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NEWSLETTER

Argonner Elementary School
 Sportfield Elementary School
 Hanau Middle School
 Hanau High School

Elevating Science to the Next Level *Experimenting with Microcomputer Base Laboratory*

Thermal Equilibrium

By Gail Dube

The Hanau American Middle School (HAMS) eighth grade science students studied thermal equilibrium using Personal Science Laboratory (PSL) software and temperature probes. The students read about thermal equilibrium in their textbooks and discussed the meaning of the term, thermal equilibrium.

The class then considered the question, "How many minutes will it take for two containers of water of different temperatures to reach thermal equilibrium?" The students experimented with beakers containing 200 milliliters of warm water and 200 milliliters of cool water (11 degrees centigrade).

The water temperatures were determined using the temperature probes and PSL grow bar graph set for 30 seconds. The class then placed the cool water in a small plastic bag inside a 600-milliliter beaker. The hot water was poured in the larger beaker outside the plastic bag. Only the plastic bag then separated the cool and warm water. One temperature probe was placed in the cool water inside the bag, and a second temperature probe was placed in the warm water in the beaker. The class used the PSL line graph set for 3 minutes. Thermal equilibrium was achieved after 2.5 minutes.

The class discussed and documented the results. The students concluded that the experiment should be repeated several times for accuracy. Students then

developed additional questions regarding heat that could be tested with the PSL software and temperature probes.

Co-Teaching and Student Mentoring

Students from HAMS shared their knowledge and technical skills in reading and interpreting weather images to Dick Evanson's fourth grade students. Gail Dube brought several of her eighth grade science students to Sportfield Elementary School to work with Dick Evanson and his class. Gail and Dick previously co-taught several lessons on weather. The students reviewed weather images and identified changes in ocean temperature

over the period of one year. The students were required to analyze, plot, color, and compare seasonal water temperatures. The students described the effect the changes in water temperature have on the weather. The HAMS students were instrumental in boosting the students' confidence. They provided valuable assistance to the fourth grade students. The mentors were Denica Coombs, Marcus Graham, Candyce Jones, and John Sousa.

NASA visits Hanau

Hanau students were very excited when they received a visit Dr. Bruce Payne, a NASA representative. Dr. Payne, NASA and JPL Educational Consultant

Professional Development

Teachers from Argonner Elementary, Sportfield Elementary, Hanau Middle, and Hanau High Schools attended a computer workshop integrating Inspiration, a mind mapping computer program, into the curriculum. Dr. Bernajean Porter, Education Technology Planners, Inc., was the instructor. Dr. Porter modeled the program, Inspiration, by demonstrating its various capabilities. She also facilitated the teachers in the classroom. The program is a major hit with both the teachers and students.

Teachers attending the workshop were Middle School: Mary Chemlick, Mary Evanson, and Lori Hill; High School: Robert Tecklenburg and Carolyn Tecklenburg; Sportfield Elementary: Dick Evanson; Argonner Elementary: Anna Heuer, Nancy Bogensberger, Kathy Sennett, Charlia Gooden, and Colette Sosnick.

Dr. Porter also provided training on the Student Writing Center program. Teachers receiving training in the classroom on these programs were: Ann Bromaghim, Nancy Bogensberger, Anna Heuer, Nettie Eddie, Deb Knudsen, Billy Eller, Denise King, Mary Chemlick, and Bobby King. She provided training to information system specialist training for Lin Forrest, Lynda George, and Peggy Lynn.

came to share information with Hanau. The information is available from NASA. He used the Internet and CD images to teach about space, rocks, and physiology. The teachers and students received valuable information integrating technology with the curriculum.

Dr. Payne's visit was made possible through the efforts of our partners at TERC and through the sponsorship of the Presidential Technology Initiative.

Dr. Payne's shared his technological expertise throughout the Hanau schools. He taught sessions in the following classes: Andre Clophia, Pat Brown, Shirley Lynch, Dick Evanson, Gail Dube, William Whitaker, Randal Walls, Kathy Sennett, Charlia Gooden, Nettie Eddie, Carol Parmenter, and Colette Sosnick.

Educators' Day

On March 6, 1998, the Hanau School Complex was host to more than 300 educators. Teachers, administrators, and staff supporters from all the schools in Hessen District converged on the high school and middle school to participate in Educators' Day. Presentations and workshops on designing web pages, creating computer art, using spreadsheet, and graphing program were given throughout the day. Teachers from each of the hosting schools shared their experiences and knowledge by giving presentations on technology integration. The presenters used hardware and software from the tool kit to demonstrate the impact technology integration is having on themselves and the students.

HHS Tech Corps

Eleven Hanau High students have been selected to become member of the Hanau High School Tech Corps. They are: David Fuller, Johnny Johnson, Jerry Jones, Joel King, Danielle Maynard, Rebekah McGahee, Kevin Mills, Stan Mistak, Carlos Renjifo, Tracy Stapler, and Kiley Winston.

The Tech Corps will assist the teachers with technology problems, help teach technology tools, offer assistance to classmates, offer short workshops for classmates and help maintain the

Kids Speak

Special Visitors in Room 219: Dr. Bruce Payne and Dr. Bernajean Porter visited our second grade class at Argonner Elementary School. Dr. Payne showed us how to find the Hubble Space Telescope using the computer. This spacecraft help scientists learn about the sun, planets, moon, and stars. Dr. Payne works with NASA. This was a fun activity.

Dr. Bernajean Porter helped us write poems about a story we read called *Little Grunt and the Big Egg* by Tomie dePaola, using Student Writing Center on the computer. We worked as partners. It was a lot of fun. Submitted by Second Graders in Nettie Eddie's class.

computer equipment throughout the school. They will receive training and assistance from Kevin McGillivray and Oren Eddie.

These Tech Corps students were selected by recommendations as to their technology skills, their trustworthiness and their ability to assist others. Once the Tech Corps is firmly established, more students will be invited to participate.

Model Schools Parent Workshops Continue

The third Hanau Model Schools Parent Workshop began last weekend and will continue through April 26. Parents are receiving 20 hours of technology training on computer operating systems and software used in the four Hanau Schools: Word, PowerPoint, Excel, Netscape Internet Browser, and other curriculum-specific tools.

The next Parent Workshop will be held May 1-2, and 8-9 in the High School Computer Lab. There are just a few openings left for this workshop and parents are asked to call Kevin McGillivray (evenings: 06055-3442) if they would like to participate.

Our goal was to provide approximately 20 hours of training to 100 parents during this school year. The May workshop should move us past that number!

Coming Attractions

April 23 Susan Conklin, DoDDS Army Liaison

May 4 Karl Eyerkauf, County Commissioner, Main-Kinzig County, Germany

May 7 & 8 Georgia Williams-Scaife, School-Home Partnership

May 6 – 16 Liz McNamara, TERC, Model Schools Project Director

May 9 - 23 Judy Wasser, TERC, Senior Researcher

May 15 Technology Day and Celebration of Model Schools

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