



**Technology Education 928  
HyperStudio in the Classroom  
Grades 4-12  
Tony Gordon**

Bring multi-media into your classroom by adapting your existing projects for use with HyperStudio.

HyperStudio is multi-media authoring software based on the metaphor of index cards. Each slide created is called a card. A group of cards is called a stack. A stack operates in much the same way a Web site does.

A hands-on approach will be employed during this course to ensure participants will have enough knowledge to use the program in a classroom setting. Skills such as importing pictures, recording sounds, and overall HyperStudio stack development will be covered.

Bring an existing project, create one from scratch, or work on sample projects provided by the instructor.

This class is designed for all levels of computer proficiency.

**Objectives:**

- 💡 Explore multi-media authoring and understand the basic concepts related to its use.
- 💡 Investigate HyperStudio as a curriculum enhancement tool.
- 💡 Discover how existing curriculum can be used with HyperStudio.

**Technology Education 929  
Communication Electronics  
Grades 7-12  
Todd Vander Loop**

Experience the ins and outs of running a cable access T.V. channel.

Participants will take over the daily operations of Channel 99 and the electronics projects completed in the class, Communication Electronics. This is a hands-on workshop that will expose you to video (editing, production, broadcasting, etc.) and the electronics that make it all possible.

**Objectives:**

- 💡 Gain knowledge of how to use editing equipment to communicate a message.
- 💡 Experience the jobs in the field of television.
- 💡 Be able to design an electronic circuit.
- 💡 Design communication messages relayed over the television.
- 💡 Gain knowledge of a cable access T.V. channel.



## Technology Education 930

### Keys For Success:

*Motivation, Experimentation, and Competition*

Grades 7-12

Charles Berben and Mark Vrieze

Boggle your brain with Robo Pong. Satisfy your need for economy with a mousetrap-powered vehicle.

Cross a chasm with only kite sticks and an ounce of glue. Within lies the problems; you supply the solvent in making them dissolve. Problem-solving activities that have proven to be great incentives in the classroom using technology, math and science.

Participants will design, construct and troubleshoot the following:

A ping pong ball hawking robot

An efficient mousetrap-powered vehicle

The strongest 14" kite stick bridge

### Objectives:

- 💡 Experience hands-on activities in problem solving.
- 💡 Take home problem-solving activities which can be implemented in the classroom with minimal cost per student.
- 💡 Integrate math and science in solving technological problems to predict possible outcomes.
- 💡 Select materials for design and development of solutions to a problem using technological systems.
- 💡 Evaluate alternative solutions to achieve the best outcome via troubleshooting.



## Technology Education 931

### Aviation For The Beginner

Grades 7-12

Dan Fara

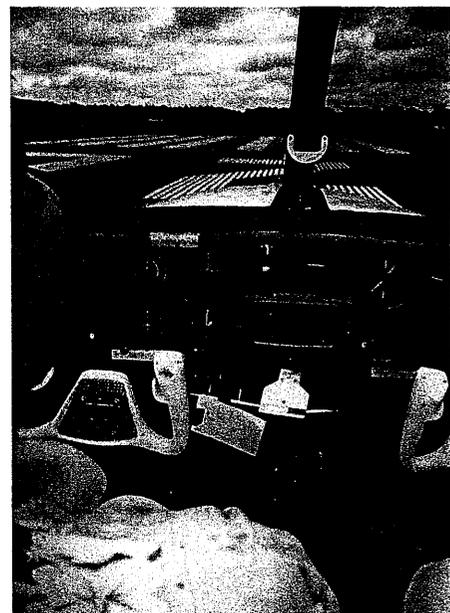
Explore the wonderful world of flight, with some hands-on experiences in aviation. This session is designed for the individual who wishes to learn about airplanes and how they fly.

Participants will become familiar with the basic fundamentals of aeronautics. They will build a glider, work with aerodynamics, navigation, radio communication, FAA regulations, physiology of flight, map reading, flight simulation, reading weather reports, and go on an actual flight.

Cost for this class will be determined by the length of the flight.

### Objectives:

- 💡 Gain knowledge and experience in the field of aviation.
- 💡 Become acquainted with the social, economic, and cultural impact aviation has on our society.
- 💡 Investigate ways aviation might be incorporated into your curriculum.
- 💡 To gain an appreciation of the world of aviation.

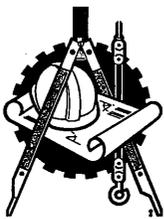


**Technology Education 932**  
**AutoCad R14 Fundamentals and**  
**Advanced AutoCad R14**  
*(For Windows 95)*  
**Grades 9-12**  
**Thomas J. Whelan**

This course will provide participants with a chance to learn how computers and computer-aided drawing programs can improve their current manual drafting program, and prepare students for the challenge of the information age.

Be exposed to a variety of challenging exercises utilizing the software AutoCad R14, the most widely used international design program in industry today.

All participants will gain hands-on experience with this software which can in turn be incorporated into individual classrooms.



Advanced exercises involving Architectural Design, Mechanical Design, and Engineering will be explored.

**Objectives:**

- 💡 Assist teachers in the development of a Cad program.
- 💡 Understand basic computer terminology and concepts.
- 💡 Provide teachers with the skills needed to produce various 2D and 3D drawings in a Cad environment.
- 💡 Utilize sufficient skills in the use of Cad tools and functions and how to manipulate them on a computer.
- 💡 Develop an appreciation for Cad and its impact on industry.
- 💡 Develop faster techniques to improve drawing productivity.
- 💡 Create various exercises to be used in individual classrooms.

**Integrated 933**  
**Leadership Workshop for Building Effective**  
**Family Involvement in Early Childhood . . Math**  
**and Science**  
**Grades PreK-2**  
**Marta Larson**

Playtime is Science (PS) and Family Math for Young Children (FMYC) are model programs that are nationally recognized for their excellence in math and science education, their ability to involve hard-to-reach parents, and their focus on providing

**933 Continued**  
**Leadership Workshop for Building Effective**  
**Family Involvement in Early Childhood . .**

educational opportunities for girls and children from cultural groups that are traditionally under-represented in the skilled scientific workforce. These models incorporate hands-on activities which foster a cooperative learning environment for families to approach math and science as a fun, everyday event in which anyone can participate. This leadership workshop will help teachers and school staff facilitate family classes in their own communities. Class participants will be eligible to earn additional credit from UW-Stout for leading parent-child workshops using materials and lessons from this course. Participants are asked to attend as part of a team that includes minimum of three persons from the same school.

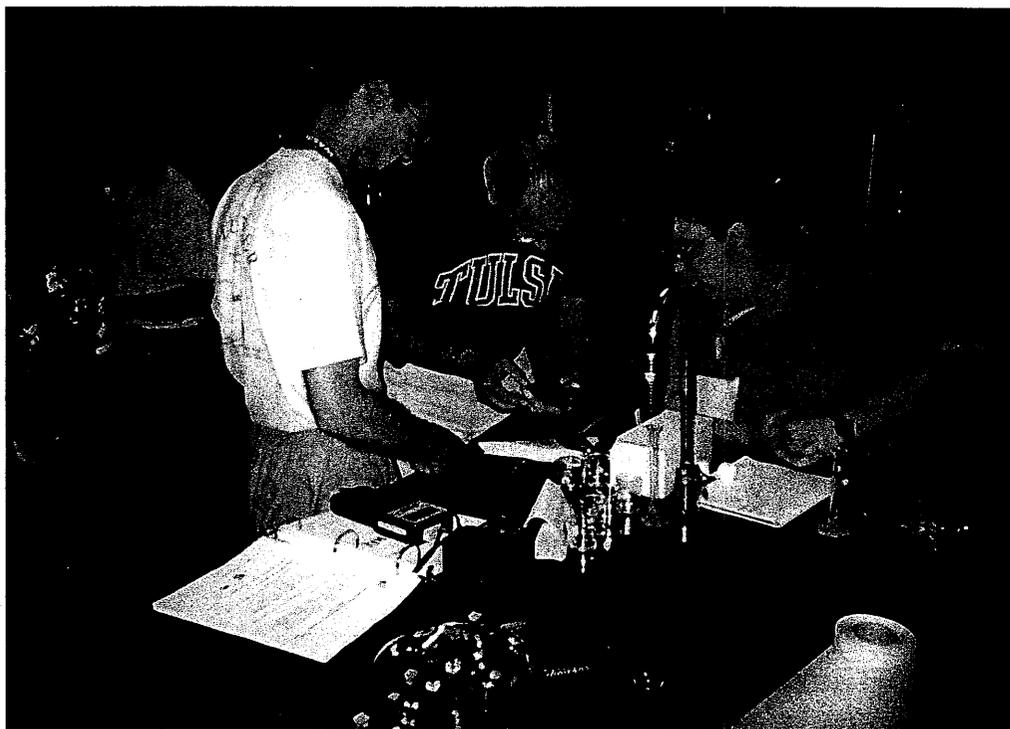
**Objectives:**

- Learn activities and strategies to empower parents in their role as their children's first and most important teachers, and engage children and parents to work on mathematics and science together.
- Learn strategies to encourage female and minority children to talk and think about mathematics and science.
- Learn strategies to encourage risk-taking, persistence, and intellectual self-esteem in girls, and children from cultural groups, that have not traditionally been successful in math and science.
- Learn strategies to use materials commonly found around the house to make math and science games and activities.
- Learn strategies to teach children and parents to focus on the process of thinking mathematically and scientifically rather than finding any one right answer.
- Learn strategies to help children and parents value alternative strategies for thinking about math and science problems.
- Learn strategies to create an awareness that mathematical and scientific thinking leads to many types of well-paying jobs.
- Learn strategies for recruiting and retaining hard-to-reach families.
- Develop an action plan for implementing parent/child classes in their school and/or community.
- Participate in an ongoing state-wide technical assistance and support network for helping parents and children learn about mathematics and science together.

**Integrated 934  
In-Tech-Great!!!  
Grades K-6**

**Stefanie Boggs and Bill Giese**

Learn strategies to enliven your elementary classroom! Science, math, and reading strategies which cause students to THINK as they utilize a hands-on, problem-solving approach will be presented. Leave with ideas that are easily implemented in your classroom.



This fast paced hands-on workshop will allow teachers to become familiar with the new Technology Education State Standards through engaging activities they can emulate in their own classrooms.

Projects are based on cross-curricular themes. Science, reading, and math connections will be made while utilizing a technical education philosophy.

Participants will be required to produce finished projects and participate in the design process. Additionally, a written theme-based unit based on the

**Integrated 934 Continued  
In-Tech-Great!!!**

participants' grade levels will be assessed and presented at week's end.

**Objectives:**

- Develop an awareness and understanding of the Elementary Technology Education Standards.
- Become adept at using tools and materials.
- Learn ways to integrate Technology Education into classrooms.
- Learn creative ways to enhance group work.
- Create meaningful connections between math, science, and reading pedagogies.

**Teaching Method/  
Strategies:**

With a basic philosophy that people learn by doing, we will pose problems and challenges which need to be solved. Solutions lie in the design, build, test, and evaluation process participants will engage in as they learn. Different learning styles will emerge and be valued as unique to the individual.

**Integrated 935**  
**T.O.Y.S.**  
*(Teach Our Youth Science)*  
**Grades K-8**  
**Jaime Malwitz**

Teachers, don't take those toys away from your students. Instead use them as self-motivating teaching tools! This program uses toys as a launching pad to teach science, integrated with math and technology, in the classroom setting. Not only is it hands-on, but it is also a minds-on approach to actively involve all students while applying the Benchmarks for Science Literacy to math, science, and technology as well as Wisconsin's Model Academic Standards.

Imagine using DUPLOS to teach systems, communication, and math; BEADS to do estimation, graphing, or simple percents without division or calculators; GUMMI BEARS for inquiry learning and predicting; CARS and TRAINS to demonstrate Newton's Laws of Motion; and becoming a paleontologist while digging for DINOSAUR bones. These are among the many activities intended to introduce the novice teacher to the user-friendly aspects of science, math, and technology through an inexpensive, yet comprehensive, application of material readily available to teachers and students.

For the more experienced teacher, toys will be used as extensions for their current curriculum, and include helpful additions to SCIS, FOSS, and GEMS.

Methods of assessment will be discussed and demonstrated as they apply to the learning cycle of exploration, concept building, and application to the world outside the classroom. The multicultural aspects of toys, as well as gender equity, will be addressed throughout the program.

Teachers are encouraged to bring a favorite classroom or child's toy along, and learn how to incorporate it into their own curriculum. Each teacher will take home a T.O.Y.S. starter kit, a reading list of science related books for their grade level, and many activities created, shared, and distributed in class. Remember, when it's time for children, it's time for T.O.Y.S.!



**Integrated 936**  
**Adventure in The Classroom**  
**Grades K-12**  
**Dave Lockett**

The primary thrust of this course is to provide teachers with instructional techniques and applications of adventure learning. Individuals will become acquainted with a variety of adventure activities that can be used in the classroom.

They will also be provided with an opportunity to participate on a high and low ropes course.

Seminar discussions will focus on the foundations of adventure education as well as philosophical issues including experiential learning theory, risk taking, and the aims of adventure education.

**Objectives:**

- Utilize a variety of adventure activities in the classroom.
- Explain the educational benefits of low and high elements.
- Explain how to set up, implement, and debrief problem-solving initiatives.
- Understand the main philosophical underpinnings of experiential learning and adventure education.



## Integrated 937

### Milk It!

#### *Developing Multiple Intelligence Learning Kits for Interactive Teaching*

Grades K-12

Dave Masterson and Jon Griffith

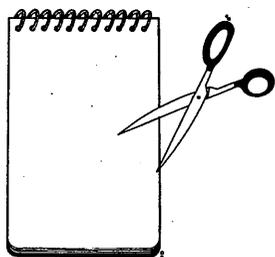
Have you ever found a way to reach each individual student? You know, find out what they learned in their own way?

This workshop is geared towards helping participants identify students' intelligence (learning style), developing standards-based activities that use students' intelligences, and developing assessment tools that use those intelligences effectively to display what the student has learned.

MILK IT! - Multiple Intelligence Learning Kits for Interactive Teaching. A variety of technological tools will be demonstrated through the workshop.

#### **Objectives:**

- Provide a background of Multiple Intelligence.
- Provide assessment tools for assessing Multiple Intelligences.
- Demonstrate hands-on, standards-based activities that are geared for interactive teaching.
- Provide examples of activities and assessment tools; including developing rubrics that target Multiple Intelligences.
- Have attendees create their own standards-based activities.



## Integrated 938

### Wisconsin Energy Education Program (KEEP)

Grades K-12

Jennie Lane

Put some energy into your classroom!



Through hands-on activities and class discussions, learn how you can enhance students' understanding of what energy is, where it comes from, and how it affects their lives.

You will also receive a copy of KEEP's comprehensive, easy-to-use Energy Education Activity Guide and be introduced to additional energy-related educational materials.

This course is designed for teachers who want to experience it today and teach it tomorrow. Applicable to teachers of Science/Mathematics, Social Studies, Language Arts, Technology Education, Family Living and Consumer Education, or to anyone who wants to promote energy as part of their environmental education curriculum.

#### **Objectives:**

- Appreciate the need for energy education.
- Gain knowledge about and hands-on experience in energy education.
- Become familiar with energy education support materials.
- Develop strategies using the Education Guide and other resources to integrate energy concepts into the curriculum.

#### **Content/Syllabus:**

Class as currently constituted covers 16 hours (will be expanded to meet Academy's needs).

Students are introduced to the Activity/Resource Guide.

Students are led through a number of activities.

Students are asked to cooperate with other students and explore other activities/resources.

Discussion of cross-curricular application of guide and activities.

