



ALL FAITH BIBLE SCHOOL—An advanced training session for teachers, helpers and craft workers of the All Faith Bible School was held Monday in the Chapel Annexes. Preparation for the second Protestant-Catholic ecumenical Bible School are underway now. Planned for the week of June 14-18, the Bible School is open to pre-kindergartners thru 8th graders of all faiths.

Classes will meet from 8:30 to 11:15 a.m. thru 6th grade with an evening program being offered for 7th and 8th graders. Registration can be taken following Sunday services in June and at the Chaplain's Office during the week. A fee of \$1.00 per child with a \$3.00 family maximum will be charged.

Photo By PH1 D. C. Manderscheid

PROMOTIONAL OPPORTUNITIES

Applications for positions listed in this column will be accepted from current NWC employees and should be filed with the persons named in the ad. All others desiring employment with the Naval Weapons Center may contact the Employment Division, Code 452, Extension 269. Current applications (SF-171) or Standard Form 172 should be submitted bringing your work history up to date if one has not been submitted within the last 6 months. The fact that positions are advertised in this column does not preclude the use of other means to fill these positions. Part of the ranking process of those rated as basically qualified will be a supervisory appraisal form that will be sent to the employees present and most recent previous supervisor. Selection shall be made without discrimination for any nonmerit reason.

Editorial Clerk (Typing), GS-1087-4, PD No. 80152-2, Code 4013—Editing, copyreading and proofreading; layout and composition; consultant on composition standards and report procedures. Incumbent must have a thorough understanding of various printing processes and their limitations, and the kind of reproduction most applicable to the various types of reports commensurate with time schedules. Minimum Qualification Requirements: Eighteen months general experience and six months specialized, in accordance with X-118. Job Relevant Criteria: And Or Selective Placement Criteria: Must learn the Magnetic Tape Typewriter. Experienced operator desired. Advancement Potential: GS-5.

File applications with June Chipp, Bldg. 34, Rm. 206, Phone 2676.

Supervisory General Engineer, GS-855-13 or Supervisory Physicist, GS-1310-13, Code 3532—Incumbent is the Head of the Electro-Optical Branch, Electronic Systems Department. The branch is engaged in the investigation and development of applications of electronics, optics, and mechanical design to basic problems in target detection and identification, surveillance, reconnaissance, and missile guidance. The work can be classified as foundational research, instrumentation design, and exploratory development. New technologies being used include lasers and electro-optical properties of liquid crystals. Typical research and development projects are: video signal processing for enhanced display and other means of discriminating low contrast objects in cluttered backgrounds; target and background optical signature

studies; study of the effects of electric fields on the optical properties of liquid crystals and the feasibility of using these materials in display devices and image converters. The position also includes responsibility for the operation of the Joshua Electro-Optical Test Facility and the Photographic Section for the Division. Minimum Qualification Requirements: General Engineer: Bachelor's in engineering and 3 years experience in appropriate subject-matter field (includes one year at GS-12 level). Physicist: Bachelor's degree and 3 years of experience in appropriate subject-matter field (includes one year at GS-12 level). Job Relevant Criteria: 3 to 5 years minimum experience and education in optical theory, practices and instrumentation which includes work such as electro-optical properties of liquid crystals, study of electric fields on the optical properties of liquid crystals, etc.

File Application for the above with Sue Praslowicz, Bldg. 34, Rm. 206, ext. 2577.

Clerk-Typist, GS-3 or GS-4, Code 304—This position is located in the Systems Development Department, Instrument Development Division, Code 304. Duties will consist of the preparation of official correspondence, technical papers and reports, procurement actions, personnel actions, time cards, completing travel arrangements, and other miscellaneous duties. Minimum Qualification Requirements: GS-3 level: One year of general clerical experience. GS-4 level: One year of specialized clerical experience with duties similar to those listed above. Job Relevant Criteria: Must be a good typist and have a good knowledge of English grammar and spelling. Must be able to carry out assigned duties without close supervision.

File above applications with Beverly Saiger, Bldg. 34, Room 212, Ext. 2514.

