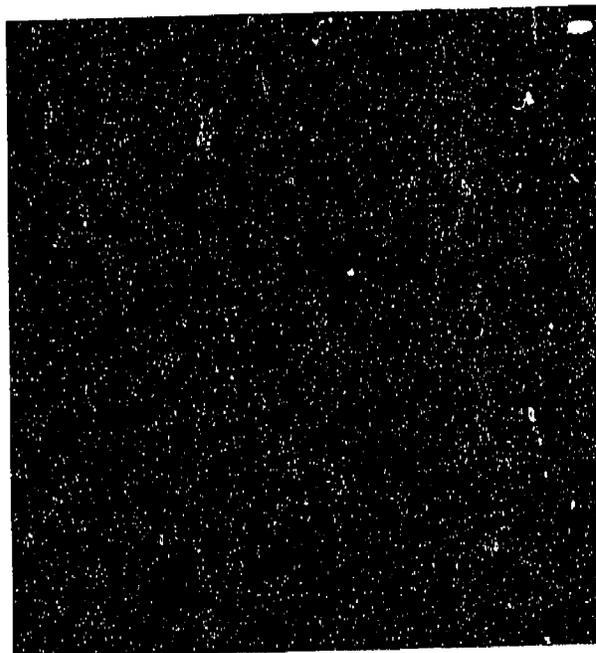
With the industrial arts class, the architect worked on the design and construction of a small storage barn for athletic equipment, yard vehicles and a sports concession stand. The students researched construction techniques and program needs, then priced materials, built a scale model, and finally constructed the barn.

Two physics students worked independently with the architect on a heat transfer/insulation study. After physically testing various insulation materials in a lab, they calculated the heat loss for a small dwelling. They also determined potential fuel-saving methods, such as orienting large windows to southern sun and using heavy drapery as nighttime insulation.

In addition to working in class with teachers, the architect formed two mini-courses of his own which met during lunch hour. In the first course, "Graphics for the School," students planned signs, graphics and large murals for the school. The second course, "Student Design Workshop," began with awareness exercises. The students designed and constructed a student activity center in a corner of the cafeteria.

The resident comments:

I found that teaching in high school is very hard work. I tried on all occasions to be conscious of the individual ability levels of the kids, to use a relaxed and non-threatening approach when I sensed a reluctance or insecurity on someone's part, and to keep an enthusiastic attitude even when a certain amount of intransigence was in the air.



**Resident/Site**

**Residency/Resources**

**Program**

**Comment**

Architects-in-Residence:  
**Daniel Brown** and  
**Nancy Green**

Roosevelt Elementary  
 School  
 Roosevelt, New Jersey

Site: Rural  
 Population: 120 students;  
 5 faculty  
 Grade level: K-8

In-School Coordinator:  
 Lew Gantwerk, Principal

Both residents spent one day per week together and one day individually in the school. They worked with small groups and entire classes during class and after school, and occasionally on weekends.

There was a close school-designer rapport. Discussions, reviews and planning took place on a daily basis. The administration facilitated their interaction by approving a series of early closings on a weekly basis for teacher training.

Miscellaneous labor and materials were contributed by community members and \$5000.00 was approved by Board of Education for materials.

The intent of the residency was to revitalize the school, both physically and attitudinally, through the course of the 38-week residency. The school itself, as building and institution, became the focus of the residency, and of all of its activities and projects. They fell into five phases: 1) awareness, 2) design goals, 3) implementation/fabrication of systems, 4) hall design and 5) re-design.

Awareness activities included mapping rooms, listing activities and objects, making models of personal environments, and manipulating classrooms with existing furniture. Students made models of proposed room changes, including the design of learning environment support structures. Developed in this way, the design goals could serve as the basis for designing and building classroom furniture to solve perceived problems: primarily noise, clutter and functional inflexibility of furniture.

In the implementation phase, the six classrooms were painted, tri-wall private spaces were placed in classrooms for children's use, flexible components (homosote panels on metal frames) were designed and built to support the changing requirements of the classrooms, and a handbook to support the continued evolution of the structures was written by students and teachers.

All of these projects helped develop a sense of the ability to control the immediate environment, and from this students and teachers are developing a sense of stewardship over an important aspect of their daily lives.

The school's public space (a long, narrow, central hallway) was completed near the end of the school year, and provided an intense involvement at a time when students and teachers are usually winding down.