**Integrated 939**  
**Shrink-Wrap**  
**Grades 1-5**  
**Mary Richards and Deb Wood**

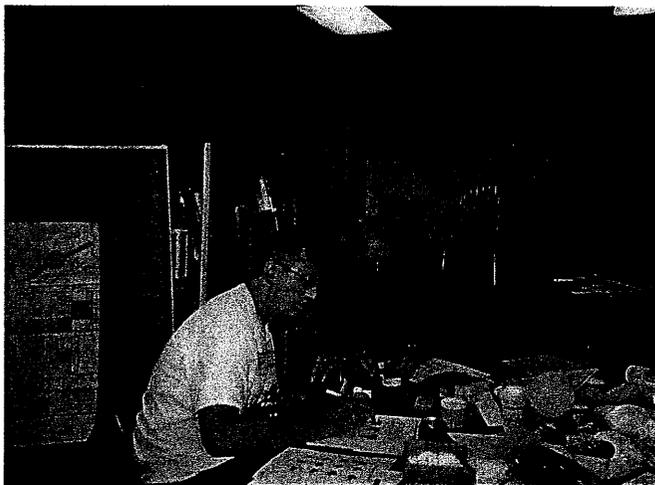
Integration! Standards!! Assessment!!! Technology!!!!  
Brain-based Learning!!!!

BUT how do you “shrink” and “wrap” this all together into classroom lessons?

“Shrink Wrap” will provide some methods and models on how to package your lessons and still have all the necessary contents! This is a hands-on program.

**Objectives:**

- Explore Math, Science, Technology Standards.
- Discuss and model authentic assessment.
- Design integrated lessons.
- Explore lessons which reflect Multiple Intelligences model.
- Experience technology as a learning/teaching tool.
- Provide resources.
- Establish connections to Community, Business, and Industry.
- Promote professionalism and leadership among participants.



**Integrated 940**  
**Weird and Wacky Ways to Integrate Science and Math**  
**Grades 4-6**  
**Sue Hall and Betsy Muhvic**

Put on your lab coats and become a super sleuth as we investigate innovative problem-solving activities.

Participants will discover new ways to integrate science and math with literature, social studies and art. Get ideas on using mysteries, inventions and problem-solving techniques that meet national standards that can be recreated in your classroom.

**Objectives:**

- Identify variables of problem-solving techniques used during this workshop.
- Practice safety with all chemicals used in “hands-on” activities.
- Process skills will be implemented following the NCTM and National Science Standards of questioning, observing, classifying, measuring, and collecting data.
- Thinking processes will be developed through communication, problem-solving, experimentation, and questioning techniques.
- Problem-solving will be emphasized in developing inferences, predicting and hypothesizing.



**Integrated 941**  
**(TI) CMS (Connecting Math and Science)**  
**Grades 9-12**  
**Provided by Texas Instruments**

The T<sup>3</sup> Connecting Math and Science (CMS) Institute is a week-long professional development program for secondary mathematics, physical science and physics teachers designed around the TI-83 graphics calculator and the Calculator-Based Laboratory System (CBL), a calculator interface used to collect data through probes or sensors, and the Calculator-Based Ranger (CBR).

The primary focus of the CMS institute is collection of data and the analysis of it from both scientific and mathematical standpoints.

Participants will gain hands-on experience collecting data with the CBL/CBR and modeling it with the powerful statistical tools of the TI-83. Working in groups, teachers will use this knowledge to develop a lesson focusing on the integration and connection of mathematics, physical science and physics.

The week will emphasize new and innovative teaching techniques as prescribed by NCTM's *Curriculum and Evaluation Standards for School Mathematics* (NCTM, 1989), *Professional Teaching Standards* (NCTM, 1991), and NSTA's *Standards for Science Teaching* (NSTA, 1995).

**Objectives:**

- Develop teachers' familiarity and facility with the use and features of the latest graphing calculator technology.
- Develop teachers' familiarity and facility with the use and features of the Calculator-Based Laboratory System (CBL) and the Calculator Based Ranger (CBR).
- Explore the scientific aspects of the data collected using the CBL/CBR system as related to physical science and physics curricula.
- Study the mathematical concepts inherent in the data collected with the CBL/CBR system.
- Investigate traditional and alternative teaching and assessment techniques that utilize technology in a balanced program of reasoning, connections, and communications.

**Integrated 941 Continued**  
**(TI) CMS (Connecting Math and Science)**

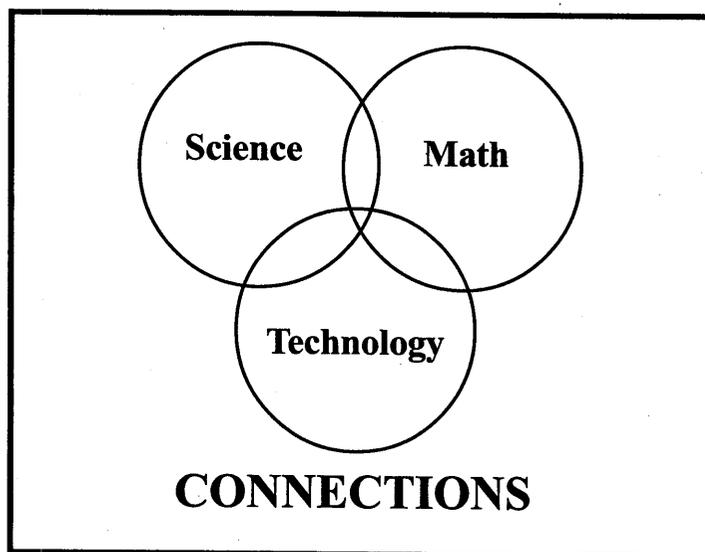
- Facilitate the cooperative efforts of mathematics and science teachers who will work together to develop an integrated lesson focusing on the collection and analysis of scientific data.

**Targeted audience:**

Participants in the T<sup>3</sup> CMS Institute should be inservice secondary mathematics and science teachers in grades 9 through 12. The mathematics content will focus on topics from algebra, precalculus and calculus.

The science content will focus on physical science and physics.

There will be a \$10.00 materials fee for this workshop.



## ACADEMY TOURS 1999

### Tour 1

#### ***Ellis Stone Construction Company***

Ellis Stone is a general contractor specializing in the design and construction of all types of commercial and institutional buildings. They employ individuals with backgrounds in architecture and the building construction trades.

#### ***R.H. Rettler & Associates***

R.H. Rettler is a consulting firm providing recreation facility planning and design, engineering, site maintenance, construction management and survey services. Approximately 50% of their clients are Wisconsin school districts.

### Tour 2

#### ***Wisconsin Rural Water Systems***

Wisconsin Rural Water is a service agency that provides technical support and educational assistance to small water utilities throughout Wisconsin. It's part of a national organization providing similar services nation-wide.

#### ***Plover Water Systems***

The Village of Plover operates a municipal water system providing portable water services to a community of over 5,000 persons. The system provides groundwater from two municipal wells. Part of the treatment system includes a reverse osmosis nitrate removal facility, one of only a handful of such systems in Wisconsin.

### Tour 3

#### ***Saint Michael's Hospital***

St. Michael's Hospital is a full service medical facility serving the Portage County area. The hospital recently completed a major addition and provides facilities to the Rice Clinic, a major out-patient service provider. The hospital's new rehab facility houses physical therapy, occupational therapy and sports medicine services.

#### ***Physical Therapy Associates***

Physical Therapy Associates is a privately owned physical therapy practice with a multi disciplined staff who specializes in orthopedics, back and neck care, sports related injuries, pediatrics, geriatrics, work related injuries and home health. They maintain an up-to-date facility with the latest equipment and technology.

### Tour 4

#### ***Signature Press Inc.***

Signature Press features a state-of-the-art graphic design and pre-press department, a complete list-management and mailing department, the best presses and highly skilled personnel.

#### ***Notable Impressions***

Notable Impressions is a specialist in Business Promotional Products. Their mission is to help companies build their business. Helping the customer to enhance and promote their image is what Notable Impressions is all about. They understand the importance of developing and maintaining a company or organization's image. Business promotional products are an inexpensive and very effective way of creating a profitable business.

## **Tour 5**

### ***Worzalla Publishing Company***

Worzalla, a quality printing and binding organization, has been serving the needs of American publishers and businesses since 1892. Worzalla offers a wide variety of options for printing and binding.

### ***The Copps Corporation***

The history of The Copps corporation is synonymous with the growth and development of the grocery industry in the U.S. Over a century ago, E.M. Copps started selling groceries to loggers, river men, and farmers in central Wisconsin. Today, this same family-owned corporation operates its own retail supermarkets throughout Wisconsin and services independent retail grocers in Wisconsin and other states.

## **Tour 6**

### ***Skyward Inc.***

Skyward is a leading provider of administrative software solutions for K-12 public and private schools. They have been serving customers since August, 1980. Their integrated software modules are easy to learn and implement, and their complete data management systems are the most cost effective and powerful tools available. Skyward's mission is to provide the most comprehensive, innovative, easy-to-implement and cost effective administrative data processing systems available anywhere!

### ***Marten Machining***

Marten Machining, Inc. is a machine shop specializing in precision tooling and custom designed machine parts for manufacturing companies. Marten Machining was established in 1984 and has a regional customer base. Parts are designed and produced using computer equipped work centers. Employees at Marten Machining have educational levels ranging from youth apprenticeships to technical degrees.

## **Tour 7**

### ***Sentry Insurance Industrial Hygiene Lab (Jeni)***

Since it was founded in Stevens Point, Wisconsin in 1903, Sentry Insurance has developed into a multinational corporation of over 45 companies with operations in the United Kingdom, Australia, Lebanon and the Far East. Total world-wide assets exceed \$700 million. With headquarters in Stevens Point, Sentry offers the services of individual and group life, health insurance, pension plans, workmen's compensation, general liability, homeowner's and automobile insurance to its policyholders.

### ***Paper Machine Tour, Science Building, UW-Stevens Point***

The UWSP installed a smaller replica of an industrial paper machine in 1996. This machine provides the students the opportunity to develop a better understanding of paper machine operation and maintenance. The hands-on experience the students gain from the machine operations makes them more valuable to potential employers. The paper produced on the pilot machine is used to supply the entire Paper Science Department.

## **Tour 8**

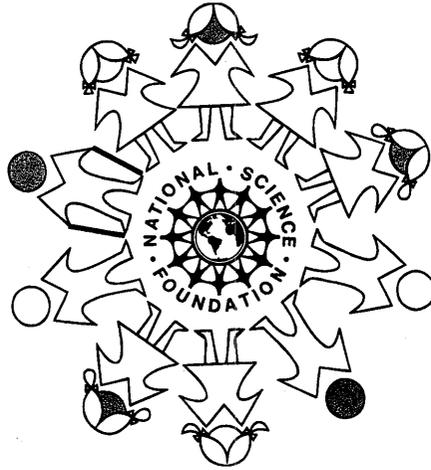
### ***Materials Recovery Facility***

The Portage County Materials Recovery Facility processes recyclable materials from throughout Portage County. The County owns the facility. It is operated on a contract basis. Paper, plastics, aluminum and ferrous metal are processed for sale on the recyclable material market.

### ***Wisconsin Public Service***

Wisconsin Public Service Corporation is a gas and electric energy utility serving Central, Northern and North Eastern Wisconsin. The utility provides a wide variety of job opportunities in marketing, sales, engineering and construction.

*Funding  
is provided in part  
by the*



*National Science Foundation  
grant #ESI 9453923.*

*The Wisconsin River Valley Academy  
is part of the  
Wisconsin Academy Staff  
Development Initiative,  
a project of the  
Wisconsin Academy of Sciences,  
Arts and Letters.*



# Points of Interest

## About the Stevens Point Area

In the 1830's, John B. DuBay established a trading post 12 miles north of what is now Stevens Point along the Wisconsin River. In 1838, an Illinois lumberman, George Stevens, made the rugged journey from Fort Winnebago and took his first survey of the area. The following year, accompanied by a Native American and several loads of supplies he housed in a rough shack on an embankment of the Wisconsin River. This rough beginning gave birth to the town now known as Stevens Point. By 1850, Stevens Point had a population estimated at 200, in 1998 the population was 24,430. Today a marker stands at the west end of Main Street, along the Wisconsin River, where George Stevens began the settlement of Stevens Point. Industries, such as manufacturing, transportation, insurance and construction have long since replaced the lumber mills and trading post that used to dot the Rivers shore. First-rate service accommodations and a friendly face are the standard in Stevens Point.

### Mainstreet Historic District

More than 60 downtown buildings comprise the Mathias Mitchell Public Square. An additional twenty buildings can be found throughout Stevens Point, some listed individually on the National Register of Historic Places, are designated local landmarks.

### Central Wisconsin Children's Museum CenterPoint Mall, 715/344-2003.

Create, explore and learn together at the Children's Museum. The Museum offers hands-on activities, changing exhibits and interactive play area for children ages 1-12.

### Museum of Natural History

Albertson Learning Resources Center, 900 Reserve Street, UW-Stevens Point Campus, 715/346-2858.

This museum houses interactive exhibits, video stations, dioramas and permanent displays. Displays present topics on earth science, dinosaurs, mammals, North American bird eggs, snakes, fossils and other natural history subjects. No admission.

## Recreation

### The Green Circle

Stevens Point Parks and Recreation Department, 715/346-1531. A 24 mile trail linking scenic natural areas that follows along the Wisconsin and Plover Rivers. The Green Circle accommodates recreationalists of all types in all seasons, including hiking, walking, bicycling, jogging, and wildlife watching.

### Schmeeckle Reserve

North Point Drive, 715/346-4992.

Supported by UW-Stevens Point as a research and teaching resource, this 220 acre reserve is open to the public. Visitors can view wildlife, walk or jog the 5 miles of trails. A lake, visitor center, shelter building, and the Wisconsin Conservation Hall of Fame are open to the public at no charge.

### Jordan Park

Located six miles NE of Stevens Point on Hwy 66 along the Plover River. The park maintains a nature center, beach, boat and canoe launch, fitness trail, wildlife and camping areas.

### Rivers Edge Campground

3368 N. Campsite Drive, 344-8058.

Just 7 miles N on the beautiful Wisconsin River. This campground offers various activities for the whole family.

### Stevens Point Parks

Stevens Point is home to nineteen city parks that offer recreational outdoor activities, including hiking, boating, volleyball, tennis, basketball and biking.

### Sentryworld Sports Center

The Sentryworld Sports Center complex offers facilities for tennis, squash, racquetball and other indoor sports.

### Local Golf Courses

SentryWorld Sports Center, 610 N. Michigan Ave., 341-1600. Ranked as one of Wisconsin's top two public golf courses.

Tree Acres Golf Course, 5754 Pleasant Dr., Plover, 341-4530.

The public is always welcome on this scenic and well-maintained 18 hole golf course.

Wisconsin River Golf Club, 715 W. River Dr., 344-9152.

Totally redesigned with 30 new bunkers, 2 1/2 acre pond.

### Fishing

A virtual fisherman's paradise awaits. The Wisconsin River is becoming known as one of the best Muskie waters in the state. Other fish to be found include Walleye, Northern, Bass, Crappie and Panfish.

