

Science Institute is a "Fantastic Experience"

by Kathy Ladd

Forty-five high school science teachers (15 each from biology, chemistry, and physics) are spending four weeks of their summer vacations participating in the Summer Institute for Science Teachers, sponsored by the Friends of Fermilab Association, updating and adding to their knowledge in the various disciplines of science. They attend lectures three days a week given by specialists in their own field. Prof. Zumdahl from the University of Illinois at Urbana presented lectures to the chemistry teachers on chemical equilibrium and some of the specific cases of equilibria in acids and bases and on solubility. This was a rare opportunity for high school teachers to hear lectures from and discuss topics with the author of their textbook. Appropriate reading and problem assignments complimented the lectures. Teachers were able to discuss both the concepts presented in the lecture and philosophies of teaching, as well as some of the latest developments at the University of Illinois, where students do their laboratory work at the computer terminal rather than in the chemistry lab. Dr. Loretta Jones lectured on the principles of thermodynamics and presented additional information on the computer approach to doing labs at the U. of I.

David Katz, of the Community College of Philadelphia, spent a day doing demonstrations and having the teachers participate in laboratory activities based on the topic "Chemistry in the Toy Store". We worked with slime, bubbles, wall walkers, super balls, (and stupid balls), chromatography, and dozens of other ideas which can be found on a toy-store shelf. These toys are interesting to our students and give us excellent ways to introduce and explain chemical concepts in a setting where students WANT to know "what makes it work."

Tuesday and Thursday plenary sessions give all participants an opportunity to hear from scientists on the forefront of research in several disciplines. Presentations vary from Dr. Clifford Matthew's (U. of I. at Chicago) theories and supporting



Chemistry participants performing interactive polymerization demonstrations are, from left, Linda Katz, Francis Parker High School; Kathy Carlig, Thornton High School; and Joe Moffa, Hales Franciscan High School.

experiments for the formation of life from clouds of hydrogen cyanide, to a talk on holography and information storage on laser discs presented by Dr. Tong Jeong, Lake Forest College. Genetic engineering was discussed by Dr. Hewson Swift of the University of Chicago. The opportunity to hear of the latest developments, some prior to their publication, increases our knowledge in all the fields of science and helps us relate them to bringing a renewed excitement to the science classroom.

Our afternoons are spent reviewing lab techniques and calculations. Members of the class have shared demonstrations that have proved successful in their own classrooms. This provides the teachers an opportunity to test demonstrations and their effectiveness in illustrating a concept.

Computer work at various levels is also a part of our busy schedule. Some teachers are working on previewing software for possible purchase and use in their own classrooms, while others are learning BASIC programming or word processing. One laboratory session was devoted to experiments involving computerized data collection.

An overnight outing at the Indiana Dunes and Forest Beach Camp provided a

cont'd on pg. 4

Fermilab EAC Next Step Toward Lab NERP Designation

In response to a proposal submitted to DOE last September, Fermilab has received funding for the purpose of forming an Environmental Advisory Committee (EAC) and developing a long-term environmental research plan. The plan, after acceptance by DOE, will provide the basis for formally designating Fermilab as a National Environmental Research Park (NERP).

A NERP can be thought of as a protected outdoor laboratory made available to qualifying organizations or individuals for various types of ecological research. The program is sponsored by DOE and is one of many efforts by the federal government to protect, restore, and enhance environmental quality.

If and when designated as a NERP, Fermilab will become the sixth DOE site to open its doors to publicly initiated environmental research. It will be the only NERP situated in the central U.S. in an area referred to as the prairie peninsula.

The NERP designation will apply to the entire site. However, those areas at or near the high-energy physics facilities will normally be excluded from NERP activities. Interference with the Laboratory's primary mission in physics will be avoided.

A partially formed EAC held its first meeting on June 16, 1986, and outlined a concept of Fermilab's long-term plan. A representative from the sponsoring DOE office, the Ecological Research Division, and two representatives from the Chicago Operations Office of Health and Environmental Research were present. During the meeting a target date of October 1986 was established for Fermilab's official designation as a NERP.

The committee also recommended three additional members. They are Dr. Paul G. Risser, EAC Chairman and Vice President for Research at the University of New Mexico; Dr. Roger C. Anderson, Professor of Biology at Illinois State University; and Dr. Robert F. Betz, Professor of Biology at Northeastern Illinois University. Forthcoming appointments will bring the committee up to full membership.