The intent of the project was to revitalize the school, both physically and attitudinally, and the community's involvement with it. Goals included providing tools for the school's community to look at its environment in new ways, to use it differently as different needs arise, and to understand and respect its relevance to the activities that take place in it.



**Resident/Site****Residency/Resources****Program****Comment**

Architect-in-Residence:  
**Phillip Danzig**

Frank H. Morrell High  
School  
Irvington, New Jersey

Site: Urban  
Population: 2500 students,  
150 faculty  
Grade level: 9-12

In-School Coordinator:  
Dr. Elaine Raichle, Art  
Supervisor

This was a four-month residency; three days per week in regular classes in the art department to which students were assigned; after-school with the Architecture and Environmental Design Club. A fourth day every two weeks was reserved for assembly presentations.

Community resources that were used during this project were the public library, the Chamber of Commerce, the Planning Office, Parks Department and Housing Authority.

The Parks Department donated \$500.00 to this project.

Introductory exercises in built environment awareness focused on the question, "What do you perceive on the way to school?" This permitted the architect to get a feeling about the students' degree of readiness and their familiarity with general content, vocabulary and so forth. It also permits students to relate to the architect on a subject in which they could feel comfortable. Such an exercise raises the student's awareness of the overly familiar. This discussion was followed by an exercise in writing directions for how to get to school from their homes without using street names. The next exercise was to map their paths to school, showing landmarks, districts, edges and paths, as well as sense impressions.

A second unit, Understanding the Five Senses, was used to develop the awareness that perception of the objective world is made through their senses. They altered the light level of the room, burned incense and played drum music. They were asked if they perceived "anything different." Then they proceeded to exercises for sound, taste and sight.

One of Danzig's classes worked on scale models. They began with drawings of the classroom and their own bedrooms and moved on to cardboard models of their rooms. These models could be "real" or as the student would like them to be. The students were enthusiastic about this project, meeting it with participation, persistence and inventiveness. Students used wood panelling and wallpaper, made patchwork rugs and so forth.

Another group worked on murals. They began by doing small, scaled sketches. These were blown up to make murals on paper, and these were then hung in the room. Some of these were hung in the cafeteria on a rotating basis; the small sketches of the murals were placed on display in the lobby with the hope that students would see the connection between them (i.e., different scales, preliminary vs. final design).

In a neighboring school the resident was asked to discuss with an eighth grade class the need for renderings.

The resident also ran an environmental film series to present architectural and environmental subjects to students and faculty. Each program was introduced and a discussion followed the film.

The In-School Coordinator comments:

The program provided cooperative group experiences and individually related ones in which one could be a participant in an effective creative process. It provided opportunities for the development of leaders, for creative uses of new materials, for completing high impact visual changes for a larger audience, for free expression, for learning to work within a community, for learning new technical skills and for the students to be exposed to a competent teaching-professional.

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## Resident/Site

Architect-in-Residence:  
**William Mikesell**

Annandale Youth  
Correctional Institution  
Annandale, New Jersey

Population: 600-1000  
residents aged 16-29; 21  
employees involved in  
educational programs

In-School Coordinator:  
Roger Kell, Art instructor

## Residency/Resources

During a four-month residency Mikesell spent 30 to 40 hours a week working with two activity groups. In this unusual setting, it was found that the team relationship with the art instructor was particularly helpful. The ISC (the art instructor) with years of experience at the institution contributed knowledge of the bureaucracy and access to the inmates.

Outside consultants participated in this project: an architect (another AIS resident elsewhere) gave constructive criticism on techniques; another architect gave an evaluation of the projects being worked on; and there was another visit from an architect from the New Jersey School of Architecture.

## Program

The participants in this program called it Project Self, a way of describing their perception of it as an opportunity to learn in proportion to the energy they contributed to the project. The resident had planned for a longer period of entry and orientation, but the inmates were eager to proceed with actual work. After surveying the building (a barracks-type "cottage"), they drew plans and listed activities that occurred in each area.

The participants (approximately 40-50) decided that the telephone room, previously a storage room in the basement, would be the place to redevelop. The room was small and in very bad condition. A sketch of the space was developed and a model was created. At the same time, the participants also chose to paint a mural and, when the design was agreed upon, that too was applied to the model. Permission was granted to proceed and construction began. At this point the number of participants doubled.

The project had an official photographer, one of the inmates, but other people learned to use the camera too. Looking at Annandale through a camera was a way of encouraging people to become more aware of their environment.