#### Some Numbers to Know

EMERGENCY .....	911
Calendar of Events .....	715/341-6566
Parks & Recreation .....	715/346-1531
Time and Temperature .....	715/344-0123
Portage Co. Business Council .	715/344-1940

For more information about the Stevens Point area contact:  
Stevens Point Area Convention and Visitors Bureau  
340 Division Street North • Stevens Point, WI 54481  
**1-800-236-INFO** (1-800-236-4636) or 715-344-2556  
Fax (715) 344-5818 [www.easy-access.com/spacvb](http://www.easy-access.com/spacvb)

# Wisconsin River Valley Academy

*Your River of Opportunity*

## Registration Form

*Name*

*Home Address*

*City/State/Zip*

*Phone (Work)*

*Phone (Home)*

*School District*

*Building*

*School Address*

*Grade Level*

*Discipline Taught*

*If you have special needs that require assistance, please notify us in writing or by phone (715-345-5569) four weeks in advance of the Wisconsin River Valley Academy.*

*T-Shirt Size (Circle one)    Small    Medium    Large    XLarge    XXLarge*

*Please list below the CODE #, title of the course and the Bus Tour you would like to attend. List two alternatives. Note that workshops with less than 10 participants will be canceled. Participants will be enrolled in alternate workshop choices.*

*1st Choice: #                      Title                                      Bus Tour 1st Choice*

*2nd Choice: #                      Title                                      Bus Tour 2nd Choice*

*3rd Choice: #                      Title                                      Bus Tour 3rd Choice*

*Final Registration due no later than April 15, 1999. Final Payment due no later than May 10, 1999.*

*Mail To: Dave Rasmussen*

*Please indicate:  Purchase Order*

*WRVA*

*Check Enclosed*

*2400 Main Street*

*Stevens Point, WI 54481*

*Please indicate if you need additional information on any of the following:*

*Hotel information*

*Day Care (please call 345-5569, we will provide the information)*

*Credit Options/Type*

*Viterbo College*

*UW-Stevens Point*

*DPI CEUs*

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*2nd Choice: #*

*Title*

*Bus Tour 2nd Choice*

*3rd Choice: #*

*Title*

*Bus Tour 3rd Choice*

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*WRVA*

*2400 Main Street*

*Stevens Point, WI 54481*

*Please indicate:  Purchase Order*

Check Enclosed

*Please indicate if you need additional information on any of the following:*

*Hotel information*

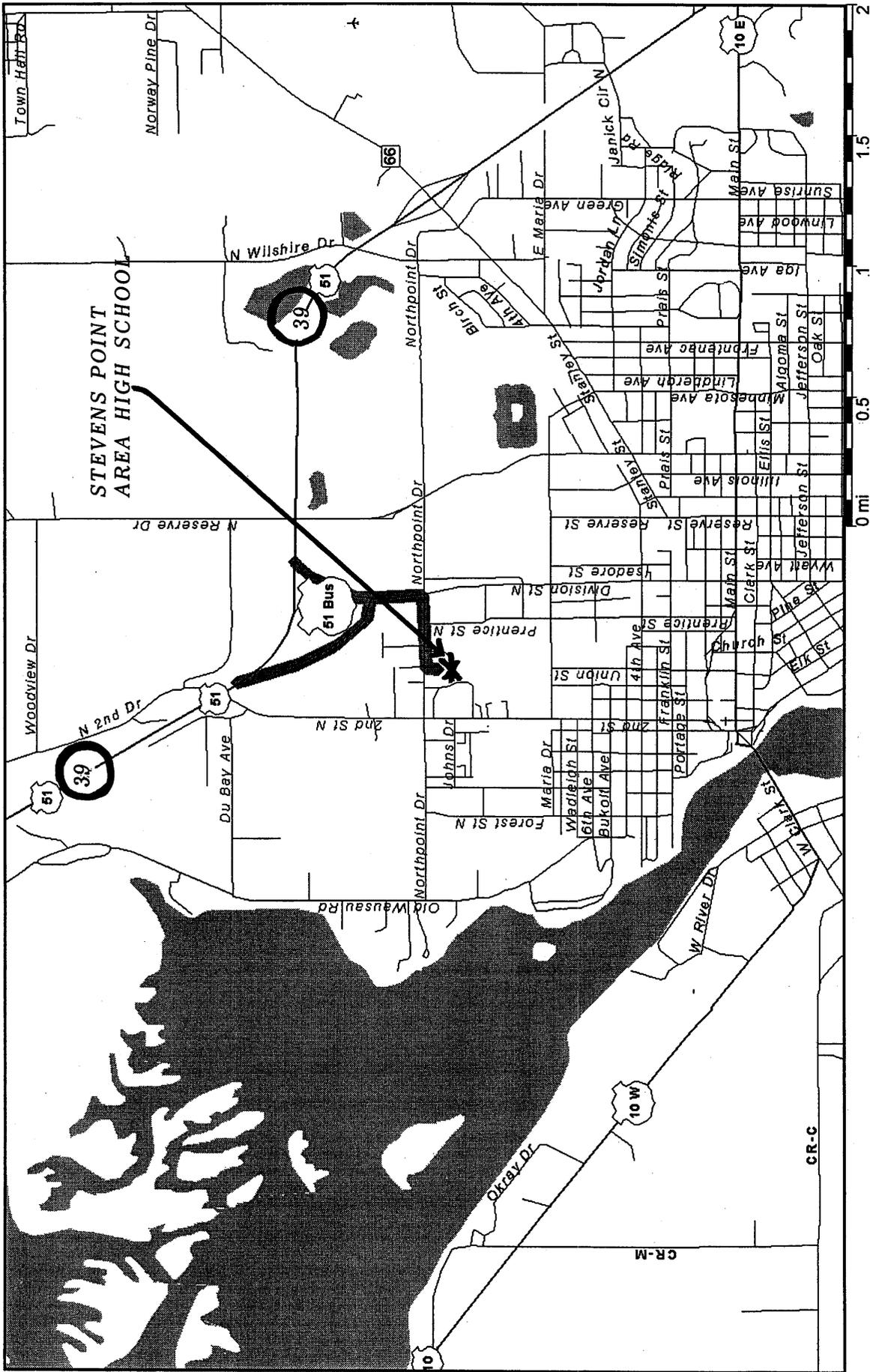
*Day Care (please call 345-5569, we will provide the information)*

*Credit Options/Type*

*Viterbo College*

*UW-Stevens Point*

*DPI CEUs*



From the North. Take I-39 (U.S. 51) to Stevens Point, get off at Exit #161. At first set of traffic lights turn right (Holiday Inn will be on that corner) SPASH is in the next block.

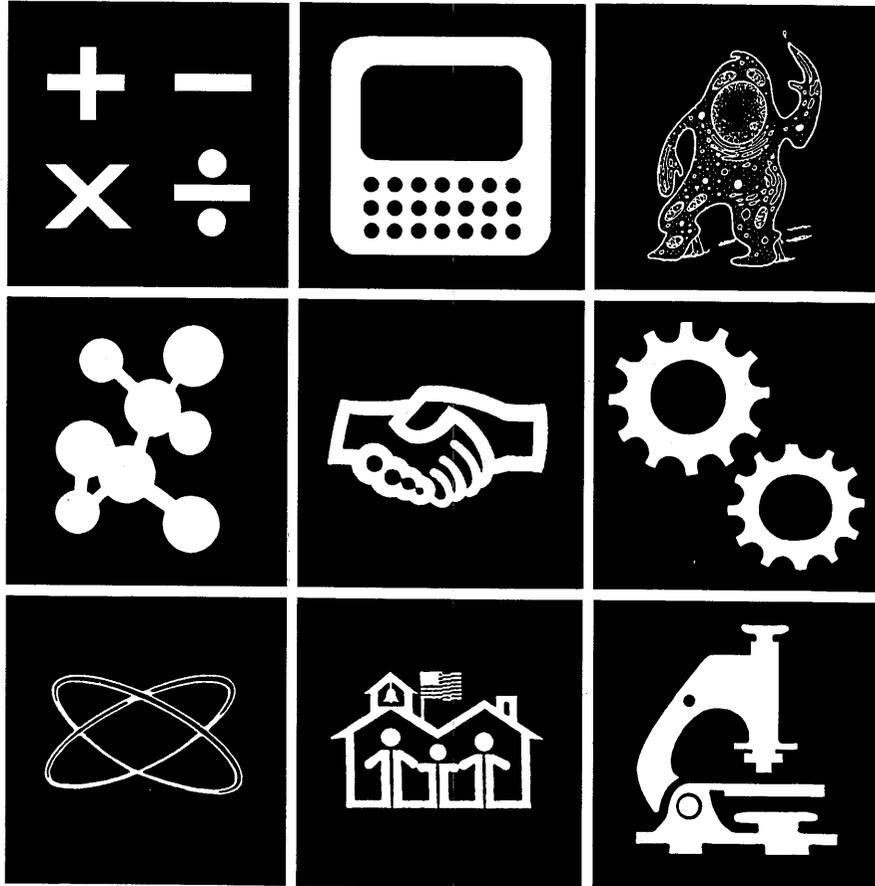
From the East. Take U.S. Hwy 10 to I-39 North, get off on Exit #161. At first set of traffic lights turn right (Holiday Inn will be on that corner) SPASH is in the next block.

From the South. Take I-39 (U.S. 51) North to Stevens Point. Get off at Exit #161. At first set of traffic lights turn right (Holiday Inn will be on that corner) SPASH is in the next block.

From the West. Take U.S. Hwy 10 to Business 51, turn left. Go to the fourth set of traffic lights (Holiday Inn will be on that corner) and turn left, SPASH is in the next block.

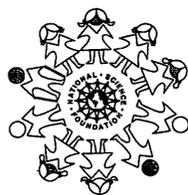
# WISCONSIN RIVER VALLEY ACADEMY

MATH • SCIENCE • TECHNOLOGY



Visit our website at [www.wisc.edu/wisacad/programs/](http://www.wisc.edu/wisacad/programs/)

2400 Main Street  
Stevens Point, WI 54481  
(715) 345-5569



Funding is provided in part by the National Science Foundation grant #ESI 9453923.

The Wisconsin River Valley Academy is part of the Wisconsin Academy Staff Development Initiative, a project of the Wisconsin Academy of Sciences, Arts and Letters.

Addressing the Joint Finance Committee

(Don't read this verbatim. Try to personalize it.)

4-14-99

Hello, my name is <sup>(Teacher)</sup> Gary Mohr / <sup>(Student)</sup> Joe Melsness. I'm from Chetek, which is a small rural community about 50 miles (south/north/east/west) of here. Our community is known for tourism (6 video tapes left) (provide a unique/clever fact about your hometown-just a brief bit of local color to accentuate a positive aspect of that community).

I would like to thank Sen. Burke and Rep. Gard (co-chairs of the committee) as well as all the members of the Joint Finance Committee for traveling to Osceola and giving me an opportunity to speak to you today about the Wisconsin Rural Challenge initiative.

Today I am asking you to rethink the role of schools in Wisconsin, particularly in rural Wisconsin, and support a one-time, \$1.2 million grant program that will stimulate fundamental changes in communities like Chetek, where I come from.

I am involved with the Wisconsin Rural Challenge because I believe rural Wisconsin matters. This initiative proposes to enhance the way young people and schools contribute to shaping healthy communities.

The Legislature is making record investments in Wisconsin's public schools. I believe that investment can simultaneously be used to improve rural communities if we change the role of schools in our small towns.

(Describe the Rural Challenge briefly. Point out that this is a statewide initiative.) *personally*

*This is my school comm. initiative*

Austin, Grandbe Colorado, Virginia Stevenspoint, Chetek

(Provide a concrete example from New Paradigm Partners of what has been and can be accomplished.)

Explain what the Rural Challenge means to you.)

*I'm coordinating along with 3 other students*

*Openly great experiences*

*3 tracks*

*Media has a real big impact*

*meet new people*

*National ~~wide~~ conference  
School & community Projects*

*Leadership skills  
TV 13 Active*

This one-time grant program will allow you, as state policymakers, to stimulate improvements in small schools, support fundamental changes in rural communities and foster innovation. All of this can happen while school districts continue to operate under the revenue limits. (Categorical funds are outside the revenue limits-they'll understand this point).

As I've said, I'm asking for a one-time appropriation to stimulate the activities of the Wisconsin Rural Challenge.

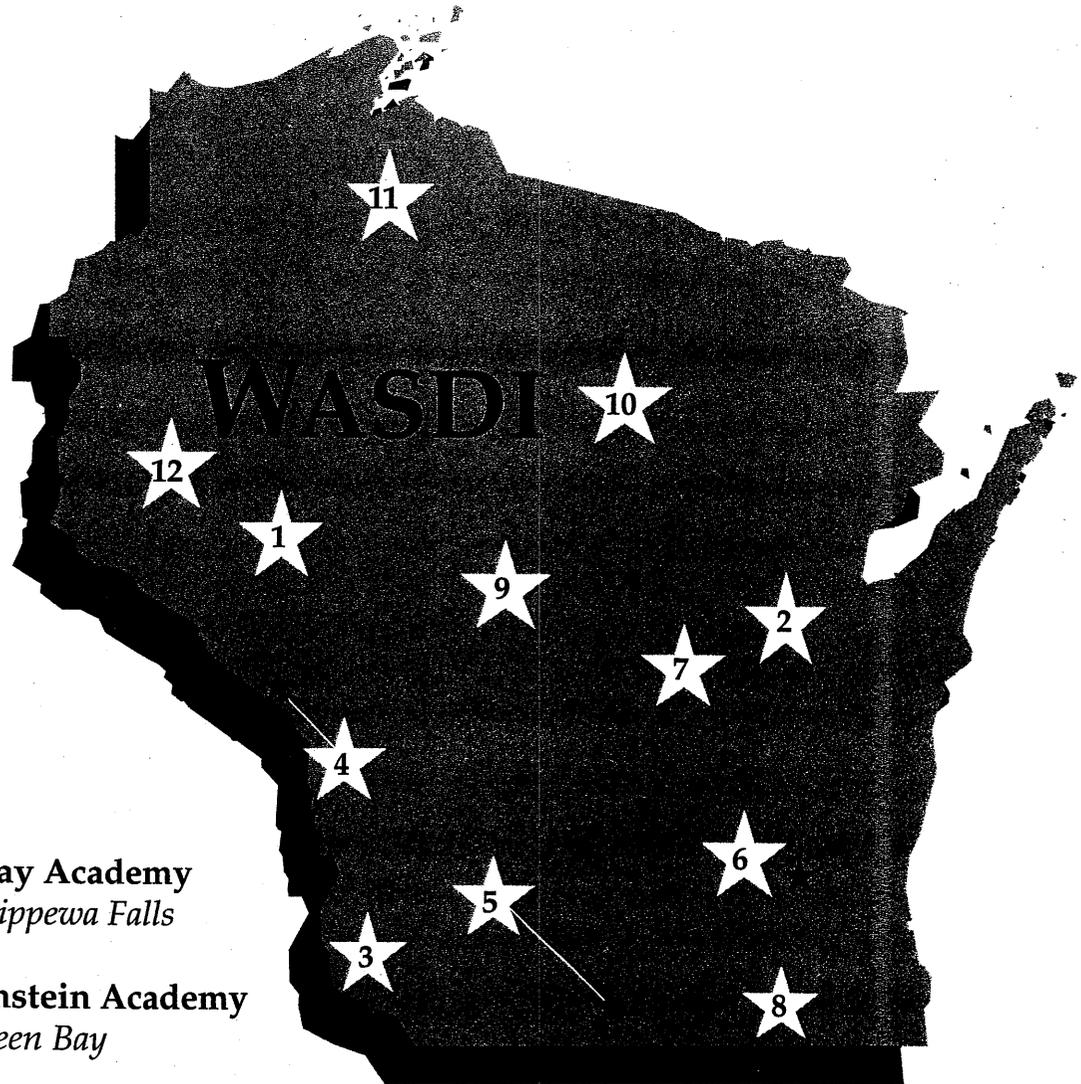
Thank you for your time. I wish you well in your difficult budget planning.

-----  
You are subscribed to the Rural Challenge Wisconsin listserve. To un-subscribe from this listserve please point your web browser at "<http://www.ruralchallenge.org/HTML/communications/listserve.html>".