To participate in the Fermilab NERP program, organizations interested in

environmental research will submit proposals for consideration. As an example, a university land reclamation group might want to investigate the use of prairie grasses in restoring strip-mine areas. The proposals would be evaluated by the EAC, which would in turn provide recommendations to the Director on whether or not the proposals should be approved.

In addition to evaluating proposals, the committee will help oversee the overall environmental research operation and advise the Laboratory on necessary support to be provided.

Fermilab's long-term plan will encourage projects that probe and find answers to the ecological relationships that apply to this part of the country. The Lab also hopes to foster a good ecological attitude and an awareness of the possible consequences of man's interactions with the fragile balance of nature.

- John Paulk

Number of Ant Farms sold since their invention 30 years ago: **7,000,000**

- from *Harper's Index*

Notice of Change

The July 10th meeting of the Director's Review of Accelerator Status and Upgrade Program in Curia II has been changed to:

July 14, 1986, 1:30 p.m. to 5:00 p.m.: "Experimenters' Reaction - Loose Ends," (A. Tollestrup, P. Koehler, P. Grannis, and D. Nygren).

Congratulations To . . .

Sherry and Ronnie (*BS/Custodial Services*) Lewis on the birth of Stacey Ann on May 23, 1986, at Mercy Center Hospital. Stacey weighed 7 lbs., 9 oz., and was 19-1/2 in. long. Stacey was welcomed home by big brother Ronnie.

Number of jobs that an average worker has held by age 40: **8**

- from *Harper's Index*

*Editor: R. Fenner; Assoc. editor: S. Winchester
Photography: Fermilab Photo Unit*

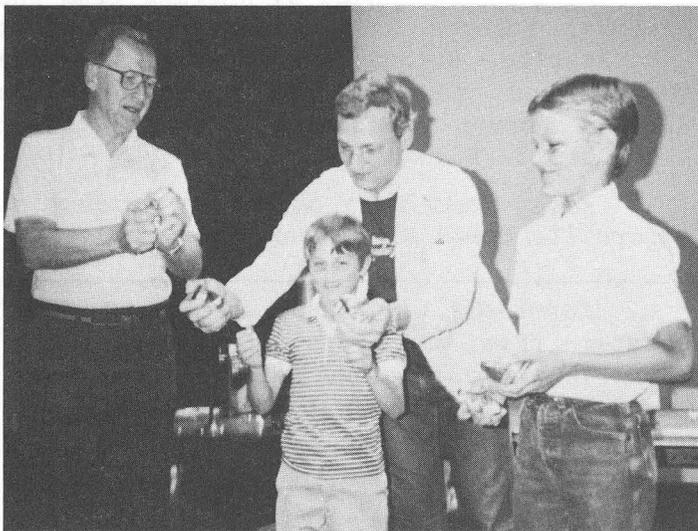
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FFLA's Poster Contest Spotlights Future Scientists

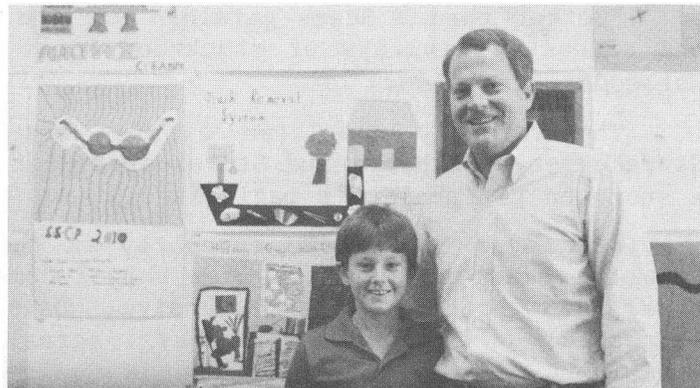
During National Science Week (May 11-17, 1986) the Friends of Fermilab Association sponsored a poster contest entitled "Discovery and Invention". Entrants were asked to create a poster showing the scientific invention they would like to be famous for in the year 2010. The contest was open to third through sixth graders attending schools in DuPage and Kane Counties.