Secretary (Typing) GS-318-4 or 5 Code 356—This position is that of Division secretary. Duties include typing a variety of documents in many forms, filling out a wide variety of forms, including travel orders, travel vouchers, engineering service requests and procurement requisitions, timekeeping and payroll functions for division personnel and supervision of a clerk-typist. Minimum Qualification Requirements: GS-4: 2 years of general clerical experience, GS-5: 2 1/2 years of general clerical work and 1 year specialized experience. Job Relevant Criteria: Proficient typist, experience in processing a wide variety of forms and types of letters, ability to supervise.

Bone Mill Developed By NWC . . .

(Continued from Page 1) changes in the originally conceived design.

Prior to the submission of designs, Dr. George Hayes, of Code 4585, and Herling made a preliminary trip to San Diego to take a look at the old method to try and get a better feel for the problem. This was in October, 1970. The prototype was completed in March of this year and taken to San Diego for tests. The hospital used the machine for three weeks and very few problems were encountered with the original design.

In a letter to Stayton, dated March 18, 1971, Lt. John W. Hammon, Jr., MC, Head of the Tissue Bank, stated in part: ". . . We used the bone mill today and it cut in half the time needed under the old method. . . ." In addition to a saving of time, the NWC-developed bone mill produced a product which equalled or surpassed that produced by the hand-operated bone mill.

Although the cost of the bone mill was negligible (barely over \$1,000), SDNH totally reimbursed NWC for the cost of the mill.

Following the success of the bone mill, SDNH is now very interested in looking into possible application of digital computer technique in monitoring patients in intensive

care wards, and other uses.

Tissue Bank History

The United States Naval Tissue Banking efforts started with the parent facility which is located at the National Naval Medical Center, Bethesda, Maryland. This parent facility has been in existence since the time of the Korean conflict. Many of the war casualties were brought to large Naval Hospitals needing complicated reconstructive procedures, the majority of which were orthopedic. At that time there was a paucity of desirable materials to perform desperately needed bone grafts and other orthopedic procedures. It was in the setting that the very beginnings of the Tissue Bank originated. On September 1, 1949, the Orthopedic Service of the Naval Hospital, Bethesda, obtained a four cubic foot freezer and began collecting, freezing and storing surplus bone from clean orthopedic cases until needed for grafting in other patients.

Stayton said that the Tissue Bank is also interested in a process which would cut down the physical labor involved in preparing and processing a bone for the mill.

Later that year it became ob-

vious that the relatively small freezer was not adequate to store enough bone for all needs generated in the Naval Hospital, Bethesda. A joint project was undertaken by the Naval Medical School, the Naval Medical Research Institute, and the Naval Hospital all located at the National Naval Medical Center to investigate methods for meeting the needs for tissue grafts in reconstructive surgery. Since the generation of a sufficient number of grafts for reconstructive surgery entailed not only expensive equipment, but also trained personnel, it was not felt practical to set up small banks in all of the activities needing tissue. As a solution, RAdm. M. D. Willcuts, Commanding Officer of the National Naval Medical Center, established a Bone Bank as a speciality activity located within the command of the Naval Medical School on November 29, 1949. This establishment created a central location for facilities and personnel to procure, process, store and ship tissues to all Naval Medical Activities and then subsequently to activities of all Military Services and finally to civilian hospitals as well.

Weekend Holiday Hours

Table with columns for Facility, Open, Closed, Mon, Sat, Sun, Mon. Lists various facilities like Fedco Service Station, Barber Shop, Pharmacy, etc., and their weekend hours.

Thrift Shop To Remain Open Thursday Nights

Beginning June 1, the Navy Relief Thrift Shop will be open on Tuesday evenings from 7 to 9 p.m., and on Thursday mornings from 9 to 11 a.m., according to Mrs. Edward Casaroli, chairman.



FIRST COMMUNION—Sixty children of the Catholic Congregation of the All Faith Chapel received the sacrament of First Holy Communion at the 8:30 a.m. Mass marking the end of months of preparation. A reception was held

following Mass in the East Wing honoring the First Communicants, their parents and friends. A gift from the parish was presented to each child at that time.