Move To (Move to Selected Folder) ▾

 v's this for Consumer Confidence  
msn shopping 

**Wisconsin Academy Staff Development Initiative**  
**1999 Summer Academy Workshops for K-12 Teachers**  
**in Science, Mathematics, and Technology Education**



1. **Cray Academy**  
*Chippewa Falls*

2. **Einstein Academy**  
*Green Bay*

3. **Southwest Academy**  
*Fennimore*

4. **Washburn Academy**  
*Onalaska/Holmen*

5. **John Muir Academy**  
*Williams Bay/Verona*

6. **Sally Ride Academy**  
*Waukesha/West Allis*

7. **Christa McAuliffe Academy**  
*Appleton*

8. **Chiwaukee Academy**  
*Kenosha*

9. **Wisconsin River Valley Academy**  
*Stevens Point*

10. **Northwoods Academy**  
*Rhineland*

11. **Gitche Gume Academy**  
*Ashland*

12. **Star Academy**  
*Amery*



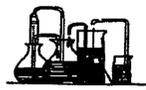
# WASDI Academies 1999

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*Mathematics, Science and Technology for Teachers*



# WASDI Academies 1999



*Mathematics, Science and Technology for Teachers*



## **History** .....

The Wisconsin Academy Staff Development Initiative (WASDI) is the coordinated, systematic statewide dissemination of a documented successful K-12 staff development program to improve science, mathematics and technology education. WASDI is a five-year teacher enhancement project funded by the National Science Foundation, school districts, businesses, universities and others and is a program of the Wisconsin Academy of Sciences, Arts and Letters. The Wisconsin Academy of Sciences, Arts and Letters is an independent, non-profit, membership organization whose purpose is to advance science, art and literature in the state.

The Wisconsin Academy Staff Development Initiative builds on outstanding examples of mathematics, science and technology education programs in order to revitalize teaching and learning. It is designed to energize gifted and respected K-12 WASDI Lead Teachers and give them the flexibility, responsibility, and resources to affect change. In 1998, ten academies operated with three satellites. Seventy-five WASDI Lead Teachers presented workshops in 1998. In 1999, eleven academies will be operating with four satellites.

The teacher enhancement program of WASDI is modeled after the Cray Academy in Chippewa Falls, initiated and developed with the support of Cray Research, Inc/A Silicon Graphics Co. The goal was to replicate the Cray Academy in ten sites around the state of Wisconsin by 1999 and we have actually exceeded this goal. Each academy is governed by its own board of directors. The entire project is governed by a State Coordinating Committee and an Institute Advisory Committee.

## **Model** .....

The Academies offer a series of workshops in one-week sessions during the summer. The overall goal of the summer academies is integration. The academies will achieve balance in offerings between science, mathematics, and technology as well as balance within the disciplines. The workshops are led by teachers, nationally-recognized presenters and university and technical college instructors identified for their ability to model effective teaching practices. They provide the teacher-participants with tools, activities, exercises, etc. to engage their students in hands-on work in science, mathematics, and technology. The integration of these disciplines and networking among participants is emphasized.

In addition, during each one-week session, teachers tour local industries and participate in discussions with representatives to gain an understanding of the application of science, mathematics, and technology in the workplace. Pamphlets are developed by some businesses, describing those science, mathematics and technology skills required in their business is provided to each participant. Group discussions reinforce the skills businesses need as well as provide an opportunity for participants to interact in a more direct manner with business leaders. It also gives the business representatives a chance to see and hear what is really going on in education today from the teachers' perspectives.

Academy Directors are encouraged to offer a core series of workshops that are determined by the State Coordinating Committee. The Institute Advisory Committee makes recommendations for these core offerings. Special attention is also given to those programs recommended by the National Science Foundation and National Research Center dissemination projects. Sixty WASDI Lead Teachers are trained each year over an eighteen month period in preparation to serve as instructors for these core programs at the summer academies. Examples of core programs are: FOSS (Full Option Science System), Operation Physics, Connected Mathematics Project, Elementary Technology, Children's Engineering-Design Technology, TERC, BSCS (Science for Life and Living), Principles of Engineering, Biotechnology, Computers, Calculators and Children, Middle School Math Models, SEPUP (Science Education for Public Understanding Program), Core-Plus Mathematics, Communication Technology, Problem Solving, Technology in High School Mathematics, Integrating Technology in High School Science, and High School Algebra for All Students. At the end of the five year project, 300 teachers will be prepared to serve as instructors for these summer academies in the core areas.

Evaluations of the Academies have documented that teachers have changed their attitude toward math and science and have significantly increased the amount of hands-on activities in their classrooms. Evaluators have found that the Academies also provide teachers with the unique opportunity

- to work in other subject areas,
- to renew interest in their profession and revitalize their energy,
- to work with teachers from grade levels other than their own, and
- to further understand the value of their relationships with people in the business community.

# WASDI Academies 1999

## Academy Sites and Director Information

**Chiwaukee Academy, Est. 1998**  
Kenosha, WI

*Dates:* August 9-13, 1999

Registration/Tuition Fees: \$275/290/495

Director, **Louise Mattioli - 414-653-7682**

Co-Directors, **Jay Simonsen and Dave Eggebrecht**

3600 52nd Street, Kenosha, WI 53144-2697

Credit issued from UW-Parkside or Carthage College

**Christa McAuliffe Academy, Est 1996**

Appleton, WI

*Dates:* July 19-23, 1999

Registration/Tuition Fees: \$315

Director, **Chris Perket - 920-734-7101**

227 S. Walnut Street, Appleton, WI 54913-1855

Credit issued from UW-Oshkosh

**Cray Academy, Est. 1988**

Chippewa Falls, WI

Chippewa Falls *Dates:* July 26-30 & August 2-6, 1999

Registration Fees: \$65

Tuition: Districts contribute to the CESA Consortium

Director, **Linda Dunahee, Ph.D. - 715-720-2039**

Program Director CF Site, **Kathy Tulman - 715-720-2034**

725 West Park Avenue, Chippewa Falls, WI 54729

Credit issued from UW-Eau Claire

**Einstein Academy, Est 1992**

Green Bay, WI

*Dates:* August 2-6, 1999

Registration/Tuition Fees: \$200

Director, **Sue Theno - 920-983-1104**

3100 Market Street, Green Bay, WI 54304

Credit issued from UW-Green Bay

**Gitche Gumees Academy, Est. 1999**

Ashland, WI

*Dates:* June 14-18, 1999

Registration/Tuition Fees: \$300

Director, **Peggy Smith - 715-682-2363 ext. 159**

CESA 12, 618 Beaser Avenue, Ashland, WI 54806

Credit issued from UW-Superior

**John Muir Academy, Est. 1994**

Williams Bay, WI *Dates:* June 21-25, 1999

Verona, WI *Dates:* July 26-30, 1999

Registration Fee: \$325

Director, **Marian Balch - 608-264-9808**

3319 West Beltline Hwy, Madison, WI 53713

Credit issued from Edgewood College

Up to three credits available

**Northwoods Academy, Est. 1998**

Rhineland, WI

*Dates:* August 2-6, 1999

Registration/Tuition Fees: \$250

Co-Director, **Virginia Metzdorf - 800-544-3039**

PO Box 518 Hwy G, Rhineland, WI 54501

Co-Director, **Penny Kuckkahn**

PO Box 518 Hwy G, Rhineland, WI 54501

Credit issued from Viterbo College

**Sally Ride Academy, Est. 1995**

West Allis, WI *Dates:* June 21-25, 1999

Waukesha, WI *Dates:* August 2-6, 1999

Registration/Tuition Fees: \$300

Director, **Melinda deCoriolis, Ph.D. - 414-352-6914**

7058 N. Fairchild Circle, Milwaukee, WI 53217

Credit issued from Cardinal Stritch University

Up to three credits available

**Southwest Academy, Est. 1993**

Fennimore, WI

*Dates:* July 26-30, 1999

Registration/Tuition Fees: \$270

Director, **Susan Foster - 920-982-7177**

N3527 Bean City Road, New London, WI 54961

Credit issued from UW-Platteville

**Star Academy, Est. 1999**

Amery, WI

*Dates:* June 14-18, 1999

Registration/Tuition Fees: \$175 consortium members

\$315 non consortium members

Director, **Brenda Ramin - 715-986-2020**

225 Ostermann Drive, Turtle Lake, WI 54889

Credit issued from UW-Stout

**Washburn Academy, Est. 1994**

Holmen, WI *Dates:* July 26-30, 1999

Onalaska, WI *Dates:* August 2-6, 1999

Registration/Tuition Fees: \$275

Director, **Cheryl Hanson - 608-786-4833**

PO Box 157, 923 East Garland Street, West Salem, WI 54669

Credit issued from UW-LaCrosse

**Wisconsin River Valley Academy, Est. 1998**

Wisconsin Rapids, WI

*Dates:* June 14-18, 1999

Registration/Tuition Fees: \$300

Director, **Dave Rasmussen, 715-345-5569**

2400 Main Street, Stevens Point, WI 54481

Fiscal Agent: CESA 5, Administrator Don Stevens

Credit issued from Viterbo College or UW-Stevens Point

All Academy directors may be reached by email. They all use the same email address with the exception of their first and last names: ex. linda\_dunahee@wetrn.pbs.org, cheryl\_hanson@wetrn.pbs.org. To email any of the directors type their first name\_last name@wetrn.pbs.org

You may also contact the WASDI project director through the same means: julie\_stafford@wetrn.pbs.org if you have any questions or comments regarding the information in this booklet.



Mathematics, Science and Technology for Teachers



# WASDI Academies 1999



## **Summer Workshops - General Information**

### **Who are the Academies for?**

The Academies are for public and private elementary, middle and high school mathematics, science and technology teachers from the state of Wisconsin. Courses are designed for teachers who are inexperienced in the instruction of science, math and technology as well as the seasoned professional looking for new ideas. They are located geographically around the state for convenient access so that all teachers have the opportunity to attend workshops.

### **What will be taught?**

An increased understanding of concepts presented through "hands-on", problem-solving, cooperative learning, application and demonstration activities encouraging integration of mathematics, science and technology education. New practical teaching strategies, ideas, curriculum, experiential learning and assessment. Knowledge of new, simple inexpensive and accessible materials and technology for classroom application. Participants have many opportunities to share ideas with other teachers, and to enhance your present teaching practices. Attention is also given to the state and national standards where applicable. There are three components to the Academies:

- keynote speaker
- hands-on workshops
- industrial and business tours and discussions

### **Expenses**

Tuition and registration fees for participants may be paid by local school district staff development funds (including Dwight D. Eisenhower Act funds or Goals 2000 funds), business and industry sponsorship or individuals. Similar sources of funding may be used to defray participants' lodging, travel and meal expenses. Daily lunches and breaks are offered at each site. Exact costs for tuition and registration are listed in the individual Academy brochures and on the Academy Site Director's page (2) in this publication.

### **Graduate Credit**

Graduate credit is offered at each of the Academy sites. Each site has a cooperating university which will issue graduate credit. These universities are listed on the Site Director's page (2) for each Academy. Participants may choose to receive Equivalency Clock Hours instead of graduate credit if they so desire. All teachers are required to participate in the workshops, discussions and industrial tours for the entire week. A designated Professor of Record is on site at each of the Academies. Attendance is taken each day including tour day for credit purposes.

### **Housing**

Housing is available in each of the Academy sites at either a local hotel or university dormitory. Hotel sites and rates are given in each of the specific Academy brochures.

### **Directions**

Maps and directions to the Academy sites are located in the Academy brochures. Once a teacher is accepted to an Academy workshop, more information on credit, housing, tours and the workshop will be sent to the teacher.

### **Weekly Schedule**

A majority of the Academy workshops are in session from Monday-Friday during their scheduled weeks. A keynote speaker traditionally kicks off the week in most of the academies. Teachers report to their workshops immediately after the keynote address on Monday morning; Tuesday, Thursday and Friday are full workshop days. Wednesday is devoted to business and industry which includes tours in the morning and discussions in the afternoon. Each Academy workshop consists of at least 30 hours of instruction.

### **Workshop Information:**

Abbreviated descriptions for each of the workshops offered at the Academies during the summer of 1999 are listed on the following pages. They are listed in categorical order by elementary, middle and high school as well as mathematics, science, technology and integrated. For more information on specific workshops, feel free to contact the site director on Page (2) for that academy and a brochure with full descriptions and registration information will be sent to you.

# WASDI Academies 1999

## Business and Industry Partnerships

The WASDI project includes the development of business partnerships over the life of the five-year NSF grant, in accordance with Goals 2000 and School-to-Work Transition, to insure the permanence of the ten sites around the state. Business and industry are involved with the Academies at three different levels:

- They serve as tour sites for Academy participants in each community.
- They participate in discussions with teachers.
- They make cash or in-kind contributions to support their local Academy or they may contribute at a level to support the state-wide program.

