Photographs, diagrams, and words are used to tell about the nursery school at Stanford University. Supported largely by tuition, this school enrolls 270 pupils who attend school during one of three different session schedules. A full-time staff of 12 is assisted by students from psychology, education, and nursing. The environment offers wide-ranging opportunities for free movement and adventure, and a program of unstructured creative play that emphasizes the child's development as an individual first and a social being second. Self-discovery is the guiding principle; self-reliance the goal. Space and privacy are provided in the 3,000 square foot structure, including porches, overhang, and covered walks. Landscaping has been done with concern for the child's imagination and physical exercise. Interior environmental control is maintained by three independent systems. (RH)
THE BING NURSERY SCHOOL

The Child's View

Child enters straight ahead (adults to left)

Passes through spacious planted atrium

Arrives in large well-equipped playroom

Moves freely between playroom and grassy slopes and valleys of an architecturally landscaped yard.
Plan left. Fences will disappear under a lush covering of vines and the trellis under a crown of Wisteria as plant growth encloses this yard.

With its three large playrooms averaging more than 1,300 square feet each and its three half-acre outdoor play areas, the Bing Nursery School creates a private world of discovery and adventure for the preschool child. He enters and explores this world unhampered by the research activities carried out here. The testing and experimentation rooms—"game rooms" in the children's vocabulary—insulate the private from the public features of the building and are, in a sense, the middle ground on which the child as host and the researching guest meet on equal terms.
Visitors view (enter left first photo). Colorful reception and library area for research staff and visitors is just inside entrance. Director's office is enclosed area in background.

Seminar room off library adjoins research room with individual work spaces. Television monitor permits remote observation by seminar group via TV camera placed behind see-through mirror (below).

Playroom seen from observation room through one-way mirror. Independent control of each ceiling microphone allows observers to following traveling conversation electronically.
ment he will encounter during his school years. As a condition of enrollment and as part of the program, parents participate to the extent of spending two or three half-days in attendance with their children each quarter. This practice has been found to be a source of great enlightenment to the parents and a means of accelerating the learning processes of the child as well.

In the free environment and unstructured program of the Bing school, researchers gain far greater insight into child behavior and development than would be possible in a formalized atmosphere. Far from being authoritarian, direct contact relationships between the researcher or student and the child come about only after the adult has made several preliminary visits to the school, has interacted with the child in conversation and play, and finally, has been accepted by him. The number of children, the size and number of the groups in which they are distributed, and the organization of attendance sessions allows researchers and students to obtain a wealth of information in their subject fields without overexposing individual children to experimentation. The children develop neither the "guinea pig" syndrome nor the "research sophistication" that occurs when the same children are exposed repeatedly to experimental research.

The Plant

The site plan and photographs amply demonstrate the degree to which the Bing Nursery School design serves the program described and the degree to which the research function has been subordinated to and removed from the nursery school function. The school building has been situated well forward on the site to gain the greatest possible advantage of space and privacy for those areas occupied by the children. The building is frame construction on a concrete slab; 3,000 square feet of the structure includes porches, overhang, and covered walks that permit outdoor play even when it rains.

The originally flat site has been sculpturally graded into uneven terrain that speaks eloquently to the child's imagination. At the same time that it fulfills his need for physical exercise. The landscape architect points out that, far from being a luxury, such grading is merely doing creatively what must be done in any case. In time, the planting now in place will transform each of these half-acre landscapes into forests of conifers, shade trees, shrubs and flowering vines dotted with grassy slopes and small meadows. As growth proceeds, the resawn redwood exterior with its pigmented olive stain can be expected to create the effect of a building that will seem to intermittently blend with and disappear into the landscape.

Interior environmental control for this school is of special interest since it is maintained by three independent systems: radiant heating in the floor and cooling by natural cross ventilation in the playrooms; air conditioning in the enclosed observation and testing rooms; and an independent unit heat ventilator system in the reception and conference area. Sound control is maintained by acoustical tile, and a small noise reduction bonus was achieved when ballast for the fluorescent lighting was placed outside under the overhand to avoid electrical interference with the audio and television equipment.