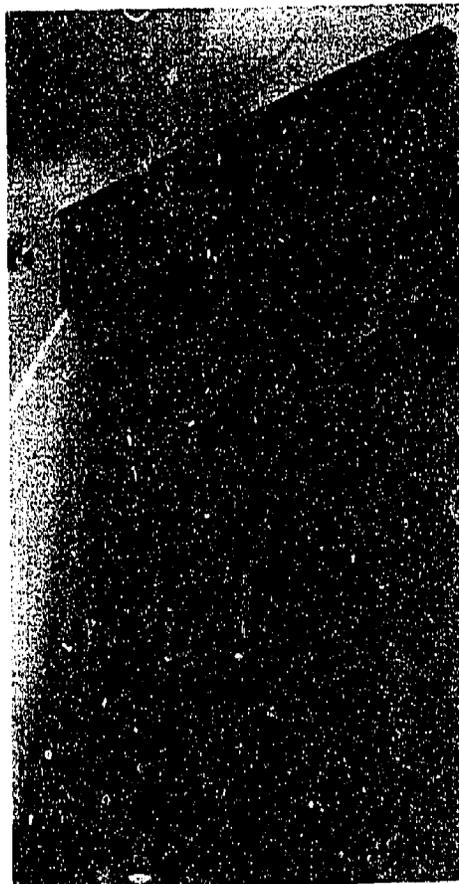




Meanwhile other projects were underway. Participants worked on a silhouette mural in an upstairs recreation room and one began to paint doors with supergraphics.



A later project involved a mural on the backboard of a handball court. The pattern selected was a geometric one, resembling a tunnel. A great deal of interest was generated throughout the institution because of this highly visible project.



Here I am, 22 years old, and I have got to get into prison before somebody comes along to help me fix up my room.

— Inmate at Annandale

The resident comments:

In addition to students who learned a design process and how to use certain construction tools and equipment, many inmates began to look at their surroundings as places that could be improved. ... Many inmates would constantly be walking up and describing some place that was lacking in any sense of place. Someone pointed out a dark stairway and said how the lighting was inadequate and with some supergraphics the small space could be pleasant and exciting; this man was really looking at things around him and thinking about them.

**Resident/Site**

**Residency/Resources**

**Pro**

**Comment**

Architect-in-Residence:  
**Jerry Ohsfeldt**

Central Elementary School  
Las Cruces, New Mexico

Site: Urban  
Population: 424 students;  
17 faculty  
Grade level: Elementary

In-School Coordinator:  
Dick Schriver, Principal

Valley View Elementary  
Las Cruces, New Mexico

Population: 21 students; 6  
faculty

In-School Coordinator:  
Fred Burgess, Principal

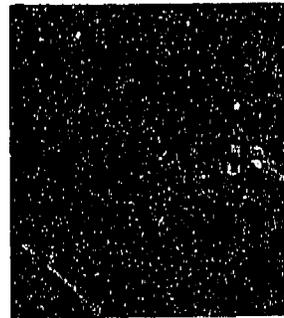
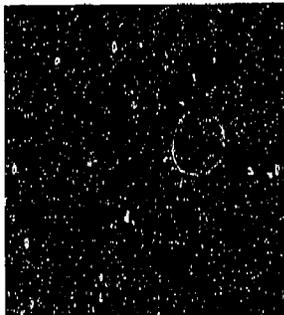
Project Coordinator for Las  
Cruces School District:  
Mary Jane Wood,  
Curriculum coordinator

This was a seven-month residency divided between two schools, three days per week. Activities were conducted during class time. The resident worked with language, reading, and fourth and sixth grade class teachers. Most of his time was spent in one school during this first year.

Community resources that were used included the public library and New Mexico State University.

The PTA contributed \$200.00 to the project.

The purpose of this residency was to enhance language experience, increase vocational awareness, promote awareness of the built environment and raise student-faculty morale. When informal discussion with teachers failed to raise their interest in the program, Ohsfeldt began to paint supergraphics in the hallway and main lobby. A highly visible project, it aroused a great deal of comment and interest and was, in itself, an informal learning process. Students stopped to ask him what he was doing, what it was and why he was painting it. Teachers, too, learned from the experience and began to use him as a resource in their classes.