### Academy tour sites are listed below in alphabetical order:

3M (CR), Abbott Laboratories (CHI), ABC Supply Company, Inc. (JM), Air Wisconsin Airlines Corporation-Appleton (CM), Akrosil, Division of International Paper (CM), Allen-Bradley Co./Rockwell International (SR), American Astronomical Society (SW), American Family Mutual Insurance Company (JM), AmeriPrint Graphics (CM), Ameritech (CR), Andes Candies, Inc. (JM), Appleton Papers, Inc.-Locks Mill (CM), Appleton Water Filtration Plant (CM), Ayres Associates (CR), Bank One-Appleton (CM), Barnstead/Thermolyne (SW), Bay Technologies (E), Beckart Environmental, Inc. (CHI), Bellin Hospital (E), Blackhawk Engineering (SW), Bothe Associates, Inc. (CHI), Carnes Company (JM), Century Telephone of Wisconsin (W), Chippewa Brass & Aluminum Foundry Ltd. (CR), Chippewa Herald (CR), Chrysler Corporation (CHI), Coating Place, Inc. (JM), Compression Inc. (CR), County Concrete (CR), Courtesy Corporation/McDonald's (W), Covance (JM), Dairyland Power Cooperative (W), Dayton Hudson Corporation (CR), Dick's Supermarket (SW), Dura Tech Screen Printing, Inc. (W), Eau Claire Press Company (CR), Ellis Stone Construction Company (WRV), En Chem (E), Entomology Research Center (CHI), Environmental Management Technical Center (EMTC) (W), Extrusion Dies, Inc. (CR), Federal Aviation Administration (E), Fort Howard Corporation (E), Foth & Van Dyke (E), Franciscan Skemp Healthcare Systems (W), GE Medical Systems (SR), G. Leblanc Corporation (CHI), Georgia Pacific (NW), Green Bay Botanical Gardens (E), Green Bay Metropolitan Sewerage District (E), Green Bay Packaging (E), Green Bay Plastics (E), Green Bay Water Filtration Plant (E), Gundersen Lutheran (W), Haas Automotive (CM), Hardie Interactive (SW), Harley Davidson (NW & SR), Hubbard Scientific Company (CR), Huntsman Packaging (CR), Hutchinson Technology, Inc. (CR), HyPro Inc. (CHI), IDEXX (CR), Image IT (CM), Independent Printing (E), Integrated Paper Services, Inc. (CM), Jacob Leinenkugel Brewing Company (CR), Johnson Matthey (CR), Karen Johnson Products (CHI), Kell Container Corporation (CR), Kenosha Area Business Alliance (CHI), Kikkoman Foods, Inc. (JM), Krueger International (E), Kurth Sheet Metal (CR), LaCrosse Municipal Airport (W), LaCrosse Tribune (W), Lake of the Torches Casino (NW), Lakeside Nursing and Rehabilitation (CR), Lawrence University Science Department (CM), Lee Markquart, Inc. (CR), Luther/Midelfort Health System (CR), Lynch Display Van (CHI), Manu-Tronics (CHI), Marathon Engineering (CM), Marten Machining (WRV), Martin Peterson Company, Inc. (CHI), Mason Shoe (CR), Materials Recovery Facility (WRV), Mayer Lane Farm (CR), Medical College of Wisconsin (SR), Memorial Medical Center (GG), Menasha Corporation-Promo Edge (CM), Midwest Security Insurance Companies (W), Miller Brewing (SR), Mitchell Airport-Midwest Express (SR), MRM Elgin Corporation (CR), Mt. Carmel Medical and Rehabilitation-Burlington (CHI), National Weather Service (E), Natural Creations (CR), Nicolet Instrument Corporation (JM), Nicolet Paper (E), North American Tool Corporation (JM), Northern Crossarm Company, Inc. (CR), Northern Engraving Corporation (W), Northern States Power Company (CR), Northwestern Bank (CR), Notable Impressions (WRV), Ocean Spray Cranberries, Inc. (CHI), Ocenoco Inc. (CHI), Omni Tech Corp. (SR), Origin Center/A Phillips Plastics Company (CR), Paper Machine Tour UW-Stevens Point (WRV), Partners in Design Architects, Inc. (CHI), PDM Bridge (CR), Pepsi Bottling Co. (E), Peterson Health Care (NW), Phillips Plastics Corporation (CR), Physical Therapy Association (WRV), PLACON, Inc. (JM), Plexus Technology Center (CM), Plover Water Systems (WRV), Presto Products Company (CM), Promega Corporation/BTCI (JM), Quad Graphics (SR), Racine Area Manufacturers & Commerce, Inc. (CHI), Racine Water and Wastewater Utilities (CHI), Radix Corp. (CR), Rayovac Corporation (SW), Reinhart Institutional Foods, Inc. (W), Rex Systems, Inc. (CR), REXAM Medical Packaging (JM), R.H. Rettler & Associates (WRV), Rockwell Automation at Allen-Bradley (SW), Rooney Printing Company, Inc. (CR), Sacred Heart Hospital (CR), Schneider National (E), Schreiber Foods (E), Sentry Insurance Industrial Hygiene Lab (WRV), Signature Press Inc. (WRV), Silicon Graphics Inc. (CR), Skipperliner Marine (W), Skyward Inc. (WRV), Snap-On Inc. (CHI), St. Elizabeth Hospital (CM), St. Joseph's Hospital (CR), St. Michael's Hospital (WRV), St. Vincent Hospital (E), Sta-Rite Industries, Inc. (JM), STS Consultants (E), The Cops Corporation (WRV), The Title Company, Inc. (W), The Trane Company (W), The UW College of Engineering, UW-Madison (JM), Thunder Lake Marsh (NW), Tosca, Ltd. (E), Triumph Twist Drill (NW), United Health/Appleton Inc. (CM), U.S. Web (SR), Valmet-Appleton Inc. (CM), Victor Allen's Coffee and Tea, Inc. (JM), Voith Sulzer Paper Technology (CM), Waukesha Engine (SR), Waukesha Foundry (SR), Waukesha Memorial Hospital (SR), W.H. Brady Co. (SR), W.S. Darley & Company (CR), Wal-Mart Distribution Center (CR), Walnut Hollow Farm (SW), Watson Industries, Inc. (CR), Waxdale (CHI), West Allis/West Milwaukee Police Department (SR), Winnebago Software (W), WPS (NW), Wisconsin Physicians Service Insurance Corporation (JM), Wisconsin Public Service (E) & (WRV), Wisconsin Rural Water Systems (WRV), Wisconsin Tissue Mills (CM), Wissota Tool & Machine, Inc. (CR), WJFW 12 - NBC (NW), WKTY Radio (W), WLUK-Fox 11 (E), Workforce Development Center (SR), Worzalla Publishing Company (WRV), XMI Tie (CR)

### Legend for initials after tour site name:

CHI	Chiwaukee Academy	NW	Northwoods Academy
CM	Christa McAuliffe Academy	SR	Sally Ride Academy
CR	Cray Academy	ST	Star Academy
E	Einstein Academy	SW	Southwest Academy
GG	Gitche Gumee Academy	W	Washburn Academy
JM	John Muir Academy	WRV	Wisconsin River Valley Academy



Mathematics, Science and Technology for Teachers



# WASDI Academies 1999



Mathematics, Science and Technology for Teachers



## ***Business and Industry Partnerships***

Listed below are the businesses, agencies, individuals or institutions which made financial or in-kind contributions to the Academies:

3M Company-Menomonie (CR), ABC Supply Company, Inc. (JM), ABR Employment Services (WRV), Academy Committee (E), Advisory Board (SR), Affordable Maytag Home (WRV), Air Wisconsin Airlines Corporation (CM), Akrosil, Division of International Paper (CM), Aldrich Chemical (SR), Alwin Manufacturing Company (E), American Astronomical Society (SW), American Family Mutual Insurance Company (JM), American Medical Security (E), AmeriPrint Graphics (CM), Ameritech (CM, CR, SR), Amplas, Inc. (E), Anamax Corp. (E), Anchor Bank (JM), Andes Candies, Inc. (JM), AON/Alexander & Alexander (E), Appleton Area School District (CM), Appleton Papers, Inc.-Lock Mills (CM), Appleton Water Filtration Plant (CM), Apple Computer, Inc. (CR), Ashland School District (GG), Ashwaubenon Teacher's Association (E), AT&T (JM), ATO Findley, Inc. (SR), Ayres Associates (CR), B&R Services (E), Bank One-Appleton (CM), Barnstead/Thermolyne (SW), Baus Catering (W), Bay Towel/Royal Cleaners (E), Belmark, Inc. (E), Belson Co. (E), Berners-Schober Associates (E), Blackhawk Engineering (SW), Bloomer Advance (CR), Bloomer Plastics, Inc. (CR), Board of Directors (E, JM, SW), Brio Corp (SR), Brown County Medical Alliance (E), Business Steering Committee (W), Byron Walters Family Trust (E), C.A. Lawton Co. (E), Cardinal Stritch University (SR), Carnes Company (JM), Carolina Biological Supply Company (SR & E), CASL Technologies (SR), Cellular One (CHI), Cellular Plus Communications (CR), Century Foods International (W), Century Telephone of Wisconsin (W), CESA 1 (SR), CESA 10 (CR), CESA 11 (CR), CESA 2 Staff Development (JM), CESA 3 Dwight David Eisenhower Consortium (SW), CESA 4 (W), CESA 6 (CM), CHADD (W), Children's Museum (W), Chileda (W), Chippewa Area Catholic Schools (CR), Chippewa Brass & Aluminum Foundry (CR), Chippewa Falls School District (CR), Chippewa Herald (CR), Chippewa Valley Technical College (CR), Coating Place, Inc. (JM), Coca-Cola Bottling Company (E and CM), Communications Systems International, Inc. (CR), Community Industries Corp. (WRV), ConCAD Technologies (W), Consolidated Thermoplastics (CR), Consolidated Papers (WRV), Copp's (E), Cornell Corporation (CR), Cornerstone Foundation of Northeastern WI (E), Cotter Funeral Home (E), Coulee Region United Educators (W), Coulee Children's Center (W), Coulee Region United Educators (W), Coulee State Bank (W), County Concrete Corporation (CR), Courtesy Corporation/McDonald's (W), Covance (JM), Cummins Great Lakes (E), Curriculum and Operations Committee (SR), Daanen & Janssen, Inc. (E), Dahl Ford, Subaru, Mitsubishi, Inc. (W), Dairyland Power Cooperative (W), DAKA International (SR), Daleo Machine (SW), Davy Engineering (W), Dayton Hudson Corporation (CR), Delavan-Darien High School (JM), Dean Foods Vegetable Co. (E), Denmark PTO (E), Department of Natural Resources (W), De Pere Optimist Club (E), De Pere Teacher's Association (E), De Soto Schools - Prairie View Garden Project (W), Dick's Supermarket (SW), Discovery World Museum (SR), DuBois Formal Ware (E), Dunn County News (CR), Duplicating Systems (E), Dura-Tech Screen Printing, Inc. (W), Egan Foundation (E), E.O. Johnson (CR), Earth Shuttle Educational Travel Programs (CM), Eau Claire Press Company (CR), Edgewood College (JM) Employers Health Insurance (E), Entertainment Publications (SR), Environmental Management Technical Center (W), Evjue Foundation, Inc. The Charitable Arm of the Capital Times (JM), Exec PC (SR), Extrusion Dies, Inc. (CR), FABCO Equipment (E), Family Resource Center (W), Federal Aviation Administration (E), First Northern Savings Bank (E), Firstar Bank (JM), Firstlogic (W), First Security Credit Union (E), Fisher Family (E), Foley & Lardner, Attorneys at Law (JM), FMC Corporation (E), Fort James Corporation (E), Foth & Van Dyke (E), Fox Cities Alliance For Education (CM), Fox Cities Chamber of Commerce & Industry (CM), Fox Valley Technical College (CM), Franciscan Skemp Healthcare Systems (W), Gambo-Johnson (WRV), Gelatt Roberta K. and Daniel (W), Gelatt Phillip M. Foundation (W), GenCorp Polymer Products (E), General Casualty (JM), General Mills Corporation (W), George Kress Foundation (E), Goals 2000 Mini Grant (JM), Good Humor Ice Cream (E), Grace Tec Systems (E), Granulation Technology (E), Greater Green Bay Community Foundation (E), Greater Green Bay Kiwanis Club (E), Green Bay Auto Dealers Association (E), Green Bay Bankers Association (E), Green Bay Builders Association (E), Green Bay Drop Forge (E), Green Bay Metropolitan Sewerage District (E), Green Bay Optimist Club (E), Green Bay Packers Foundation (E), Green Bay Press Gazette (E), Green Bay Rotary Club (E), GTE Foundation (JM), Gundersen Adolf and Virginia (W), Gundersen Lutheran (W), Haas Automotive (CM), Hardie Interactive (SW), Harley-Davidson (SR), Hawkings, Ash, Baptie and Co. (W), Heintzkill Chiropractic (E), Herbert H. Kohl Charities, Inc. (JM), Heyde Companies (CR), Hoida Lumber Co. (E), Holmen High School & Staff (W), Holt, Rinehart, Winston (SW), Howard-Suamico Optimist Club (E), Howard-Suamico Teacher's Assoc. (E), Hubbard Scientific Company (CR), Hutchinson Technology, Inc. (CR), Hypro Inc. (SW), Image IT (CM), Imperial Inc. (E), Independent Printing (E), Industrial Recyclers of Wisconsin (WRV), Infinity Technology (E), Integrated Paper Services, Inc. (CM), International Paper Co. Foundation (E), Internet Connect (CR), Jacob Leinenkugel Brewing Company (CR), J.C. Penney Co. (E), Johnson Matthey (CR), Julie C. Stafford (CR), Junior Achievement (WRV), Kell Container Corporation (CR), Kikkoman Foods, Inc. (JM), Kiwanis Club of Greater Green Bay (E), Klein Insurance Group (W), Konop Vending (E), Kroll's West (E), Kubiak Pools (E), Kurth Sheet Metal (CR), Kwik Trip, Inc. (W), LaCrosse County Human Services (W), LaCrosse Family and Childrens Services (W), LaCrosse Footwear (W), LaCrosse Municipal Airport (W), LaCrosse Tribune (W), Lakeside Nursing and Rehabilitation (CR), Lakeside Nursing and Rehabilitation (CR), Lawrence University Science Department (CM), Leader Telegram (CR), Lee Markquart, Inc. (CR), Leicht Transfer & Storage (E), Lindquist Machine Corporation (E), Lochner Kathy & Jon (E), Lord's Dental (E), Los Banditos (E), Luther/Midelfort Health System (CR), Lutsey Family Insurance (E), M&I Bank of Madison (JM), Madison Gas & Electric (JM), Marathon Engineering (CM), Marathon Travel & Cruise Shops (WRV), Marten Machining, Inc. (WRV), Mayer Lane Farm (CR), MCL Industries (E)

### **Legend for initials after business partner name:**

CHI	Chiwaukee Academy	NW	Northwoods Academy
CM	Christa McAuliffe Academy	SR	Sally Ride Academy
CR	Cray Academy	ST	Star Academy
E	Einstein Academy	SW	Southwest Academy
GG	Gitche Gumee Academy	W	Washburn Academy
JM	John Muir Academy	WRV	Wisconsin River Valley Academy

# WASDI Academies 1999

## ***Business and Industry Partnerships cont.***

Listed below are the businesses, agencies, individuals or institutions which made financial or in-kind contributions to the Academies:

### Academies:

McMonagle Lumber (E), Medical College of Wisconsin (SR), Menasha Corporation (CM), Meyer Family Foundation (E), Mid-State Technical College (WRV), Midwest Security Insurance Companies (W), Miller & Sons Super Market, Verona (JM), Miller Brewing Company (SR), Millprint, Inc. (E), Modern Screen Printing, Inc. (CR), Moore Response Marketing Services (E), Morning Glory Farms (E), MRM Elgin Corporation (CR), NASCO (SW & SR), Nelco, Inc. (E), Newton's Apple (SR), Nicolet Instrument Corporation (JM), NMT Corporation (W), Norman Bassett Foundation (JM), North American Tool Corporation (JM), Northern Crossarm Company, Inc. (CR), Northern Engraving Corporation (W), Northern States Power Company (CR), Northland Cold Storage (E), Northwestern Bank (CR), Onalaska High School (W), Onalaska Middle School (W), Onalaska School District Staff (W), Onalaska Show Choir (W), Oneida Tribe of Indians of Wisconsin (E), Origin Center/A Phillips Plastics Company (CR), Ovation Marketing (W), Packerland Packing Co, Inc. (E), Paper Converting Machine Co. (E), Passarelli's Pizzeria (CHI), PDM Bridge (CR), Pepsi-Cola (E), Pepsi-Cola General Bottlers (CHI & SR), Perini America, Inc. (E), Phi Delta Kappa (E), Piechowski Dr. Sue (E), Pizza Hut-Chippewa Falls (CR), PLACON, Inc. (JM), Plexus Technology Center (CM), Plover Wastewater Systems (WRV), Pomp's Tire Service Inc. (E), Pope & Talbot-Eau Claire (CR), Portage Co. Job Center (WRV), Program Planning Committee (W), Presto Products Company (CM), Program Advisory Committee (JM), Promega Corporation/BTCI (JM), Pulaski Teachers Association (E), Rayovac Corporation (SW), Reinhart Family D.B. and Marjorie Foundation (W), Reinhart Institutional Foods, Inc. (W), Rex Systems, Inc. (CR), REXAM Medical Packaging (JM), River's Bend Supper Club (E), Rock Garden Supper Club (E), Rockman's Catering (WRV), Rockwell Automation at Allen-Bradley (SW and SR), Romco, Inc. (E), Rooney Printing Company, Inc. (CR), Sacred Heart Hospital (CR), Sam's Club (E), Schauer & Schumacher (E), Schlueter David (W), Scholastic, Inc. (SR), Schreiber Foods, Inc. (E), Senn Blacktop, Inc. (CR), Serigraphics Screen Print, Inc. (W), Service League of Green Bay (E), Service Master (E), Shopko Stores, Inc. (E), Shopping News (SW), Silicon Graphics Computer Systems (CR), Skipperliner Marine (W), Skyward Inc. (WRV), Spectrum Industries (CR), St. Elizabeth Hospital (CM), St. Joseph's Hospital (CR), Sta-Rite Industries, Inc. (JM), State Bank of LaCrosse (W), Steering Committee (CM), Steen-Macek Paper Co. Inc. (E), Stock Lumber, Inc. (E), STS Consultants (E), Super Sports (CHI), T-Bo Studio (CR), Tectron Tube (E), The C.A. Laston III Family (E), The Falk Corporation (SR), The Pineries Bank (WRV), The Procter & Gamble Paper Products Co. (E), The Scope Shop (SR), The Selmer Company (E), The Title Company, Inc. (W), The Trane Company (W), Therma-Tron-X, Inc. (E), Thursday Morning Optimist Club (E), Triangle Distributing (E), Tosca, Ltd. (E), Tri-State Business Machines (W), Tufco Industries (E), Tweet-Garot Mechanical, Inc. (E), United Health/Appleton Medical Center (CM), University of Dubuque Flight Operations Center (SW), U.S. Paper Mills Foundations, Inc. (E), UW College of Engineering, UW-Madison (JM), UW-Eau Claire (CR), UW-LaCrosse (W), UW-Milwaukee (SR), UW-Oshkosh (CM), UW-Parkside (SR), UW-Stout (CR), Valley Cabinet (E), Valmet-Appleton, Inc. (CM), Verene Crane, (CR), VerHalen, Inc. (E), Verona School District (JM), Victor Allen's Coffee and Tea, Inc. (JM), Volunteer Center (E), Voith Sulzer Paper Technology (CM), W.H. Brady Co. (SR), W.S. Darley & Company (CR), Wal-Mart Distribution Center (CR), Walgreens (SR), Wal-Mart (E), Walnut Hollow Farm (SW), Washburn Academy Business Steering Committee (W), Washburn Academy Volunteers (W), Watson Industries, Inc. (CR), Waukesha County Technical College (SR), Waukesha School District, Nicolet High School (SR), West Allis/West Milwaukee School District (SR), Wettstein's (W), Winnebago Software (W), Wisconsin Educational Communications Board (CM, CR, E, JM, SR, SW and W), Wisconsin Manufacturers & Commerce (CR), Wisconsin Physicians Service Insurance Corporation (JM), Wisconsin Power & Light Company (JM), Wisconsin Power and Light Foundation (JM), Wisconsin Public Service (E & WRV), Wisconsin Rural Water (WRV), Wisconsin Tissue Mills (CM), Wissota Tool & Machine, Inc. (CR), WKTY Radio (W), W.O.S. Inc. (E), Wright Industrial (E), Wrightstown Teacher's Association (E), W.S. Patterson (E), W.W. Grainger (E), WWTC (W), Zoll Stone (E)