—Rocketeer photo



A LITTLE KNOWLEDGE GOES A LONG WAY—Elizabeth J. (Billie) Hise, left, watches as a student in her motorcycle safety class prepares to put into practice some of the tips and advice on safety taught by Mrs. Hise. The NWC Safety Department employee instructs a class in

motorcycle safety which consists of classroom work in the morning and field work in the afternoon. The classes, which have been irregular, are planned to be held on a regular monthly basis. For information call Mrs. Hise, Ext. 2037.

—Photo by PHCS C. E. Bruce

A Look Into The Past

From The Rocketeer Files

25 Years Ago . . .

Claiming that the possible atom bomb effect on naval vessels may be such as to make the world's most powerful Navy only a nuisance, the House Appropriation Committee cut over a billion dollars from the Navy's 1947 fiscal budget. . . 23 Burroughs High seniors and 11 Station servicemen received their diplomas in the first annual NOTS high school graduation ceremonies in the new Theatre. . . A Hollywood stage show at the Station Theatre included famed songstress Ella Mae Morse, who made popular such songs as "Cow Cow Boogie" and "It's Only A Paper Moon"; and Chill Wills as MC; Val Setz, comedy juggler, plus other entertainers. . . Memorial Day services began with a parade down Blandly, sponsored by American Legion Members of the John M. Armitage Post 684; and a monument was dedicated at NAF in memory to Lt. John M. Armitage, first NOTS flyer to lose his life during rocket experimentation here.

15 Years Ago . . .

It was reported that more than 20,000 persons attended the Armed Forces Day event the previous week-end, setting an all-time record for the annual event. . . In the first of a series of articles about the new \$90,000 golf course, official opening day was set for June 30. . . The cooperation of the State Highway Dept. was secured in erecting junction signs between the Station and Bishop, and between the Station and Los Angeles. . . Larry Mason received Supply Department's "Mug-of-the-Month" award for having submitted 16 beneficial suggestions during one month. . . Paul Pierce's TV show "Get the Facts" featured NOTS in a program sponsored by KRCA, Channel 4, and the Los Angeles Herald-Examiner. NOTS panel members were: H. G. Wilson, Associate Technical Director; D. W. Steel, Head, Underwater Ordnance Dept., NOTS, Pasadena; and Lynn Nowels of TID who drew sketches of the ideas being discussed on NOTS weapon development work. . . France Adamson, Burroughs High Senior, who won a State Scholarship award, was pictured receiving congratulations from Dorothy Donahoe, State Assemblywoman.

5 Years Ago . . .

Jimmy Craig, of Code 3552, won the Indianapolis Motor Speedway Balloon Race, landing three minutes short of the hour time limit. Of seven balloons entered in the event, Craig was one of the only three that got off the ground because of high winds. Craig figured that his training in the high winds of China Lake played a big part in his winning the race, and he gave much of the credit to his ground crew, Dick and Margy Zinke of NOTS and his wife, Carole, who were able to get him off in less than 5 minutes. . . Capt. Leon Grabowsky awarded PRIDE (Personal Responsibility in Daily Effort) certificates to ten Ridgcrest merchants. NOTS Supply Dept. instituted the program in 1965 to motivate employees and the concept was extended to local and out-of-town merchants who were invited to take part. . . The John A. Burkhardt's garden at 52-B Rodman, dubbed a shaded retreat from the desert's heat, won first prize in the "Yard Beautiful" contest sponsored by the Community Council in cooperation with the Oasis Garden Club.

Employee In the Spotlight



Margaret A. Raphael

Margaret A. (Nancy) Raphael, a mathematician in Code 4055, was recently selected the Federal Women's Program Coordinator at NWC, and as such, represents the women employees of the Center with the national organization in Washington, D.C.

Nancy, who was a teacher for 20 years, is quite outspoken in her views on women's education and preparation for a life in the professional world. "Most of my 20 years teaching was done in girl's schools," she pointed out, "which reinforces my opinion that some of the lack of employment opportunities for women could be remedied by a change in attitude in the education of women."

Nancy elaborated, "The prevailing attitude in the education of women, from the first grade up, is to be housewives, secretaries, school teachers and nurses. In order for a woman to be educated in the professions—mathematics, engineering, medicine, law, science—the woman must be a loner. She will suffer from all sorts of attitudes ranging from cynicism, to snobbery and humiliation.