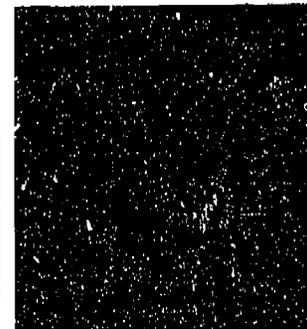
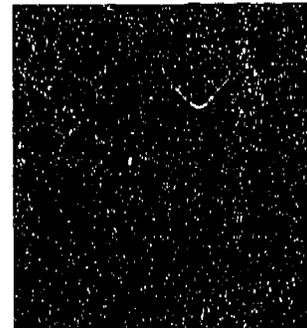
The resident worked with students building structures from rolled and folded butcher paper; they learned architectural symbols and then measured their homes and drafted the floor plans of them.

Another class surveyed the school yard and mapped and drew site plans of it. A vegetable garden was selected as a project and a site analysis was made to determine the location for it. Students planted the garden.

In classrooms, environmental changes began to be made. Long tables in both the classrooms and cafeteria were exchanged for smaller arrangements of tables and desks to encourage small-group interaction.

This resident also held a workshop for teachers.

As a result of this year's program, children, teachers, administration and parents have taken a new interest in their school and have saved it from abandonment.



**Resident/Site**

**Residency/Resources**

**Program**

Architect-in-Residence:  
**Alan Anderson**

Rosedale Elementary  
School  
White Plains, New York

Site: Suburban  
Population: 300 students;  
20 faculty  
Grade level: Elementary

In-School Coordinator:  
Bernice Steinman, Art  
teacher

Highlands School  
White Plains, New York

Site: Suburban  
Population: 150 students;  
15 faculty  
Grade level: Elementary

In-School Coordinator:  
George Yanchik, Art  
teacher

Eastview School  
White Plains, New York

Site: Suburban  
Population: 8-16 year-old  
gifted children drawn from  
district

Project Coordinator: Ronald  
Topping, District Program  
Coordinator

The residency was divided among three schools, the architect spending part of each week in each school, meeting in two- to three-hour sessions.

Community resources that contributed to the project in some way were the City Planning Department, a beautification committee, the Parks Department, a senior citizens' group and local suppliers. Local experts in construction and design were used as consultants. Staff time and materials from the architect's own office were donated. The school system donated an additional \$5000 for construction materials.

Like several other projects, this architect-in-schools residency was structured around a defined product. In each of these schools a specific product was considered the end result, but in all cases the product was developed based on successive phases. The steps included discussion about the built environment, visits to an architect's office and a construction site, measuring and data collection, scale drawings, and model building of students' own rooms. This was followed by designing, model building, selecting materials, budgeting and finally constructing the new project.