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*Mathematics, Science and Technology for Teachers*



# WASDI Academies 1999



## ***Elementary Workshops - Mathematics***



### **Investigations in Number, Data, and Space: Teaching Investigations - Grades K-5 (JM Williams Bay & CR)**

Presenter at JM: Kerri Wood, River Heights Elementary, Menomonie, WASDI Lead Teacher  
Presenter at CR: Jan Mokros, TERC Co-Director, Cambridge, MA

Investigations is a staff development program aimed at helping elementary teachers understand how math reform plays out in your own classrooms as you use the highly-acclaimed curriculum Investigations in Number, Data, and Space. The curriculum used in this workshop is a series of comprehensive units that comprise a complete K-5 mathematics curriculum designed to guide students and teachers in the complementary roles of investigation and inquiry. Teachers will explore the curriculum within the strands of the Wisconsin State Standards of mathematical processes, number relationships, geometry, measurement, statistics and probability and algebra. The final project of the course will be a curriculum map for teaching math in the upcoming school year based on the investigations curriculum within an overlay of how standards are met.

### **Hands-on, Minds-on Authentic Learning Experiences in Mathematics - Grades K-2 (SR West Allis)**

Presenters: Diana Duffey, WASDI Lead Teacher and Penny Krafczyk, Willow Glen Elementary  
This workshop will emphasize interactive learning, hands-on activities, and child-centered mathematical instruction. Topics to be addressed include number sense, problem solving, data and graphing, geometry, probability and measurement. Teachers will learn to identify activities and lessons that foster the NCTM and Wisconsin Standards. Assessment tools and strategies will be examined throughout the workshop.

### **Mathworks: Trim Down and Shape Up Your Mathematics Curriculum - Grades 1-5 (SR West Allis)**

Presenters: Shelley Long and Chuck Paulson, Southern Bluffs Elementary, LaCrosse, WASDI Lead Teachers  
Participants will be learning how to develop their own curriculum by using supplementary materials and their own creative talents. This workshop approach to mathematics instruction is an interactive, hands-on, student driven curriculum. Topics such as graphing, number sense, problem solving, geometry and other topics will be covered. You will be actively involved in small group and large group interactions.

### **So How Do You Integrate Math Anyway? - Grades 3-5 (SR Waukesha)**

Presenter: Vicki Slafter, Kenosha Unified School District, WASDI Lead Teacher  
In this workshop, we will take an indepth look at the practical integration of science, social studies and language arts with mathematics. Participants will investigate the mathematics standards and their implications toward student learning and assessment. We will closely study the standards of number operations/relationships, geometry/measurement and statistics/probability through participation in manipulative-based, student-centered activities.

### **Concentrate on Concepts: Building Basics with Better Understanding - Grades K-2 (SW, CHI & WRVA)**

Presenter: Maggie Paoletti, Forsyth County School District, GA, WASDI Lead Teacher  
This workshop is designed to emphasize the use of problem solving, literature and manipulatives in a constructivist classroom. Participants will review how best to manage the classroom using math center activities which concentrate on the standards. Friday's work will include a make and take session to recreate materials for use in your classroom. Number sense and numeration, probability, geometry, communication and connections and guided practice of CGI problem types are some of the areas which will be covered.

### **Designing Learning Environments for Developing Understanding of Geometry and Space - Grades K-4 (SW)**

Presenter: Mazie Jenkins, Madison Public Schools  
This geometry and measurement workshop will focus on the research-based framework developed by Prof. Richard Lehrer and others from the University of Wisconsin. Participants will examine dimension, form, classification and representation of two and three dimensional structures. We will explore units and intervals in measurement, distance and direction in the study of wayfinding, explore ideas of symmetry and similarity in a variety of contexts, and examine the use of geometry to model world experiences and situations.

### **Green Globes, the Wild West and More!!! - Grades 3-8 (NW)**

Presenters: Michelle Parks and Barb Riedel, Eau Claire Public Schools, WASDI Lead Teachers  
Participants will be engaged in activities using several sunburst computer software programs and videodisc programs. Participants will actively experience geometric concepts, algebraic concepts, and more using technology through a constructivist model. Throughout the workshop, classroom management ideas, research and the learning process will be discussed.

# WASDI Academies 1999

## ***Elementary Workshops - Mathematics cont.***



### **AIMS - Math Connections: Patterns, Problem Solving, and Practice - Grades 3-5 (WRVA)**

Presenter: TBA

Students will find the AIMS approach to the study of numbers refreshing and interesting. In geometry, the approach differs from that in common use. Studies begin with solids, the geometric objects most familiar to students. The connection between mathematics and science becomes more meaningful within the AIMS curriculum in which combinations of measurements are studied for their production of new units of measurement. Number Sense and Operations, Geometry and Spatial Sense, Dealing with Data and Chance and Patterns and Functions will be covered in this workshop.

### **Meeting the Challenge of the State Math Standards - Grades 3-6 (WRVA)**

Presenter: Elaine Hutchinson

This workshop is designed to give teachers experiences that focus on the goals of the Wisconsin Academic Standards. Hands-on activities will relate the concepts of number operations and relations, geometry, measurement, probability, statistics, and algebraic relationships to the overarching goals of developing mathematical processes. Participants will work in group problem solving situations. They will be given exposure to activities and learning processes similar to those described in the State Standards and then be expected to use the experiences from the workshop to develop materials that can be used in their classrooms.

### **Tapestries for Learning - Grades K-2 (CR)**

Presenter: Maggie Paoletti, Cummings, GA, WASDI Lead Teacher

What do How Many Bugs in a Box? Science and Mathematics concepts have in common? Inside this colorful book is the means to teach counting to children using whimsical insects as the teaching tool. This workshop is designed to immerse participants in an integrated learning setting which can be recreated in the classroom. Learn to choose and use literature to expand math and science concepts. Explore a variety of computer software applications as tools for teachers and students and discover curriculum links to Internet sites which can be used in a single computer classroom.

### **Everyday Math (Developed by the University of Chicago) - Grades 2-5 (CHI)**

Presenters: Tracy Taylor-Johnson and Shelly Long, WASDI Lead Teachers

This course will aid participants in the implementation of this new math curriculum. Learn how to enhance math instruction with supplemental materials and your own creative talents. This is an interactive, hands-on approach to teaching math. Participants will work on all math topics and will investigate alternative and authentic assessment.

### **From the Land of Ahhs...Adventures in Math (and Science) for the Senses - Grades 4-6 (CHI)**

Presenter: Bobbette Bruce, Lublin, WASDI Lead Teacher

Teachers won't be able to stay in their seats during this workshop! You will experience math and science kinesiologically, as well as, aesthetically. Investigate and create interesting sights, sounds and motions while learning science and mathematics.

### **Mathline - Grades K-12 (CHI)**

Presenter: Susan Cook, Oconomowoc, WASDI Lead Teacher

Learn how to use the Mathline videos to plan lessons and units that help students learn important math content, the ability to communicate and reason mathematically and be more confident problem solvers. The Wisconsin/PBS MATHLINE project is a nationally recognized, year-long program for K-12 teachers. The workshop includes an on-line component and a video series featuring classroom teachers modeling exemplary NCTM based lessons with their students.

### **Read Any Good Math Lately - Grades K-2 (W Onalaska)**

Presenters: Barb White and Mary Johnson, Holmen

Turn math into an exciting adventure for your students. Through the use of literature, cooperative games and hands-on activities, make math come alive in your classroom. This workshop will help participants develop lessons that correlate with the national and state standards in math.



*Mathematics, Science and Technology for Teachers*



# WASDI Academies 1999



## ***Elementary Workshops - Mathematics cont.***



### **CPR - Put Some Life Into Your Math Curriculum - Grades 3-6 (W Onalaska)**

Presenter: Judy Fadness, Eau Claire, WASDI Lead Teacher

In this workshop you will learn a powerful way to incorporate children's literature into the teaching and learning of mathematics, how to make the key communication skills of representing, talking, listening, and writing an integral part of your mathematics curriculum, to use calculators as a valuable tool for learning mathematics, to use problem-solving approaches to investigate and understand mathematical content, ways to provide children with opportunities to apply their reasoning skills and ways to assess standards-based mathematics.

### **So We Have Math Standards, Now What? - Grades K-6 (ST)**

Presenter: Kerri Wood, Menomonie, WASDI Lead Teacher

This workshop is for those of you who have been feeling the pressures of standards and testing. Participants will leave with unit plans that are focused on essential learning for all students.

### **Bridges to Classroom Mathematics - Grades K-6 (CR Core Program)**

Presenters: Becky Bartlett and Kathleen Pitvorec, University of Chicago

This workshop will help participants understand the mathematics and pedagogy behind curricula such as USCMP's Everyday Mathematics and TERC's Investigations in Number, Data and Space. The workshop will approach topics such as number theory, probability, geometry and statistics in ways consistent with these reform curricula. Teachers will experience on their own level the kind of mathematics reformers want them to provide for their students. Because these new programs provide numerous classroom activities, this workshop focuses more on deepening participants' understanding of mathematics than on activities that are immediately applicable to the classroom.

### **Mathematics Their Way - Grades K-2 (WRVA)**

Presenter: Chris Weinhold

This workshop introduces mathematical topics through practical and meaningful activities which inspire thinking and curiosity in the learner. The emphasis of the workshop is to help the learner understand interrelated mathematical processes within the context of rich experiences rather than mastery of isolated skills. Mathematics Their Way provides teachers with a variety of classroom methods and materials which allow children to develop and use mathematical concepts. The goal of this program is to teach children how to learn.

### **TIEM+ (Elementary Plus) - Grades K-6 (WRVA & GG)**

Presenter: Provided by Texas Instruments

This five-day (30 hour) workshop is to engage teachers in mathematically worthwhile activities that illustrate the unique experiences that the TI Math Mate™ AOS™ four functions calculator and the TI Math Explorer fraction calculator brings to the learning of mathematics in the elementary grades. Topics addressed include numeration, operations, patterns, geometry, measurement, probability, statistics, and graphing.

### **Math Under Construction: "Redesign and Rebuild Your Math Curriculum" - Grades 2-5 (WRVA & E)**

Presenters: Shelly Long and Chuck Paulson, WASDI Lead Teachers, WRVA

Shelly Long and Tracy-Taylor Johnson, WASDI Lead Teachers, E

Math Under Construction will help you redesign and rebuild your math curriculum. It will teach you to focus on your district's scope and sequence, the National and State Standards, and individual and multi-age developmental levels. You will learn how to add or replace parts of your curriculum by using supplemental materials and your own creative talents. You will be actively involved in topics such as measurement, geometry, problem solving, graphing and so much more.

### **Assessing the Standards in Mathematics - Grades K-12 (SR Waukesha)**

Presenter: Jim Marty, Waukesha, WASDI Lead Teacher

The purpose of this workshop is to get individual teachers more familiar with the Wisconsin Model Academic Standards in Mathematics and the Standards 2000 project currently being undertaken by the National Council of Teachers of Mathematics. You will examine an assortment of samples of assessment materials and then working in small groups by grade level, develop assessment instruments which reflect the Standards at that grade level to take back to your classroom.

# WASDI Academies 1999

## ***Elementary Workshops - Mathematics cont.***



### **Cognitively Guided Instruction - Grades K-3 (JM Verona) & Grades 1-3 (SR Waukesha)**

Presenters: Susan Gehn, Nichols Elementary, Monona at JM and Paul Becher, Waukesha at SR  
Participants will learn about children's understanding of place-value concepts and the development of strategies for adding/subtracting and multiplying/dividing multidigit numbers as natural extensions of the procedures that children use to solve problems involving single digit numbers. We will also look at some of the concepts and strategies that children use in developing rational number concepts.

### **Computer Tech-Knowledge-Gee! - Grades 3-8 (JM Verona)**

Presenter: Jeff Lucas, Spring Road School, Neenah, WASDI Lead Teacher

Learn how MacIntosh computers can upgrade your teaching. Many ideas and activities for integrating computers into your math and technology curriculums will be explored using drawing, painting, word processing, database and spreadsheet ClarisWorks applications. These integrated curricular activities teach computer procedures as they expand classroom learning using authentic computer files. You will also learn to use the computer as a professional tool for assessment, record keeping, and creating a variety of other useful classroom products.

### **Classroom Miniature Golf - Grades 3-6 (E)**

Lori Williams, Manitowoc, WASDI Lead Teacher

Participants will use the design process from the technology education standards to construct a mini golf course within specifications given by the instructor. Participants will find that limitations force students to solve problems and think mathematically. Teachers will also choose state standards which they would like to include in units of their own and will create outlines for integrated units.



*Mathematics, Science and Technology for Teachers*



# WASDI Academies 1999



Mathematics, Science and Technology for Teachers



## ***Elementary Workshops - Science***



### **"I" is for Math, Science and Technology Education - Grades K-2 - (CR Core Program), (CM, W Onalaska & SR West Allis)**

Presenters: Candy Nerge and Rosanne Cowan, WASDI Lead Teachers

Investigate a theme a day the math, science and technology way! Ignite interest in your students with research based ideas and games to incorporate into thematic units. Incorporate quality children's literature and authentic assessments into your curriculum. This workshop invites K-2 teachers to explore hands-on science strategies, questioning techniques and the applications of technology in an exemplary cohesive science program (FOSS). You will learn how to structure similar inquiry based learning activities by exploring Earth, Life and Physical Science through FOSS science kits.