The Bing Nursery School was built at a total cost of about $370,000. This included such items as $20,000 for streets improvement; $27,000 for site development such as excavating, grading, drainage, etc.; $18,000 for landscaping and irrigation, $12,000 for sound and TV equipment; $10,000 for fixed furnishings; and $9,500 for movable furnishings. A significant percentage of the cost of the building can be attributed to the construction and materials called for by the laboratory function this facility performs.
The Planning

The Bing Nursery School at Stanford University is the result of several years of experience and planning that began in 1949 in a temporary World War II building three miles from Campus. Operated under a parents' cooperative arrangement with the University's Department of Psychology, the nursery school was established to provide children of Stanford parents with pre-school educational experiences and Stanford with a teaching facility for undergraduates interested in child development and a laboratory for graduate students and faculty investigating child behavior. The opening enrollment of 70 children quickly grew to an enrollment of 105, and in 1950 a cottage annex was acquired on campus to accommodate 72 more.

The outstanding success of the nursery school operation was threatened in 1963 when it became necessary to abandon the off-campus site to the owners of the property. At that time, efforts were begun to raise funds to finance a permanent on-campus home for the school that would perpetuate and enhance the initial success. The major contribution to the cost of the new school came from Mrs. Anna Bing Arnold through the Bing Fund, Inc. The National Science Foundation, recognizing the teaching and research opportunities offered by the project, had already awarded a sizeable grant to fund those elements of the facility needed to carry out its scientific functions. Additional contributions were made by faculty members and by friends of the University.

Planning the Bing Nursery School was a collaborative effort in which research psychologists and teachers participated with the Palo Alto architects Clark, Stromaquist, Potter, and Ehrlich. The School Planning Laboratory also participated by writing the educational specifications and assisting in the selection of interior furnishings. The unique landscaping plan for the Bing school was designed and executed by landscape architects Royston, Hanamoto, Mayes and Beck of San Francisco.

The Program

Bing Nursery School is a tuition school that is largely self-supporting, although some benefit is derived from the special grants obtained to conduct research activities. The enrollment of some 270 pupils attend the school during one of three different session schedules meeting three mornings a week, two mornings a week, and three afternoons a week, respectively. The full-time staff of 12 includes a teacher and three teaching assistants in each of the play areas, plus the Director and her assistant. Four additional staff members are assigned to the annex, which continues to operate in conjunction with the new facility. During any given session, the average attendance in each playroom is 28 pupils. University undergraduates in the fields of psychology, education, and nursing, who also learn at this school, provide supplementary assistance to the full-time staff.

In the words of its Director, Dr. Edith Dowley, the school is a place where "children are given back some of the things modern life has tended to take away from them." This includes a physical environment that offers wide-ranging opportunities for free movement and adventure, and a program of unstructured creative play that emphasizes the child's development as an individual first of all and as a social being second. Although some cognitive training is provided, it is undertaken outside the context of formalized instruction. The program is guided by the principle that the greatest discovery a child makes at this age is the discovery of himself. With this discovery comes self-reliance and then an awareness of "self among others" that prepares him for the structured environ-
The demand for quality is the most insistent factor in education today, and the processes and procedures of education are undergoing accelerated evolution in reply to this demand. New subject matter, new methods of instruction, new media, and new patterns of pupil grouping are reshaping the physical skeleton of our secondary schools. To accommodate the changing means and changing objectives of education, versatility rather than volume has become the principle guiding secondary school facilities planning and design.

The 1966 Summer Institute at Stanford University, co-sponsored by Educational Facilities Laboratories and the Stanford School Planning Laboratory, will examine both the new forces of change in secondary education and their facilities implications. Institute speakers will be individuals who are outstanding participants in both developing and implementing the innovations that are reshaping our schools.

Whether future high school facilities will embrace or strangle productive change will depend largely on the degree to which designers and planners of the physical environment understand and take into account the current evolution in the internal processes of education. Presentations at the 1966 Summer Institute and visits to secondary schools that are pioneering designs for change will demonstrate how this can be, and in many cases has been, accomplished.

For a copy of the 1966 Summer Institute program and registration information, write to School Planning Laboratory Summer Institute, School of Education, Stanford University, Stanford, California. Registration closes June 5, 1966.