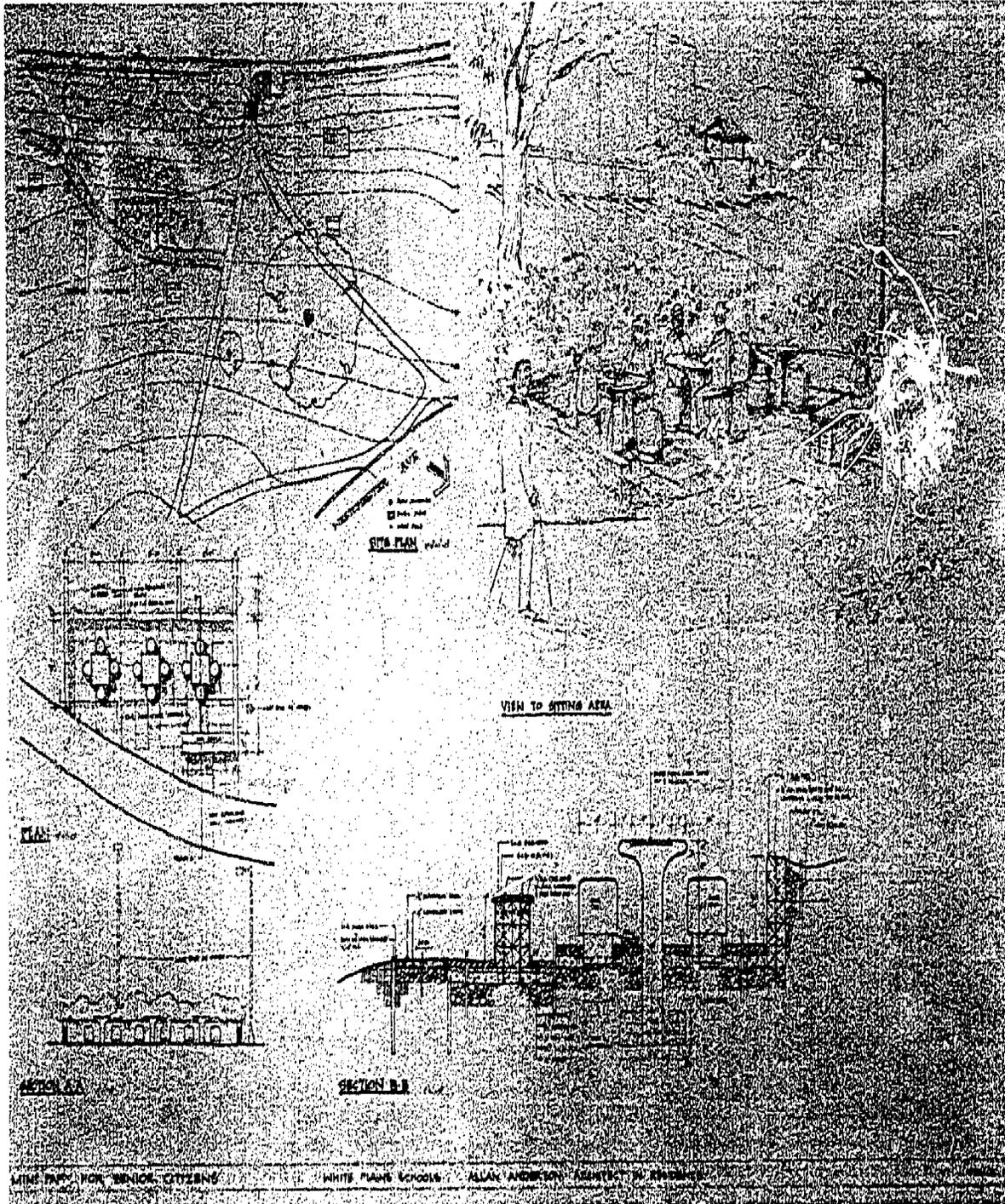
At Rosedale, one team of students designed and constructed a frame and plywood reading corner in a classroom. The structure, which includes a loft, provides interior quiet space and exterior study carrels and bulletin boards.

The second team designed and constructed an overnight campsite in a woods on the school grounds. A modified, lean-to structure, it is of frame and plywood on cinderblock base, and will provide overnight shelter for 15 children. The third group designed and constructed furnishings for the school lobby, including benches, a aquarium and display space.

The fourth group's project was the creation of a sculpture garden in an interior courtyard. Students designed, built and placed redwood benches and pedestals.

At Highlands, students designed and were involved in the construction of a library resource center, a plywood and frame structure to house reading areas and a projection screen. The structure includes a loft reached by a ladder.

At Eastview, a mini-park for senior citizens was designed. Each child designed and developed a model for the project. Several of these were presented to the senior citizens and to the Parks and Recreation Commission and one was presented to the Common Council of the City of White Plains. Construction funds for the project have been approved by the city.



The resident comments:

Model making proved to be a difficult time for many students. If they were careless in taking measurements or making drawings — and many children are — parts wouldn't match; even windows and doors turned up in the wrong places.

Too much time was spent in actual construction of scale models; more time should have been given to design development and the construction phases. (As an analog to this, Anderson notes that children's spirits rose steadily in construction, an observation made by several other residents who were involved in large projects.)

The concept of direction (north, south, east, west) was surprisingly difficult for some of the children. Take nothing, not even what appears to be most basic, for granted.

In addition to his work with students, the architect, together with another AIS (see Santillo) in the district, presented a series of in-service courses. The workshops consisted of presentations, discussion and projects that the teachers could implement in their classrooms.

## Resident/Site

## Residency/Resources

## Program

Architects-in-Residence:  
**Harry Coccossis and  
Carol Goldstein**

Parley-Coburn  
Elmira, New York

Site: Urban  
Population: 500 students;  
30 faculty  
Grade level:  
Middle/elementary

In-School Coordinator:  
George Tremonton,  
Principal

Project Coordinator:  
Charlene Holland,  
Chemung Valley Arts  
Council

The residents worked with students three full days per week and a fourth day was for planning. Activities included both team teaching and after-school projects. The designers worked most closely with a team of seventh grade teachers. These teachers were used to working together to plan curriculum and activities, and they were able to introduce built environment easily because of the interdisciplinary approach. The principal, who was especially supportive, facilitated their approaching teachers with new ideas.