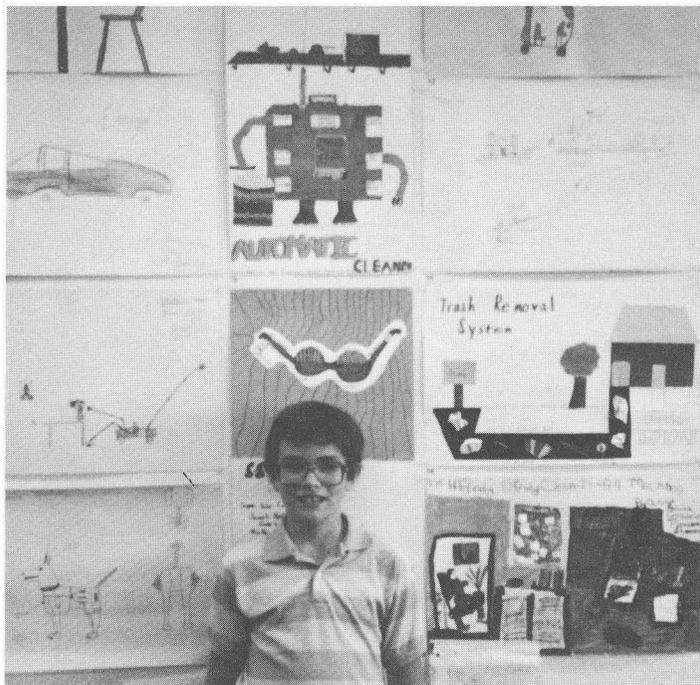
Some of the winners of the 1986 poster contest were (l to r) Ryan Nash, Brookdale School-Naperville; Jenny McCann, Greenman School-Aurora; Robin Beck, McCleery School-Aurora; Nicole Belsley, Brook Forest School-Oak Brook; and Jason Goodwin, Lincoln Junior High School-Naperville.



Phil Livdahl (far left), Fermilab Deputy Director, assists young artists during the science magic show which preceded the awards ceremony. Bill West (center), Chairman of the Science Department at Naperville Central High School, organized the show.



Mike Schiling of Brookdale School poses with his father in front of his winning poster, "Trash Removal System."



Aaron McCann of Greenman School, with his poster "Automatic Cleaner." The poster was awarded first prize in the 3rd-4th grade category. (Photos courtesy of FFLA)

Film Society Presents . . .

On Friday, July 25, and Saturday, July 26, 1986, the Fermilab International Film Society will present a Science Fiction Film Festival in Ramsey Auditorium.

The Terminator will be shown at 8:00 p.m. on Friday, July 25, followed at 10:00 p.m. by **When Worlds Collide**. On Saturday, July 26, **Star Wars** will be shown at 8:00 p.m. Capping off the festival at 10:00 p.m. will be **Things to Come**.

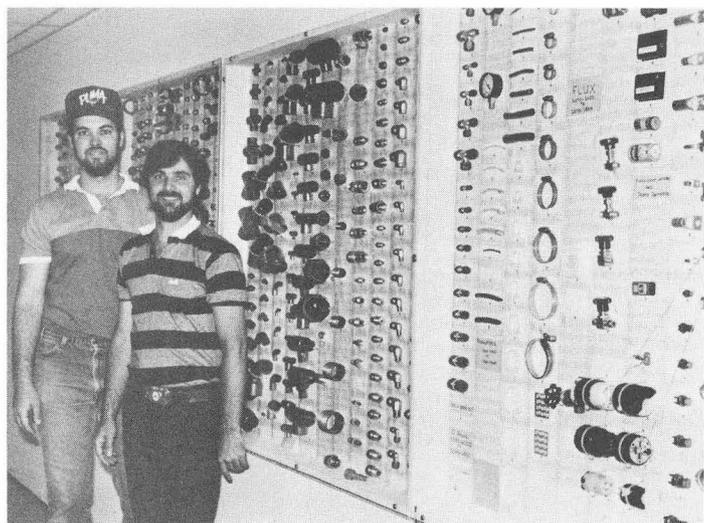
Tickets are \$2 for adults; children 12 and under are admitted for 50¢. Tickets are available at the door.

New Stockroom Displays Save Time, Talk, and Trouble

"Better than a Sears catalog" was the way a Fermilab employee/customer characterized the extensive displays of stockroom items which adorn the walls outside the Wilson Hall Catacombs stockroom.

The recently completed display was assembled in common item groupings by Lead Storekeeper Dave Myers and Storekeeper Scott Borton. (See *FermiNews*, January 24, 1985 for a story on the project's beginnings.)

With over 6800 items currently in the stockroom inventory, customers often did not know the exact name of the item they'd come in search of. Since a picture catalog would have been prohibitively expensive, Dave suggested, "Why not display actual examples?" Frank Cesarano, Stores Supervisor, replied, "Sounds good to me," and the project was begun. Frank noted that he has received numerous telephone calls praising Dave and Scott's efforts.