"For a woman to succeed in any type of job she must have a BA degree to do the same kind of work that a man can do with an eighth grade education." Nancy left the teaching profession four years ago and joined NWC. "I was offered an opportunity to work in areas in which I was most vitally concerned," she said. "I felt I could accomplish more in my field as a worker than as a teacher."

While a teacher, Nancy spent three years teaching in a ghetto area of Los Angeles where her students were 55 per cent Mexican-American and 35 per cent black. "From this experience, I believe that education is one of the most necessary aids in solving the

problems of minorities," she stated.

Other teaching posts she held in the 20 years included an assignment as Assistant Professor of Mathematics at Immaculate Heart College, in Los Angeles, and as a mathematics teacher at St. Anthony High School, in Long Beach.

She received her BA Degree in Mathematics from Immaculate Heart College and her MS in Mathematics from St. Louis University, in St. Louis.

Nancy was born in New York City but raised in Beverly Hills. Although Nancy is no Women's-Liber, she does work energetically toward her own personal goal of helping women to attain a better position in their professional lives. She knows how to relax, however, and can be frequently seen playing a rubber of bridge or reading. She also enjoys traveling and has visited many places in the Southwest since coming to NWC.

She will return to teaching part-time in the Fall when she takes on the task of instructing a course in Fortran Programming for Engineering Applications under the UCSB program at the Training Building.



BOTANICAL KNEEOLOGY describes this venture by members of Brownie Troop 87 as they landscape portions of the Halsey Street Girl Scout Park with plants they have donated for improvements. Salvia (Blaze of Fire) is being planted here by: (l-r) Terri Beene, Cynthia

Benham, Elaine Bridges, Laura Higuera, Yvette LaPierre, Toni Menz, Carolyn Price, Camille Ronning, Lisa Ronning, Debra Shawler, and Gina West. Observers were: (l-r) Mrs. Lloyd Klaus, guest; Mrs. Michael DeSeranno, Troop Leader; and Mrs. Charles Benham, Co-Leader.

The Rocketeer

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DEADLINES:

News Stories Tuesday, 4:30 p.m. Photographs Tuesday, 11:30 a.m. The Rocketeer receives American Forces Press Service material. All are official U.S. Navy photos unless otherwise identified. Printed weekly with appropriated funds by a commercial firm in compliance with NavExos P-35, revised July 1958. Office at Nimitz and Lauritsen. Phones 3354, 3355, 2347



DIVINE SERVICES

Protestant (All-Faith Chapel)—Morning Worship—10:00 a.m. Sunday School—8:30 a.m., Chapel Annexes 1, 2, 4 (Dorms 5, 6, 8) located opposite Center Restaurant.

Roman Catholic (All-Faith Chapel)—Holy Mass—5:00 p.m., Saturday (Fulfills Sunday obligation); 7, 8:30 and 11:15 a.m. Sunday.

Daily Mass—11:30 a.m. in Blessed Sacrament Chapel, First Saturday, 8:30 a.m.

Confessions—4 to 5 p.m. Saturday, and 8 to 8:25 a.m. Sunday.

NWC Jewish Services (East Wing All-Faith Chapel)—8 p.m. every first and third Friday.

Sabbath School—10 a.m. to noon, every first and third Saturday.

Unitarian Fellowship—(Chapel Annex 95, King Ave.)—Sundays, 7:30 p.m.

Center Cooperates With Burroughs High School Faculty On Work Experience Program

By Leslie Schreiber
Rocketeer WES

Forty-three High School students began their work at the Naval Weapons Center this February, as part of a program to gain valuable knowledge about future careers, as participants in the Burroughs High School Work Experience Program.

The Work Experience Program, which provides top students with a learning opportunity of extraordinary value to gain experience in a practical working environment, is receiving wide attention from educators as well as local merchants. Through this program, students work in close

association with advisors in various fields of study. Students who have been selected from a wide range of applicants are assigned to an adult volunteer from one of the sponsoring organizations.

There are four specific areas covered through this program. The Laboratory Program for science and math students, the Administrative Program, for students with interest in the administrative and management field, the Clerical Program for those intending to enter the secretarial-clerical related

vocations, and the Vocational Program for students who plan to enter any of the skilled trades represented with the station work force.