Cornell University was used extensively as a resource; it provided invaluable services such as the use of the slide library, an extensive library system, access to the cooperative extension headquarters, professor/professional involvement and duplicating services.

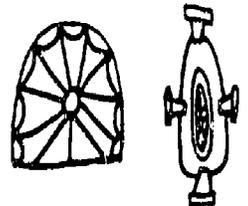
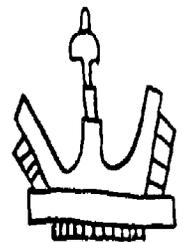
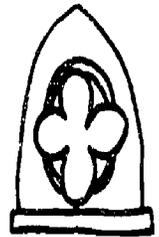
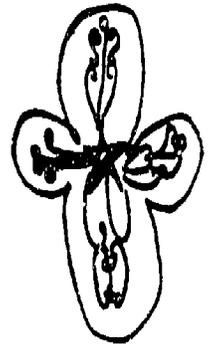
Four architects in the Corning/Elmira School System worked as a team. Each architect was closely identified with one school. This was based on the need for continuity in the schools and coordinated planning. The problem of identifying who was responsible in each school was avoided. But the team approach was invaluable in their estimation. The team was a forum for information and ideas, a sounding board for problems and a means to work with teachers toward common goals. (See also Linda Fritz and John Meffert.)

The emphasis in this residency was on integration of built environment education into the existing school curriculum. The architects-in-residence approached classes through lectures, discussion, slides, filmstrips, and other traditional classroom techniques. In art classes students focused on shelter. They viewed slides on housing forms throughout history, participated in discussions relating housing to climate, technology and materials; did scenario exercises on human needs; and designed houses of the future. A health class studied ecological issues and solar energy and housing.

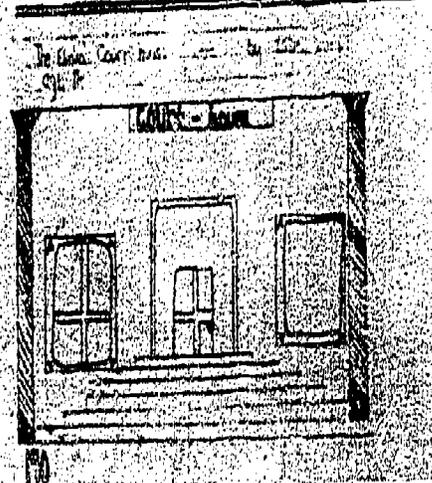
The residents gave a slide presentation of Greek architecture to a ninth-grade English class studying Greek drama, stressing that the context of a given society can be reconstructed by looking at its architecture. To further illustrate this concept, part of the presentation covered modern, vernacular architecture.

Social studies students learned about the city as a place of exchange of goods and services. They viewed city plans and modes of transportation throughout different historic periods, looked at the modern city, and discussed slides showing alternative forms of transportation and their impacts on the city. Students followed this up with writing essays on the city of the future.

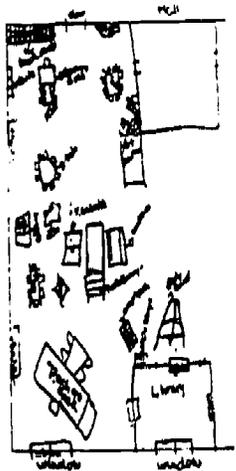
Other aspects of the city — its physical and esthetic qualities — were also studied by social studies classes through city planning exercises, map interpretation, slides and sketches.



### Landmarks and Architecture



## Describing Our Class Room



### Feelings

Hot - summer  
Cold - winter  
Small  
crowded (to the old  
classroom)  
heat  
Light

### Ornaments

Plays  
posters  
orange and  
yellow paint  
orange rugs  
Bulletin boards  
student drawing

### Physical

Chairs  
tables  
coat rack  
garbage cans  
chalk board  
Heaters  
Books  
toy tray  
shelves

Dexter  
Ralph

The residents held a two-day workshop on architecture, "Why Buildings Don't Fall Down." Interested students signed up and participated during study hall periods. They explored different building types and principles — domes, shells, arches, bridges, suspended roofs, tensile structures, skyscrapers, and cantilevers. They discovered how structure, energy, materials and new technology affect decisions. On the second day, students constructed a model of a particular building type for some real location in their city.