Scott Borton (left) and Dave Myers stand proudly next to the display boards they created to help ease the pain of stockroom withdrawal.

Similar display boards for the Site 38 Stockroom have been completed, and Frank expects them to be up soon. The job took Dave and Scott one month to complete, working during the day.

They have also put together quite a few sample books which include forms, drafting supplies, and ribbon samples.

Dave and Scott give a lot of the credit to the following co-workers for their help: Shelby Jones, Claudie King, Claire Morton, Geneva Jacobson, Al Long, Juan Sifuentes, Dale Wilderspin, Pam Venters, Dave Seifert, Carl Sneed, Duane Foster, and Jim Fichtel.

Thanks to Dave and company, making stockroom withdrawals has become as easy as pointing to what you want.



...**"Fantastic"** cont'd from pg. 1

completely different view of science outside the classroom. Students hiked over the dunes with Dr. Terry Marsh of North Central College, and Dr. Herbert Lamp of the University of Chicago, who explained how and why the dunes had developed and how they are still evolving. Viewing Saturn's rings and the constellations from the shore of Lake Michigan through telescopes provided by Dr. Jim Sweitzer and Mr. Jim Seevers of the Adler Planetarium, will long be remembered by everyone.

The opportunities presented by the Friends of Fermilab through this Institute are impossible to enumerate. Everyone agrees it has been a fantastic experience with many varied opportunities packed into four weeks of sharing with other teachers. Having been renewed and revitalized by this outstanding program, these teachers will go on to share what they have learned with their students for years to come.

The SIST is funded by a grant from the National Science Foundation and by Abbott Laboratories, Furnas Foundation, Inc., the Forest Fund, the Grainger Foundation, the H. Earl Hoover Foundation, and the Robert R. McCormick Foundation.

(Kathy Ladd is a chemistry teacher at Naperville North High School.)

FermiNews will print letters to the editor from employees in response to articles appearing on these pages. Letters for publication will be selected by the editor.

Letters must be signed, and *FermiNews* reserves the right to edit for space while preserving each letter's intent. Submit to: Letters, Fermilab Publications Office, MS 107.

Percent of Americans who say they don't know anyone who doesn't like Jell-O: 55
-from *Harper's* Index



Employees who were honored at the 10-Year Service Awards luncheon were:

Front row from left: L. Hanabarger, S. Lewis, M. Leininger, D. Taylor, E. Campbell, M. Martin, and T. Smith, second row from left: E. Brown, T. Williams, S. Farwell, J. Fourmont, J. Savignano, S. Kovacs, and D. Bundy, third row from left: S. Hays, M. Gormley, M. Olson, R. Hance, T. Kiper, and G. Famera, fourth row from left: D. Wolff, C. Briegel, B. Chrisman, Director's Office Representative, G. Eggleston, Jr., E. Hagler, K. Ewald, and B. Kobiella, and fifth row from left: P. Mazur, R. Raja, J. Loskot, and M. Hrycyk.

Congratulations to all!



New Slide Display on WH15

A new feature of the 15th floor exhibit area in Wilson Hall is a self-contained projection unit for Fermilab slides. Viewers can access any of the eighty slides by following step-by-step instructions posted on the cabinet.

The slides represent both historical and contemporary views of the Laboratory including the Accelerator, Magnet Facility, and CDF, showing many locations not visible from the visitors' area. It is hoped that these slides will not only be of interest to the general public, but especially useful to Fermilab staff escorting visiting family and friends. The new unit is located at the south end of the 15th floor.



NALREC Cubs Trip

Join NALREC on Friday, July 25, 1986, for the baseball game of the century, when the L.A. Dodgers meet the Chicago Cubs.

The bus will leave Wilson Hall at 1:00 p.m. sharp, so a half-day's approved vacation is required. The cost of this fun-filled afternoon is only \$17, which includes refreshments, choice seating, sandwiches, and the bus trip to and from the game.

For more information, call Joe Morgan on ext. 4181, Ed Justice on ext. 3361, Rose Callaghan on ext. 4445, or John Jones on ext. 4191.

Bill Noe, Sr., Retires . . .

Bill Noe, Sr., began working at Fermilab in April of 1971 in the 15-ft. Bubble Chamber. He then went on to Neutrino Cryogenics, Proton Cryogenics, and finally, Cryogenics Systems in the Accelerator Division.