The Administrative Program is sponsored by the Administrative Development Committee (ADC); the Laboratory Program is under the direction of the local chapter of Research Society of America (RESA); the Clerical Program is supported by the Department Staff Assistant Council (DSAC); and the Vocational Program is under the direction of the Technicians and Artisans Committee (TAC).

The program gives students a chance to put some of their textbook knowledge to practical use. In order to qualify for the program students must meet certain requirements which include, 1) maintaining a "B" or better in science, mathematics, and social studies for those desiring to enter the Administrative and Laboratory programs, 2) a scholastic record satisfactory to the selection committee, 3) a sincere interest in the program, 4) a keen desire to obtain as much knowledge as possible from the program, and 5) a willingness to cooperate fully

with school and NWC personnel. During the semester, the students spend an average of 10 hours a week on the job, performing tasks assigned to them, for which they will receive 1/2 credit. In addition to the experience and credit gained, students learn how to work confidently with others. Students are expected, at the end of the school year, to write a critique of the experience they have gained. He is then graded by his assigned "teacher-employer" and that grade becomes a part of his high school record.

The Work Experience Program was initiated during the 1955-56 school year. It was in an experimental stage and only sixteen students took part. These students worked with scientists, machinists or office administrators on a one-to-one basis gaining first hand knowledge in these various fields. Being so well received by both NWC and the school personnel, it was included into the school curriculum. In 1962-63 the Administrative Program was started, and the Clerical and Vocational Programs were added in 1964-65. Over 300 students have par-

ticipated in this program in the last 15 years.

Participating Students

Students who are participating in the program are: Dan Avery, Laura Ayres, Wanda Beck, Teresa Bensene, Michael Biddlingmeier, Hartley Braspeninckx, John Buck Curtis Cardwell, Richard Carle, Darlene Cox, Frances Daughtery, Brad DeGeus, Sidney Fenter, Roy Gardner, Randal Gilkinson, Kathy Glover, Robert Gonder, Debbie Haack, Tom Hennessey, Darla Hill, Edgar Hillebrand, Clara Holt, Gary Hudson, Donna Jeffres,

George Ivancovitch, Lee Kessler, Melinda Kirkpatrick, Diana Martin, Gerald Moore, Paul Nelson, Norman Oliver, Pam Pangle, Sheila Peters, Dan Rivers, John Rouland, Barbara Timmons, Orrel Torrey, Leslie Schreiber, Craig Strommen, Charlotte Swedblom, Ken Wahl, Theresa Wuest, Eric Skoog.

Sponsors

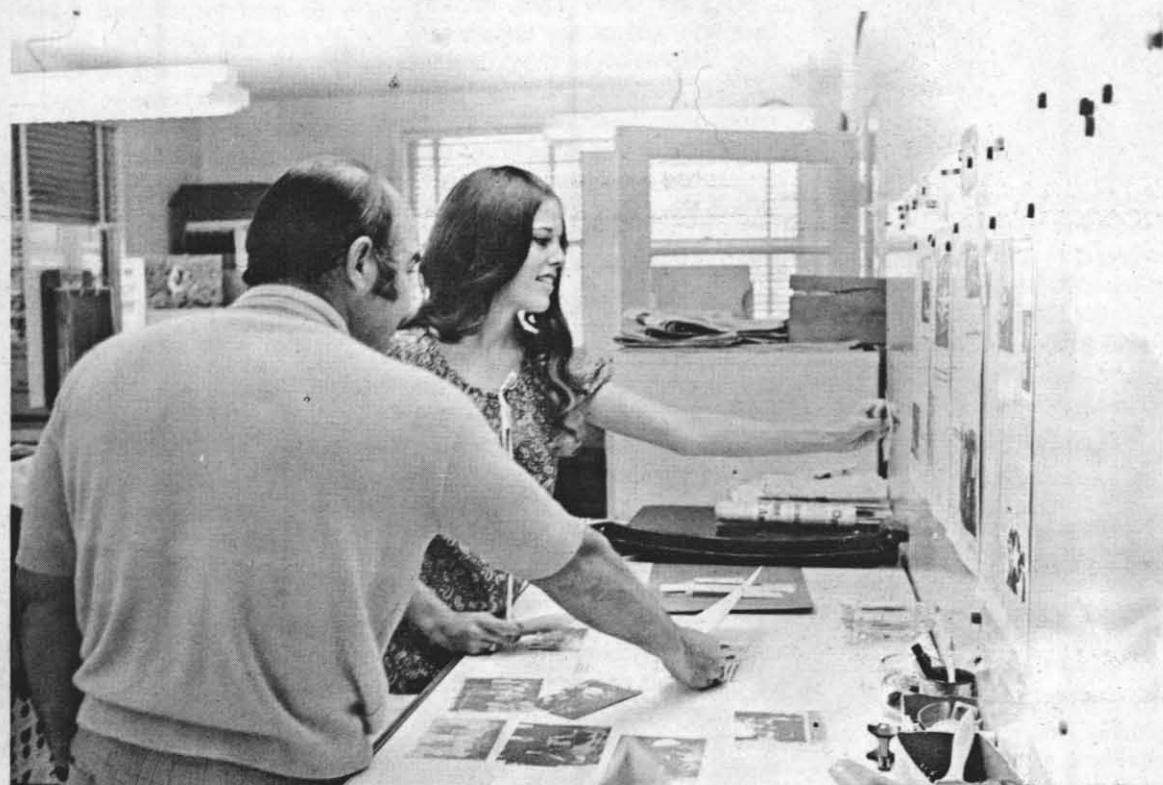
Sponsors who are cooperating with this effort are; Dale Randle, Capt. Thomas D. Stephenson USN; Miss Olieta Hickox, Mrs. Maryon Ward, Myron Scovil, James H. McDaniel, Frank