Outside of regular classes the architects involved students in a project that resulted in a specific physical improvement. Two groups worked with the band director and the residents to study acoustics in building design. Their study culminated in an actual change in the auditorium through sound design improvements, using cartons, egg crates and drapes.

This team also became involved in several community activities. Because of their work on the new neighborhood community center in one wing of the school, they were able to participate in the planning of parent/student workshops, adult education courses and student slide shows, a neighborhood walking tour for opening day activities, and a summer youth program based on the AIS concept.

The architects-in-schools comment:

What really matters is not the product orientation nor the acquisition of skills to design the environment, but a good understanding of the interplay of the underlying forces.

People create their environment and subsequently are affected by it in their everyday living.

At HAGHRMAN'S  
One of the things we like was  
the lawn at Hagermans. It was smooth  
with no weeds and shaded. Some  
people wished they could have had  
a picnic there, but it was a  
funeral home. Hagerman's is on the  
corner of Pa. Ave. and Franklin St.

**Resident/Site****Residency/Resources****Program****Comment**

Architect-in-Residence:  
**Linda Fritz**

Painted Post Middle School  
Painted Post, New York

Site: Small town  
Population: 520 students;  
36 faculty  
Grade level: Middle 5-8

In-School Coordinator:  
John Vine, Principal

This resident worked three days in the school for 24 hours per week, working with a core-subject team of five teachers. She also worked with the art and home economics classes. There was daily contact with her in-school coordinator.

Community involvement included the Village Hall Department; the Chemung Valley Arts Council and the Southern Tier Regional Planning Board.

(See note at Coccossis.)

The seventh grade science class learned about using nature to create and conserve energy within the built environment by studying the basics of a simple solar heating system within a house. Their study included a visit to a "solar" house and a talk with the architect who designed it.

One art class viewed slides, found textures around the school and did gravestone rubbings in order to become aware of the richness and variety that texture can add to the built environment. Another art class studied how signs and lettering convey messages about the environment.

Two social studies classes used architecture to study history and society. In one case, slides were used to illustrate and promote class discussion of the events and lifestyles of American society after the Civil War to 1900. Another class studied pictures of houses and drew elevations of their own houses in order to recognize different styles of colonial architecture, particularly rooflines, and to understand how colonial architecture was a reflection of European heritage and adaptation to a new environment and building materials.

Other social studies classes explored their immediate built environment. One class worked on how to change the environment to better suit our needs. The difference between needs and desires was discussed and floor plans of the classroom, showing different desk arrangements, which could affect activities and behaviors, were drawn. Another class made field trips to various buildings armed with specific questions to answer. Students made sketches and drew site plans.

In an English class, students studied the physical character of regions, and one's perception of place. They "read" the built environment through viewing and discussing slides of their own town, other American cities and many foreign countries.

The resident comments:

Kids who were rather non-productive in the classroom became really enthusiastic when I put a camera in their hands and went with them to shoot slides of Painted Post's old homes or new architecture. And in the classroom, as they presented their work, they were well-organized, lucid and quite proud of themselves.

## Resident/Site

## Residency/Resources

## Program

Architects-in-Residence:  
**Paul Heyer** and  
**Deborah Snow**

Fiedel School  
Glen Cove, New York

Site: Suburban  
Grade level: Pre- through  
middle school

In-School Coordinator:  
Roslyn Fiedel, Executive  
Director

Glen Cove High School  
Glen Cove, New York

In-School Coordinator:  
Florence Andresen, Acting  
Principal

Landing School  
Glen Cove, New York  
Grade level: Elementary

In-School Coordinator:  
George Priest, Principal

Project Coordinators for  
Glen Cove schools: Ivan  
Fiedel and Roslyn Horn  
Fiedel

Heyer worked one day per week at Fiedel and one day at Glen Cove. Snow worked five days per week at Fiedel, Glen Cove and Landing. Heyer worked with middle grades at Fiedel; Snow worked with kindergarten and elementary levels at Fiedel, and combined fourth and fifth grades at Landing. Both residents worked with students from various classes one afternoon per week at Glen Cove.

At the Fiedel School pre-schoolers worked with blocks to learn basic concepts: "inside" and "outside;" "tiny" and "small." The whole class gathered together inside of a block structure to define "large." They also made block structures for different uses, such as sitting, talking in a group, taking a nap and so forth.