Previous to joining Fermilab, Bill was at Brookhaven National Laboratory.

Tom Peterson, Bill's supervisor, said, "Bill's retirement means that the Accelerator Division will be losing a very dedicated and experienced employee. He has been our Technical Specialist in charge of satellite refrigerator helium compressors since the start of TEVATRON construction, and his work with compressors and refrigeration systems began long before that.

"Bill is one of those extremely valuable employees who combine experience and great practical knowledge with dedication and a strong sense of responsibility. Bill seemed always to be one of those who stayed late into the evening or came back at night and on weekends to help get the cryogenic system running again after a power outage, or some other problem, knocked off our compressors. It will not seem quite right to be running our helium compressors without Bill around, but I am sure those who have worked with him will carry on capably." Tom added, "I know I can speak for the whole Cryogenics Department in wishing Bill a happy and fulfilling retirement."



Bill Noe, Sr.

A member of the Knights of Columbus, former financial secretary of Elgin Council, member and past president of the South Elgin Lions Club, a member of the South Elgin Bicentennial Committee, Bill was also the chairman of the Lions' Candy-Day drive, and is present Bingo Committee chairman. He was elected to the South Elgin Village Board in 1983, and was the Park Committee chairman for two years. He is presently chairman of the Police and Public Safety Committee.

After retirement, Bill plans to spend time with wife, Jean, his 4 children, and his 4 grandchildren. He also plans to do some traveling.



Credit Union Notes . . .

Q: When can I make a withdrawal from my Credit Union account?

A: You can make a withdrawal under \$2000 anytime after 8:30 a.m. until 1:00 p.m. and again after 1:45 p.m. until 4:00 p.m. Checks for more than \$2000 should be called in before 10:00 a.m. and will be ready to be picked up after 2:00 p.m. the same day.

Q: I have more than one kind of account (shares, IRA, certificate, etc.) at the Credit Union. Why can't I get one statement instead of four or five different ones? It's so confusing.

A: Good news! Help is on the way. Beginning this quarter, members will receive a new quarterly, consolidated

statement detailing activity on all accounts except share drafts (checking). Share draft statements will continue to be sent to members on a monthly basis.

Q: When I opened my account, they asked me if I wanted my account to be singly or jointly owned. What are the advantages vs. the disadvantages?

A: In most cases, it is to your advantage to have your accounts jointly owned because it allows another person, of your choice, to have quick access to your funds on deposit at the credit union. This becomes very important in times of serious illness and/or death.



Rank of the "grapevine" among employees' leading sources of information about their company: 1

- from Harper's Index

FOR SALE:

AUTOS:

1981 AMC HATCH BACK. Stick shift, low mileage, great shape; \$2300. Call Carl, ext. 4248.

1980 CHEVY CITATION. 4-dr., hatchback, 6 cyl., auto. trans., A/C, P/S, tilt wheel, good tires and brakes, rustproofed, 62,000 original miles, a well maintained car in excellent cosmetic and mechanical cond.; \$2450 or best offer. Call Larry, ext. 3523 or 859-0515.

1980 BUICK REGAL LTD. V-6, auto.; A/C, PS, PB, PW, and door locks, excellent condition, AM/FM 8-track, wire wheel covers w/locks, color: bronze, 43,000 mi.; \$4000 or best offer. Call John Spencer, ext. 4972.

1979 FORD DELIVERY VAN. Overhead rear door, 31,500 mi. Call (312) 554-2532.

1977 PONTIAC. 4-dr., V8, good condition; \$895. Call Carl, ext. 4248.

1976 TOYOTA CORONA. 4-dr., 5-spd., 20R engine, A/C, body very rusty, but it runs; \$150. Call Owen, ext. 3534.

1976 DODGE ASPEN. 70K miles, runs great, 6 cyl., auto, P/S, disc brakes; \$495 or offer. Call Chuck, ext. 4116 or 879-0394 after 5 p.m.

1975 DODGE DART SWINGER. New ignition system, battery, alternator, runs well, auto., P/B, P/S, 6 cyl., some rust, good second car, nice for new driver; \$500. Call Deb ext. 2289 or 844-1636.

1972 DODGE 1/2-TON PICK-UP. W/cap, runs well, 8 cyl., auto, P/S, P/B; \$545 or offer. Call Chuck, ext. 4116 or 879-0394 after 5 p.m.