Donnelly, Chief Larry Doyd, Jo Pittman, Eleanor Johnson, Roy Williams, Dean Ray, Dan Butler, Harry Devereaux, Mrs. Lee Oldfield, Almer Galloway, Snowden LaFon, Jim Turner, Mrs. Ruth Lewis, Mrs. Erma Sturm, William Parks, Richard Fryer, Eugene Breitenstein, Marshall Breaux, Russell Huse, Marvin Bachman, Richard Johnsen, William Baker, Mrs. Bernadine Reeves, Mrs. Beulah Glidewell, William Valenteen, David Livingston, Robert Bonner, William Parks, Mrs. Alice Parker, and Frank Buffum.

Michael McGrath, chairman of the Burroughs science department, is the high school coordinator for the program and has been responsible for assigning students to their sponsors.

Unique Position

Burroughs High School is in a unique position to conduct such a program. Most of the "Jobs" are on the Naval Weapons Center, however some local businessmen are now keying toward the program. It is a rewarding program in terms of lasting benefits to students.



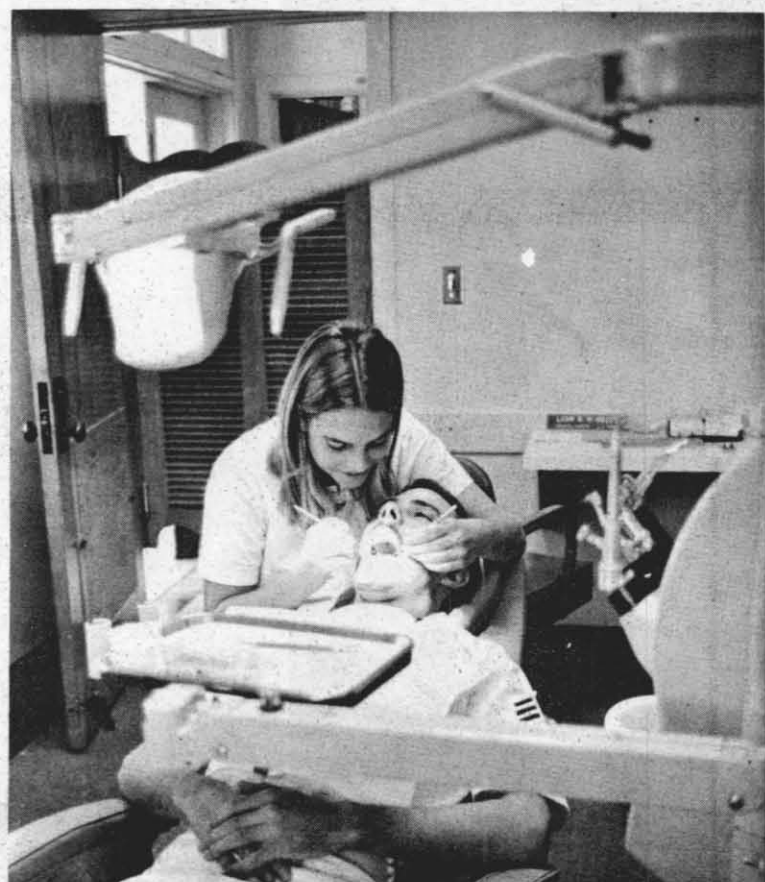
STUDENT JOURNALIST — Leslie Schreiber, former editor of the Burroughs High School Blockbuster, and William P. Valenteen, Jr., Editor of The ROCKETEER, discuss the page layouts for the upcoming issue of The ROCKETEER. Leslie writes articles, assists in layouts, does the weekly filing and answers the telephone for the newspaper staff.