To tie in with the unit the class had just studied, the ecology of the pond and shore, and to begin to explore personal territory in physical terms, the third and fourth grades at Fiedel built a village of huts from indigenous materials. They scavenged materials found on the school grounds to create two-, three- and four-person outdoor enclosures. This activity has also spun off model building of native Indian dwellings and drawings of various buildings, space stations, doll houses and so forth.

The Fiedel kindergarten class also built gerbil mazes, as a rudimentary exercise in enclosure. If the enclosure were not complete, the gerbils would find a way out of it. This was also an introduction to woodworking techniques for the kindergarteners.

The architects-in-schools also engaged the students of the kindergarten, first and second grades, and the middle school in activities more directly related to their own environment: defining their personal boundaries within a class by physically indicating them with a piece of string, then drawing them on a map of the classroom. Discussions about territory with the middle school class led to an awareness that some private spaces were needed within the classroom. The students began to plan and build a loft in their room for such purposes.





Middle school classes were involved in developing an entire built environment for a city of gerbils. They discussed the needs of gerbils, drew utopian gerbil habitats, and planned their designs for a working scale model city. Each student built his own element on a homosote base which fit together with other bases.

The kindergarten class at the Landing School focused its activity on the socio-dramatic play section of the classroom. The current theme for the class was cycles. The cycle of planning, building and using the dramatic play area was repeated several times during the year for different functions. The children made decisions, learned to use the material to make their dramatic play area "say" what they needed, and used the space appropriately.

The architects-in-schools worked with the fourth/fifth grade class at Landing in its social studies unit "Along the Oregon Trail." In conjunction with this subject, the architects assisted the students to build a covered wagon space for the classroom to recreate the cramped quarters that the Oregon pioneers had to live with. The space has now been converted into a quiet reading area, a space apart from the rest of the classroom, yet open to it. Their next step was to look at the territory as it was found by the pioneers and how land was divided among them. The children then actually built up settlements at model scale on a relief map that they made. The whole unit fostered interest in creating stories, building scale models of pioneer dwellings and equipment, drawing maps of the area and, in creating a four-minute animated film with synchronized narration and music about the trip westward.

At the Glen Cove High School, the architects-in-schools worked with the home economics class. The attempt was to have an immediate impact on the school through the transformation of the home economics class's institutional setting into one which encourages the students to personalize it, to give warmth and texture to it, to use space thoughtfully and to begin to break up the "barnlike" interior.

Proposed projects are to turn a barren courtyard into a sculpture court and horticulture laboratory and a dismal lobby into an information, welcoming and meeting place.

At the Fiedel School, with its emphasis on creative problem-solving, the architect found he was able to use basically the same teaching process and vocabulary that he used with his architecture students at Pratt.

Teachers noted a gain on the part of students in levels of abstraction and problem-solving ability. The children's free block play began to take on architectural form and dimensions; they were concerned with building environments rather than solely creating fantasy combinations.



**Resident/Site****Residency/Resources****Program****Comment**

Architect-in-Residence:  
**John Meffert**

Northside-Blodgett Middle  
School  
Corning, New York

Site: Urban  
Population: 500 students;  
30 faculty  
Grade level: 6-8

In-School Coordinator:  
Thomas Madigan, Principal

This was a three-month residency; two mornings per week were spent in participating in an 80-minute unified studies program; afternoons and one additional full day were used for special projects and involvement with other classes. There was daily contact with the in-school coordinator.

Meffert involved students, teachers, alumni association and other community groups in a celebration of school's 50th anniversary. Community resources used were Corning Glass Works, Market Street Restoration Agency, Southern Tier Regional Planning Board and Chemung Valley Arts Council.

(See note at Coccossis.)

For a World Cultures class, sixth grade children viewed slides on architecture at different times and places and studied relationships between various styles.

A seventh grade social studies group did a unit on city planning. Activities included discussion, mapping, community awareness exercises and a field trip to the downtown area. English students studied advertising and signage in the built environment. Students in other classes worked on the concept of personal space: one class designed personal spaces; another worked on planning a house together. Floor plans and elevations were drawn; models were built.

The architect-in-school also worked with individual students on specific projects related to other subject areas.

The resident worked with the eighth grade teacher on a Futures unit. Students organized themselves into different interest groups. They were presented with a problem concerning their town and developed solutions.

The resident comments:

In our evaluation sessions at the end of the year, the teachers expressed a strong desire to use the Architects-in-Schools program in their curriculum development next year. They are also strongly in favor of hands-on projects. I feel that the climate has been set for next year and the teachers are open to the idea of working with the architect.