MOTORCYCLES:

1984 HONDA SCOOTER "ELITE". 125 cc.; \$870. Call Bill, ext. 3428 or 620-7020.

1981 KAWASAKI LTD 1000. Kerker header, Lochart oil cooler, electric start, 8000 mi., "mint condition"; \$1575. Call 377-7758 after 6 p.m.

MISC:

For the following items, call Rich, ext. 3709 or page 475: IBM-PC computer, Amdek color +2 monitor, dual double-sided disk drives, 192K memory, Epson-RX80 dot matrix printer, quadram board w/RS232 port--more; \$2300.

For the following items, call Bill, ext. 3428 or 620-7020: Motorcycle helmet, \$50; Wards freezer, upright, 17.9 cu. ft., 3 yrs. old, \$225; Roto Tiller, 8 hp, rear tine, 3-speed forward, plus reverse, \$375.

For the following items, call 897-9355: 2 new Vega tires w/rims, \$50; AM/FM car radio w/Jensen speakers, \$60.

continued on reverse

NEW RADIO CONTROL PLANE. Goldberg's Falcon 56, ready to fly, includes new .40-size engine and Futaba 4-channel radio system; \$225. Call Dave, ext. 3567 or 892-5395.

For the following items, call Ed Justice, ext. 4553 or 892-8484: 1 set of 4, late model Chevy Rally rims, 15", \$75 or best offer; 1 antique cast-iron bath tub w/claw feet, best offer; 3-position bench van seats, 1 pair, \$100 for both or best offer; 1 pair Moluccans, \$2200; 1 pair Umbrella cockatoos, \$1800, "proven breeders", must sell-moving.

SEARS POP-UP CAMPER. Good tires w/spare, tow chain and auxiliary lights, sleeps 6 w/10x16 add-a-room, excellent condition, must sell - moving; \$225. Call Mark Ramirez, ext. 3361 or 232-6754 after 5 p.m.

SOLID WOOD TABLE. Hand made, 60" round, single pedestal base, ideal for large family or card table; \$100. Call Dick Auskalnis, ext. 4167.

REC ROOM DAY BED/SOFA. Informal, armless style in rust and tan shades, converts to a full size bed; \$25. Call Deb ext. 2289 or 844-1636.

For the following items, call Harvey, ext. 3492 or 420-0318 after work: New Home sewing machine w/cabinet and chair, \$80; Dolomite ski boots, size 10, \$15; two pairs boy's ice skates, 1 hockey, 1 figure, ea. size 7, \$5 ea.; 1 pair Head standard ski, 190's, need new bindings, \$20; 1 red-upholstered rocker, \$30; 1 Duck Head upholstered rocker, \$10; 1 ping-pong table, \$20; 1 operating treadle sewing machine, \$30; 1 aquarium setup, \$25; 1 king-size bed frame, \$10.

For the following items, call Cynthia, ext. 3082: Pernige marble-topped cabinet, 19"Dx65"Lx32.5"H, \$250; Navy blue velvet three-cushion sofa, 84"x35", 1.5 yrs., like new, \$400; barrel pull-up chair, turquoise upholstered seat, \$20.

For the following items, call Stan, ext. 3340 or 985-7204 after 6 p.m.: 100 concrete patio blocks, 8"x16"x2", 5 for \$1; 18 ft. fiberglass canoe, good condition, \$200.

For the following items, call Millie, ext. 3351 or Joe, ext. 3810: Dining table, 54" round, solid walnut, Queen Anne styling, 90 years old, 2 leaves do not match, \$300; 4 chairs, oak, padded seat, \$40 ea.; library table, 2'x4' ebony finish, \$100 (If sold together, \$500 total); 2 etageres, 2 glass shelves w/doors on bottom base, glass, chrome, walnut, \$35 each; Kimball piano, Italian style, 41", walnut wood, bench w/gold cushion, excellent condition, \$1200; desk, executive black metal w/formica top w/walnut look, 65"x30", \$100; large executive desk chair, black, \$50; Sears ping-pong table, full size, 3/4" thick, heavy duty, legs fold away, \$30; John Deere snowmobile, 74-300, good running condition, \$350; John Deere tractor lawn mower, hydrostat 48" deck, \$600; Sears 10" radial arm saw w/attachments, \$100; dark ranch mink jacket, medium size, excellent condition, 9 years old, \$300; Columbia tandem bike, good condition, \$80.

MACINTOSH EXTERNAL DISC DRIVE. 400k; \$150. Call Bill, ext. 4578/3483.