SCIENTIFIC TYPE — Dan Avery works in Instrument Calibrations under the sponsorship of Dale Randle, Head, Quality Engineering Division, NWC Engineering Department.



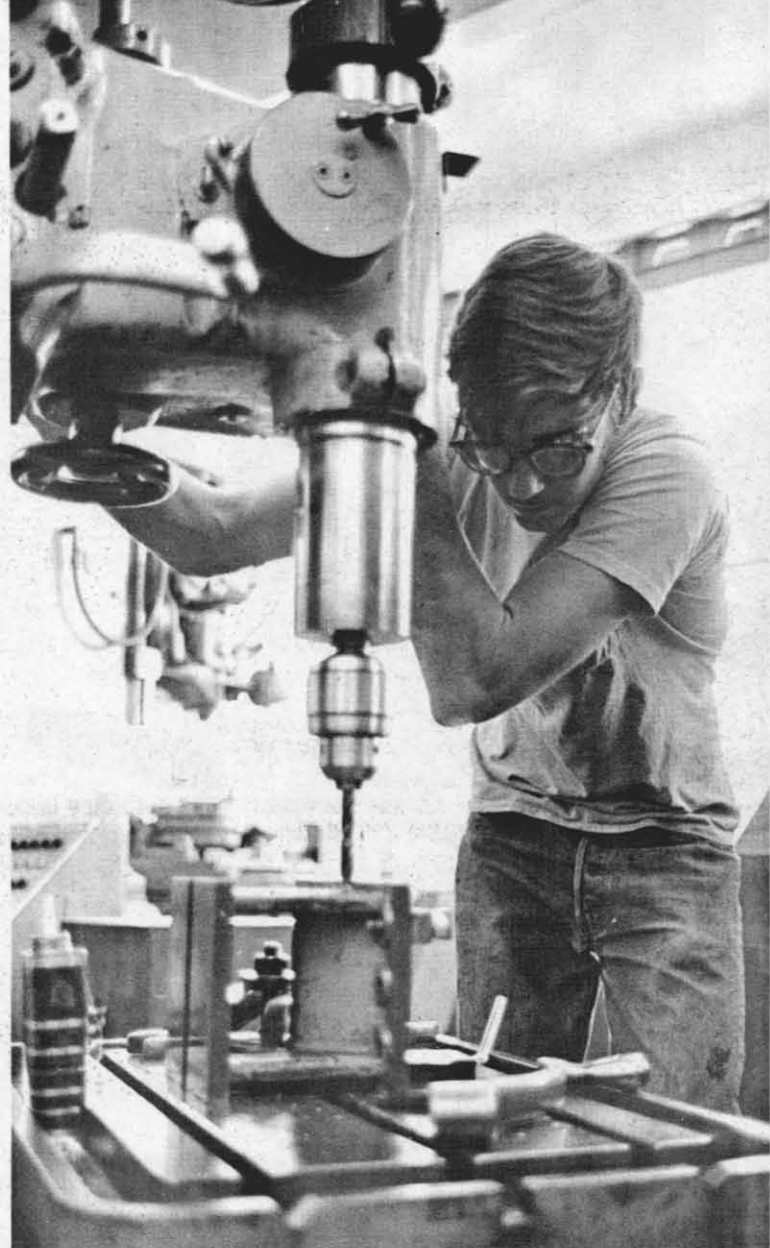
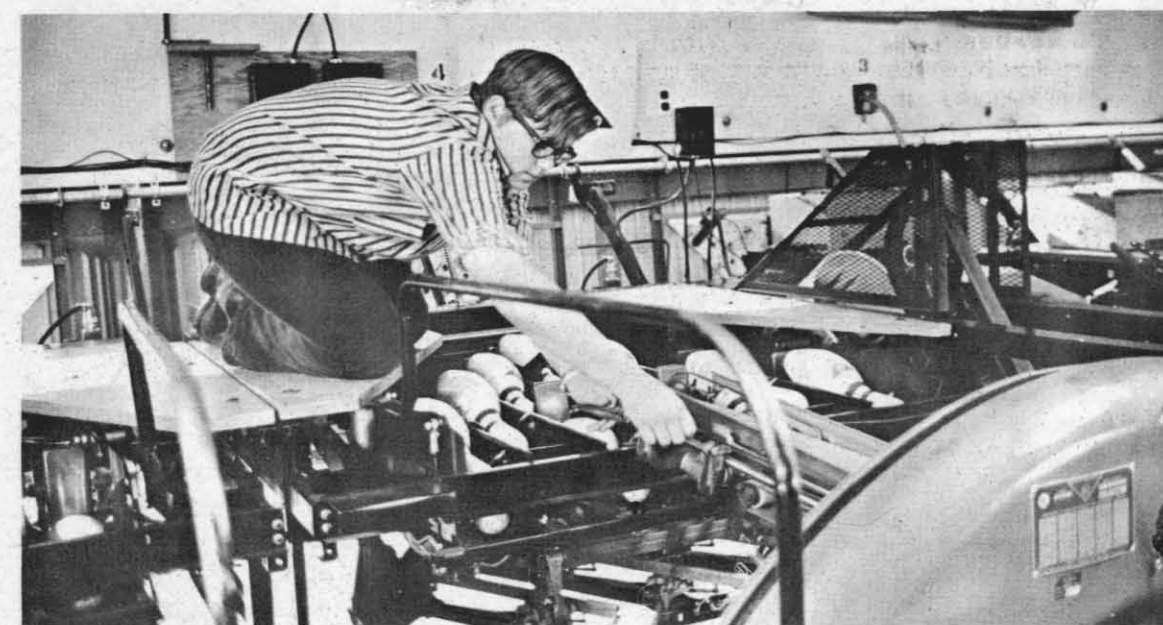
THE BIG BOARD — Barbara Timmons could be the sweet voice on the other end of the line when requesting assistance or in placing a long distance call. Sponsored by Mrs. Bernadine Reeves, Barbara is learning all of the facets of switchboard operation, including long distance, emergencies, and assisting telephone subscribers.



JUST A LITTLE WIDER — Getting a little practical experience as a Dental Assistant, Laura Ayres works on a patient. She is sponsored by Capt. Thomas D. Stephenson, NWC Dental Officer.



KEYPUNCH OPERATOR — Craig Strommen, working as a computer programmer, operates a key punch. He is sponsored by David Livingston, who is teaching Craig the fundamentals of computer programming.



JUST FOR DRILL — Brad DeGeus operates a drill press in the Machine Shop where he gains practical experience under the guidance of sponsor Ray Williams.



IN THE PROGRAM — Robert Bonner, (pointing) shows the sophisticated workings of a programmer to Charlotte Swedblom, who is working as a computer programmer under the supervision of Bonner.

OVER THE TOP — Sidney Fenter adjusts the automatic pinsetter at the Hall Memorial Lanes where he works under the sponsorship of Dean Ray, manager. A little slip here could cause Sid some trouble, but the Burroughs student is very efficient. He also works the desk and helps to maintain the alleys.



Photos By
PH3 Ronald G. Mills



THERESA GETS CHECKED OUT — Theresa Bensene, who is working as a library assistant in the NWC Library, is shown the proper way to check out a book by her sponsor, Mrs. Maryon Ward, Head Librarian.