### **Balancing Crawdads, Stream Beds and Swingers - Grades 3-6 - CR (Core Program),**

Presenters: Don Primmer and Bruce Oxley, WASDI Lead Teachers

This program provides a fresh approach to science instruction and assessment for students in grades three through six. It is a carefully planned and coordinated science curriculum. Many of the strategies make hands-on science engaging for teachers as well as students. The program's instructional features are: science background information for the teacher, detailed lesson plans that are easy to follow and adaptable to many teaching styles. Students investigate, experiment, gather data, organize results and draw conclusions based on their own actions. This workshop is intended for intermediate teachers who are planning to implement a national standards-based science program using materials from nationally recognized curricula developed with support from the national Science Foundation. The curriculum presented utilizes a modular design and can be used either as stand alone or supplementary units.

### **Farther Beyond the Dog & Pony Show - Grades 3-6 (CM) and Grades 3-8 (NW)**

Presenters: Bruce Oxley and Don Primmer, WASDI Lead Teachers

You will be presented with a wide variety of life, earth, physical, and environmental science activities that can be infused and integrated into your existing curriculum. Together we will explore science magic to arrive at ways to develop and increase your students science process skills. In addition, you will take a thorough look at the activities' relevance, applications, integrations, extensions and assessments, as well as their connections with Wisconsin's state standards.

### **Third Rock from the Sun - Grades K-5 (ST)**

Presenter: Jane Wisniewski, WASDI Lead Teacher

Participants will explore methods of teaching geology and earth science topics. Along with a \$100 stipend for the first 20 registered, there will be free resources, speaker ideas, and local field trip sites included.

### **Summer Academy Chemistry Course - Grades K-4 (ST)**

Presenter: Martin Ondrus

This is a hands-on look at the Wisconsin Science Standards that relate to the classification of matter, the collection and interpretation of data, types of chemical reactions, classification strategies along with an overview of the people that have contributed major ideas in science.

### **Building Responsible Environmental Behavior - Grades K-8 (GG)**

Presenter: Sandra Roggow, Minocqua 1997 Wisconsin Environmental Educator of the Year

This hands-on interactive workshop will address both the "why" and "how" of integrating environmental education across the curriculum. Participants will create units which will help students build the knowledge and skills needed to become stewards of our natural resources. The use of journals will be closely examined as a tool for students to record information, reflect on learning and connect actions to real-life situations. Participants will also develop assessment tools to evaluate critical and creative thinking.

### **Classroom Tested and Approved Science - Grades 3-8 (SR Waukesha)**

Presenter: Sharon TeRonde, Franklin & Dave Kowal, Wauwatosa

Join us in an active, problem-solving workshop which will involve you in numerous discrepant events, challenges, puzzles and activities designed to challenge one's thinking. These inquiry-based ideas can be easily adapted for your own classroom. These classroom tested (and approved) activities use simple and inexpensive materials.

# WASDI Academies 1999

## ***Elementary Workshops - Science cont.***



### **Using Toys to Teach Science - Grades 4-12 (CM) and Grades 3-12 (JM Williams Bay)**

Presenter: Larry Scheckel, Tomah High School

This course will teach you how to use toys effectively as part of the science curriculum. Classroom friendly toys are an effective means of harnessing students' natural enthusiasm. Lesson plans, concept development, hands-on learning, and the learning cycle will all be part of this exciting week. Over two-hundred science related toys will be demonstrated. Participants will make and take several dozen toys and receive many handouts.

### **Nature-alizing Your Students - Grades K-8 (WRVA, CM & SR West Allis, Grades 2-6 SW, Grades 1-8 W Onalaska)**

Presenter: Scott Lee

It doesn't matter what the season, what resources you have available how knowledgeable you are of our natural world or what age you teach. There is a lot you can do to help your students learn about the natural environment. Many hands-on activities, make-and-take projects and games to teach about nature to all age levels will be presented throughout the week. You will be presented many ideas to "environment-alize" and "nature-alize" your students in a fun and educational way.

### **Language Arts and Science: Working Hand-in-Hand - Grades K-5 (SR Waukesha)**

Presenters: Melody Orban, Kenosha Unified School District and

Richard Seng, Denison Middle School, WASDI Lead Teachers

During this workshop, participants will realize how effectively they can coordinate their Language Arts lessons with some of the concepts in their science curriculums. There will be make and take opportunities to build science apparatus for use in your own classrooms. This program will be filled with proven classroom activities. Each day there will be information of different Children's Literature and science.

### **Science Connections - Grades K-3 (SR Waukesha, CM & JM Verona)**

Presenter: Karen Kinyon, Franklin School, Manitowoc, WASDI Lead Teacher

Come and explore fascinating activities such as magic and magnetic sand, seltzer surprises, treasure rocks, mystery crystals and light sticks. These are some of the science connections that will integrate science into all aspects of a curriculum of your choice. Particular integrations for language arts, mathematics and art will be used in the hands-on, minds-on experiences. Participants will leave the workshop with a wealth of hands-on activities relating to color and light, insulation, surface tension, sound, measurement, pressure and states of water. You will participate in and leave with the directions to set up a Family Night Science and Halloween experience for your class that seem like magic but are chemistry in action.

### **T.O.Y.S. (Teach Our Youth Science) - Grades K-4 (SR Waukesha, CM, Grades K-8 WRVA & CHI, Grades K-6 CR)**

Presenter: Jaime Malwitz, Eden Elementary School, Eden, WASDI Lead Teacher

This program uses toys as a launching pad to teach science, integrated with mathematics and technology, in the classroom setting. Not only is it hands-on, but it is also a minds-on approach to actively involve all students in grades kindergarten through fourth grade while applying the Benchmarks for Science Literacy to mathematics, science and technology. DUPLOS, beads, gummi bears, and GAK are some of the manipulatives used in the activities to introduce the novice teacher to the user-friendly aspects of science, mathematics and technology through an inexpensive, yet comprehensive application of materials readily available to teachers and students. For the more experienced teacher, toys will be used as extensions of their current curriculum and include helpful additions to SCIS, FOSS and GEMS.

### **The Wonderful World of Water - Grades 4-6 (SW)**

Presenter: Don Tincher, Berlin Middle School

Through the course of the week participants will do experiments exploring the physical properties of water, make an aquarium and become familiar with a wide variety of activities they can share with their students to enhance their understanding of water. Teachers will be able to use the activities they learn to impress upon students the importance of preserving water quality for generations to come. As an added bonus for the week, all participants will receive the new Project WET guide. This guide is filled with ninety activities which may be used with students from early elementary through high school.



*Mathematics, Science and Technology for Teachers*



# WASDI Academies 1999



Mathematics, Science and Technology for Teachers



## **Elementary Workshops - Science cont.**



### **Trees, Technology and Tomorrow, Grades K-6 (NW)**

Presenter: Dawn Nordine, Phelps School District, WASDI Lead Teacher

Participants will experience hands-on activities and strategies such as Dimensions of Learning strategies to infuse environmental education into their classroom and all areas of the curriculum. Teachers will explore outdoors and indoors the many possibilities to place EE into their busy teaching day. Using technology such as the internet, a digital camera, software programs such as Microsoft Word, PowerPoint, Inspiration and Hyperstudio, K-6 teachers will learn to enhance their environmental education curriculum.

### **Chemistry and Physics Activities for Primary Grades - Grades K-3 (JM Williams Bay)**

Presenters: George and Shirley Coulter, New London

This workshop will stress hands-on chemistry and physics activities using inexpensive and readily obtainable substances and materials. Participants will be provided with a list of substances and materials that can take the place of those kinds of items usually ordered from a catalog, but which can be purchased locally. Participants will make several chemistry and physics activity kits that their students can easily use in class.

### **Dinosaurs to Black Holes - Grades 3-8 (JM Williams Bay & CM)**

Presenter: Don Vincent, West High School, Madison, WASDI Lead Teacher

Participants will experience hands-on methods for teaching about our Earth. From both an environmental and physical perspective, we will concentrate on Geology, Meteorology, Oceanography and Astronomy activities. You will learn many great, safe, inexpensive and teacher tested labs and demos. An emphasis will be on using and making low cost science equipment. Each participant will receive a packet of handouts in addition to making and taking materials that will be ready to take to school next fall.

### **Crime Puppies! Introductory Forensic Science - Grades 2-7 (JM - Verona), Grades 3-6 (CHI)**

Presenter: Janet Hurley, West Cedar Elementary, Waverly IA

Interest in science will reach an all-time high when you present activities as crimes for students to solve! Activities will include investigating crime scenes, analyzing colors by chromatography, comparing handwriting samples, analyzing human and animal hair, visualizing and lifting invisible fingerprints, and making casts of footprints and tool marks. Throughout these activities the process skills of observing, collecting data, analyzing, interpreting, and working as a team member are emphasized. Other forensic science resources, such as videotapes, speakers, books and games, as well as suggestions for teaching across the curriculum will be discussed. Each participant will receive an extensive packet of information and activities.

### **Language Arts and Sciences - Working Hand in Hand - Grades K-5 (JM Williams Bay & Verona)**

Presenters: Richard Seng, Denison Middle School, Lake Geneva, WASDI Lead Teacher and

Melody Orban, Jefferson Elementary School, Kenosha, WASDI Lead Teacher

During this workshop, participants will realize how effectively one can coordinate their Language Arts lessons with some of the concepts in their Science curriculums. Language Arts lessons will be used that can easily connect with earth, environmental, physical and life sciences. There will be make and take opportunities to build science apparatus for use in their own classrooms.

### **Terra's Tots: Earth's Tiny Stewards - Grades PreK-1 - (WRVA & W Onalaska)**

Presenter: Janet Hurley

This course is designed to create and nurture a love for the natural world. Participants will be involved in activities that will develop an awareness and appreciation for plants, animals, and the environment. Developmentally appropriate activities will address multiple intelligences through a thematic approach. Come and experience drama, songs, poems, finger plays, the creation of models and much more. Topics covered will include habitats and wildlife, seasons, every growing thing, bugs and butterflies, and every day is earth day. Return to the classroom with ready-to-use materials and a notebook full of ideas.

# WASDI Academies 1999

## ***Elementary Workshops - Science cont.***



### **Water Works - Grades 2-6 (WRVA & W Onalaska)**

Presenters: Joel Anderson and Randall Colton, WASDI Lead Teachers

The workshop goal is to promote awareness, appreciation, knowledge, and stewardship of water resources. Experience a collection of innovative, inquiry-based, interdisciplinary, water-related activities that are hands-on and easy to use. The workshop will incorporate a variety of formats including large group and small group learning. Field trips and resource people will be part of the week. Instructors will model strategies from brain-based research. Participants will learn about networking which connects water education, business, industry, and related agencies.

### **Detectives, Dangers, Deductions: Dastardly Deeds! A Multidisciplinary Unit on Mysteries, Crimes and Forensic Science - Grades 4-9 (WRVA)**

Presenter: Christine Pace

Join us for the adventure of solving a real-life mystery! This class is not for the faint hearted! Teacher/Detectives will experience first hand crime solving techniques. Exciting centers, computer programs, field trips, simulations, puzzles, fascinating labs, and speakers will be components of the course. Fingerprinting, chromatography, blood/hair/dental/fiber analysis, criminology, autopsies, critical thinking, and problem solving skills are course highlights.

### **Wisconsin Energy Education Program (KEEP) - Grades K-12 (WRVA & ST)**

Presenter: Jennie Lane

Through hands-on activities and class discussions, learn how you can enhance students' understanding of what energy is, where it comes from, and how it affects their lives. You will also receive a copy of KEEP's comprehensive, easy-to-use Energy Education Activity Guide and be introduced to additional energy-related educational materials. This course is designed for teachers who want to experience it today and teach it tomorrow.

### **Science Writing-Writing to Learn - Grades 2-5 (CR)**

Presenters: Rhoda Maxwell, Emeritus, UWEC and Becky Aberg, Eau Claire School District

Discover the many ways you can use writing to enhance science learning for your students. Through hands-on science activities, you will sharpen your observations, make connections, and explore new ideas using writing as your tool and guide. By engaging in writing experiences which prompt your own science understandings, as well as sharing with other workshop participants, you will have opportunities to make valuable connections on how writing can be used as a strong learning tool in your own science teaching.

### **Putting Inquiry in the Center - Grades PreK-2 (CR)**

Presenters: Janet Butterbrodt, Cadott School District & Rebecca Schneider, Chippewa Falls School District

Explore strategies that motivate children to pursue what intrigues them while still meeting your standards-based curricular responsibilities. Participants will be challenged to reverse their thinking about planning and implementing lessons; rather than utilizing textbooks and past successful lessons as the basis for curriculum, we will use student background knowledge, questions, and natural curiosity as a springboard for teaching.

### **Using the Outdoor Classroom to Teach Science Concepts - Grades K-5 (CR)**

Presenter: Char Besanson, St. Olaf College

During this activity-based session, participants will explore a variety of outdoor classroom sites, experience interdisciplinary activities and learn the science behind the activities. Teaching and class management techniques which improve students understanding of science concepts as well as the scientific process will be shared. Based on the Wisconsin Model Academic Standards, participants will explore science and environmental education concepts including plants, animals, life cycles, adaptations, habitats, weather events and snow studies, erosion and site mapping, nature journaling, poetry and writing lessons will provide opportunities to express growing awareness of the world.

### **From the Land of Ahhhs...Adventures in Math (and Science) for the Senses - Grades 4-6 (CHI)**

Presenter: Bobbette Bruce, Lublin, WASDI Lead Teacher

Teachers won't be able to stay in their seats during this workshop! You will experience math and science kinesthetically, as well as, aesthetically. Investigate and create interesting sights, sounds and motions while learning science and mathematics.



*Mathematics, Science and Technology for Teachers*



# WASDI Academies 1999

## *Elementary Workshops - Science cont.*



### **Health Care: Using Mathematics, Science and Technology to Save Lives Grades K-12 (CR)**

Presenters: Margaret Dickens-Grosskopf, Kay Scham, Karen Taylor, Steve Schreiner, Corey Weinfurter, Patricia Griffen, Patricia Traphagan, All CVTC Instructors

During this week-long workshop, participants will focus on the many applications of math, science and technology in the health care industry. Participants will analyze tissues and disease-causing organisms, apply sonographic technology in scanning body organs, discover how computers enhance X-ray diagnosis, and explore how technology is applied in the critical few moments when a heart has stopped beating. Using a hands-on approach, participants will discover how math and science, applied K-12 support these cutting-edge technologies in saving lives. This workshop will be conducted from the Phillips building on the CVTC campus in Eau Claire.

### **GEMS (Great Explorations in Math and Science Developed by UC-Berkeley) - Grades 4-8 (CHI)**

Presenter: Anne Reichel, Grayslake, IL

During this interactive workshop, participants will have the opportunity to gain first hand experience with an inquiry based approach to science. Activities from GEMS (Great Explorations in Math and Science) will serve as the foundation for investigating science concepts and processes through a guided-discovery approach. Course activities will be linked to standards and performance assessments.

### **Science in a Box: Using Materials Developed in an NSF Project to Teach Inquiry Based, Hands-On Elementary Science - Grades K-2 (CHI)**

Presenter: Melody Orban, Kenosha, WASDI Lead Teacher

Look at materials and participate in activities for life science, physical science, earth science and technology. Participants will enjoy hands-on science activities and learn how to establish a classroom environment conducive to implementing science standards.

### **Science in a Box: Using Materials Developed in an NSF Project to Teach Inquiry Based, Hands-On Elementary Science - Grades 3-4 (CHI)**

Presenter: Barry Thomas, Kenosha

Look at materials and participate in activities for life science, physical science, earth science and technology. Participants will enjoy hands-on science activities and learn how to establish a classroom environment conducive to implementing science standards.

### **Science in a Box: Using Materials Developed in an NSF Project to Teach Inquiry Based, Hands-On Elementary Science - Grades 5-6 (CHI)**

Presenter: Jodi Goocher, Kenosha

Look at materials and participate in activities for life science, physical science, earth science and technology. Participants will enjoy hands-on science activities and learn how to establish a classroom environment conducive to implementing science standards.

### **Wanted: Potential Space Station Residents - Grades K-12 (CHI)**

Presenter: Judy Beck, LaCrosse

Numerous hands-on activities will illustrate the range of materials and training opportunities available through activity guides, videos, CD ROM's and Internet websites. This course will introduce participants to the opportunities available to educators through the NASA Regional Educator Resource Centers. Participants will leave with plenty of materials to use in their classroom and many more ideas!

### **Rock Camp - Grades K-12 (CHI)**

Presenters: Tom Repine, Don Primmer, Deb Hemler, Robert Behling, Paula Waggy & Karen Parlett, West Virginia and Wisconsin

Look at rock, mineral, and fossil samples, take "field trips", and evaluate earthquakes. Construct life size topographical maps, dig for fossils and check out the insects from the Paleozoic era. Explore mineral resources in everyday life and local links to Wisconsin geology. All participants will receive an activity book and tons of great ideas!

# WASDI Academies 1999

## *Elementary Workshops - Science cont.*



### **Earth's History: Wisconsin Geologic Landscape - Grades 3-5 (SR Waukesha)**

Presenter: Susan Inkmann, Cedarburg, WASDI Lead Teacher

This workshop will allow teachers to become comfortable with the geologic history of Wisconsin. Teachers will learn hands-on lessons, lab techniques and field exercises to enhance their understanding of Wisconsin's rich geology. The new Wisconsin State Science Standards will be used to illustrate many principles and concepts.

### **Watershed Stewardship: Using Scientific Skills and Technology to Address Environmental Concerns - Grades K-12 (GG)**

Presenters: Sue O'Halloran, Dr. Mary Balcer, Dr. Jack Zaengle, Dr. Susan Heidi and Jeri Schwerin, UWS and Extension Staff

This workshop will provide teachers with the scientific background needed to understand watershed ecology and will familiarize them with the methods for conducting water quality monitoring. The focus will be on basic watershed hydrology concepts. Participants will gain experience in taking standardized quantitative measurements of water quality. Teachers will be introduced to the Global Learning and Observations to Benefit the Environment program and protocol and activities. This workshop will be in the new Northern Great Lakes Visitor Center with field days provided on-board the UW-Superior research vessel and at local natural resources agencies. Participants will have access to a bus provided for daily transportation to and from the class.

### **Snails, Tales, and Math that Sails: An Integrated Approach to Standards Based Science and Math Instruction - Grades K-4 (GG)**

Presenters: Barbara Borgwardt, Galesville and Mary Beth Hutchinson, Osseo-Fairchild, WASDI Lead Teachers  
Experience hands-on activities for science and math investigations using materials selected from FOSS, AIMS, TERC and other standards-aligned resources. Objectives of this workshop are to delight in finding new literature connections, dive into a world of scientific processes and inquiry, discover alternative assessment strategies, decipher the Wisconsin State Math and Science Standards and how they connect to your curriculum, determine appropriate problem-solving measurement and estimation skills and decide on performance tasks which will meet the needs of your students.

### **Critters in the Classroom - Grades K-2 (E)**

Presenter: Gloria Boone

Children have a natural curiosity about the living creatures around them. If properly cared for, animals in the classroom setting can provide learning opportunities that are unique. With animal models children can develop social skills, overcome fears, learn respect for life and stimulate many questions about their world. This workshop will integrate science, math, reading and the arts at the K-2 level. Information on the care and handling of animals, precautions to be taken and hands-on activities with live animals will be explored.



*Mathematics, Science and Technology for Teachers*



# WASDI Academies 1999



Mathematics, Science and Technology for Teachers



## ***Elementary Workshops - Technology***



### **Children as Designers: Elementary Tech Ed - Grades K-5 (Cray Core Program)**

Presenter: Meredith Wade, Synergy Learning

Technology education activities can be used to integrate the study of technology with related concepts from other disciplines such as mathematics, science, social studies and the humanities. When students work as designers, they gain experience drawing, planning, designing, problem-solving, building, testing and improving their solutions to respond to a specific problem or challenge. The design process develops a variety of experiences, skills and knowledge for all learners.

### **Fun With Technology - Grades K-6, (NW) & Grades 2-6 (ST)**

Presenter: Pete McConnell, Merrill School District

This is a "do it 'til you drop" workshop. The focus of energy will be concentrated on integrated activities in math and science with technology as the foundation. Teachers in grades K-6 will be taught to adopt activities to "fit" specific goals and objectives that currently exist in their curriculums. No need to reinvent the wheel - you just make it fun with technology. Each participant will take home oodles of activities and "props" for classroom instruction. Bring a camera, lots of energy and your enthusiasm.

### **Computer Tech-Knowledge-Gee! - Grades 3-8 (JM Verona)**

Presenter: Jeff Lucas, Spring Road School, Neenah, WASDI Lead Teacher

Learn how MacIntosh computers can upgrade your teaching. Many ideas and activities for integrating computers into your math and technology curriculums will be explored using drawing, painting, word processing, database and spreadsheet ClarisWorks applications. These integrated curricular activities teach computer procedures as they expand classroom learning using authentic computer files. You will also learn to use the computer as a professional tool for assessment, record keeping, and creating a variety of other useful classroom products.

### **Ready-Design-Go - Grades 4-6 (WRVA)**

Presenters: Judy Shookman, WASDI Lead Teacher & Ruth Shookman

Does your "tired" classroom need a "SHOT" in the arm? Are you frustrated with problem-solving projects that are impractical and just don't work? DESIGN-READY-GO is a week of designing, measure, sawing, wiring, hammering, gluing, and testing that will provide you with projects and experiences to be carried back to your classroom, exploring the themes of design technology and, MORE IMPORTANTLY, exciting and preparing your students for the workplace of the 21st century.

### **Technology Institute for Educators - Grades K-12 (CHI)**

Presenters: Marie Ellis, WASDI Lead Teacher and Associates

Use technology to enhance learning and address the Wisconsin Model Academic Standards. The format of this program is in three phases-summer institute, follow-up and sharing results. Developed for educators, by educators. Participants **must** sign up for the 2 credit registration option.

### **Impact Learning and Teaching Through Technology - Grades K-8 (SR Waukesha)**

Presenter: Jeanne Anderson, Waukesha

This workshop will feature classroom-tested projects and methods for using current technologies and resources in the K-8 classroom. Participants will discuss how to best integrate technology into curriculum areas to support both learning and teaching. The class will focus on best practices, implementation issues and ways to measure the effectiveness of technology in the classroom.

### **Cool Things That Work - Grades 1-6 (W Onalaska)**

Presenter: Paul Skarda, Clintonville, WASDI Lead Teacher

Students love to build things that work. In this class you will learn how to integrate projects into your existing reading, math, and science curriculum. All of the projects will be low or no cost and fit with the Wisconsin Model Academic Standards. Major themes could include electricity, measurement, wheels and axles, pneumatics, levels, support structures, solar energy, manufacturing, and inclined planes. This class guarantees you'll be excited about making your curriculum come alive by making cool things that work!

# WASDI Academies 1999

## ***Middle School Workshops - Mathematics***



### **Immersion in Rational Numbers - Grades 6-8 - (CR)**

Presenters: Jane Howell and Jodean Grunow

Experience activities that help students to truly understand rational numbers with materials that develop student knowledge and understanding of rational numbers that is rich in connections. Participants will explore unit excerpts from the Connected Math Project, Launch, Explore, Summarize (LES) instructional model, share and discuss professional experiences related to the content being studied and the strategies used to teach and learn about related alternative assessment strategies.

### **Green Globes, the Wild West and More!!! - Grades 3-8 (NW)**

Presenters: Michelle Parks and Barb Riedel, Eau Claire Public Schools, WASDI Lead Teachers

Participants will be engaged in activities using several sunburst computer software programs and videodisc programs. Participants will actively experience geometric concepts, algebraic concepts, and more using technology through a constructivist model. Throughout the workshop, classroom management ideas, research and the learning process will be discussed.

### **Computer Tech-Knowledge-Gee! - Grades 3-8 (JM Verona)**

Presenter: Jeff Lucas, Spring Road School, Neenah, WASDI Lead Teacher

Learn how MacIntosh computers can upgrade your teaching. Many ideas and activities for integrating computers into your math and technology curriculums will be explored using drawing, painting, word processing, database and spreadsheet ClarisWorks applications. These integrated curricular activities teach computer procedures as they expand classroom learning using authentic computer files. You will also learn to use the computer as a professional tool for assessment, record keeping, and creating a variety of other useful classroom products.

### **Hot Numbers With Skillet - Grades 6-8 (WRVA)**

Presenter: Lynn Scala, WASDI Lead Teacher

Participants will use an investigative approach to the following math strands: geometry, problem solving, measurement, number sense, ratio, and statistics. Teachers will work in small groups to focus on mathematics and implementation of the NCTM standards, technology and mathematics, math in the business world and alternative assessments. Participants will have an introduction to the use of Hyperstudio in the math classroom. TI 80 graphing calculators and interactive television will also be used.

### **AIMS - Math Connections: Patterns, Problem Solving, and Practice - Grades 6-9 (WRVA)**

Presenter: TBA

Students will find the AIMS approach to the study of numbers refreshing and interesting. In geometry, the approach differs from that in common use. Studies begin with solids, the geometric objects most familiar to students. The connection between mathematics and science becomes more meaningful within the AIMS curriculum in which combinations of measurements are studied for their production of new units of measurement. Number Sense and Operations, Geometry and Spatial Sense, Dealing with Data and Chance and Patterns and Functions will be covered in this workshop.

### **Graphing Calculators: From the Box to Your Classroom - Grades 7-10 (ST)**

Presenter: Rich Sterry, Menomonie, WASDI Lead Teacher

This workshop takes the participant from the ground floor up with graphing calculators. TI-92's and CBL devices will be integrated into the session that offers real-world models.

### **Math Standards: The Formula to Improved Student Performance - Grades 6-12 (W Holmen)**

Presenter: Bonnie Olson and Robert Deml, Onalaska

This workshop will help middle and high school teachers translate the new math standards into improved student performance in the classroom. Participants will learn how to analyze the standard, how to embed the standards into their own curriculum, and how to assess and document student achievement. Emphasis will be on the role of the teacher as a facilitator.

### **Math in Context - Grades 5-8 (E)**

Presenter: TBA

MIC provides a new contextual approach to mathematics instruction and assessment for students in grades 5-8. Mathematics is a network of interconnected concepts and properties describing number, shape, uncertainty and change. It is described as a language to study patterns and a way of thinking and is learned best by doing.



*Mathematics, Science and Technology for Teachers*



# WASDI Academies 1999



## ***Middle School Workshops - Mathematics cont.***



### **Algebra More Concrete - Grades 6-8 - (CR - Core Program) CMP**

Presenters: Jane Howell and Jodean Grunow

This workshop is designed for middle school teachers in grades 6-8 who are looking for examples in which algebra understandings can be built during the middle grade years. Algebraic ideas are approached through investigations and problems which allow students to search for patterns and relationships in data, and to find ways to express these patterns, first in words and then algebraic symbols. Materials and activities used during the workshop will be taken from the Connected Mathematics Project. Participants will experience activities from the CMP units titled Moving Straight Ahead, Thinking with Mathematical Models and Growing, Growing, Growing.

### **T<sup>3</sup> Graphing Calculators - Grades 5-8 - (CR Core Program)**

Presenter: Stephen Davies, Texas Instruments

The majority of this workshop will be devoted to mathematics content prior to formal algebra while investigating mathematics as problem-solving, communication, reasoning and connections. You will develop familiarity and facility teaching mathematics with the TI-Explorer calculators and TI-73. You will explore and investigate a mode of teaching middle grades mathematics including patterns and functions, number theory, statistics and probability, geometry and measurement, and algebraic thinking. You will be introduced to the programming capabilities of the TI graphing calculators.

### **Algebra in Engineering - Grades 5-8 (CM & CHI)**

Presenter: Jane Patterson, Fritsche Middle School, Milwaukee, WASDI Lead Teacher

This workshop is designed to give middle school mathematics teachers hands on, inquiry based engineering lessons that are not only rich in algebraic concepts, but are deeply founded in the state and national standards. Participants will experience and develop various forms of assessment. Some things you will learn include building balsa bridges, human suspension bridge, creative cardboard engineering, quick engineering projects, parachutes and designing packages for products.

### **Technology, Toys & Teaching Math - Grades 7-12 (CM, E, WRVA & JM Williams Bay & Verona)**

Presenter: John Katz, Menomonee Falls, WASDI Lead Teacher

This course will help you use both computer software and TI-92 graphing calculators to transform a traditional math classroom into an interactive hands-on learning environment your students will look forward to entering. Activities will include applications to geometry using Geometer's Sketchpad software, use of the Cabri II geometry software on the TI-92, use of the calculator based laboratory (CBL), integration of science and math using graphical analysis experiments, application of the TI-92 courses to algebra and calculus, and hands-on experience applying geometric transformation to miniature golf and billiards.

### **Let's Talk About It: Fostering Discourse in the Mathematics Classroom - Grades 5-8 (SW & W Onalaska)**

Presenters: Faye Hilgart, Blair-Taylor Middle School, WASDI Lead Teacher and

Jane Patterson, Fritsche Middle School, Milwaukee, WASDI Lead Teacher

This workshop provides middle school mathematics teachers multiple opportunities to explore concept-rich, hands-on, inquiry-based lessons grounded in state and national standards. Selected materials from the Connected Mathematics Project, NCTM Addenda Series, Mathline and The Linked Learning in Mathematics Project focus on the development of age-appropriate algebraic thinking. Workshop participants will examine appropriate use of calculators in a standards-based curriculum and experience a variety of assessment tools including rubrics.

### **Connected Mathematics Project (CMP) - Grades 5-8 (JM Williams Bay) and Grades 6-8 (SR Waukesha) Grades 5-8 (GG)**

Presenters: Jane Patterson, Fritsche Middle School, Milwaukee, WASDI Lead Teacher (JM)

Elizabeth Freeman and Nancy Jo Grochowski, Milwaukee (SR)

Michelle Parks and Barb Riedel, Eau Claire, WASDI Lead Teachers (GG)

This workshop is designed to give middle school mathematics teachers experience in and resources for constructivist learning, reinforcing the vision of the NCTM Curriculum and Evaluation, Teaching and Assessment Standards. Using the CMP materials as a foundation, the workshop is organized around interesting problem settings and real situations. It will allow participants to experience the inquiry, exploration and summarization of investigations in the strands of number, measurement, geometry, probability and statistics and algebra.

# WASDI Academies 1999

## *Middle School Workshops - Mathematics cont.*



### **Everything you Need to Know about Using Graphing Calculators (TI-83) and Computer Based Laboratory (CBL) in your Classroom From Start to Finish - Grades 7-12 (E)**

Presenter: Tony Pickar, WASDI Lead Teacher

Activities will be provided for math, science, biology, physics, chemistry. Participants will use the TI-Graph Link to interface between calculator and computer and will download software and programs off the internet. Graphing equations, plotting statistics, storing graph data bases, transferring data and downloading programs from TI and Vernier will be some of the activities covered. Participants will be allowed to try their own experiments in the workshop to help them feel comfortable enough to use in their classrooms.

### **Meteorology for the Teacher - Grades 6-12 (E)**

Presenter: Bruce Smith, AMS Atmospheric Education Resource Agent

The teaching of weather is going through a revolution. American Meteorological Society through Project Atmosphere provides materials and training to bring this new world of weather and climate into your classroom. The course will make use of teaching modules developed through Project Atmosphere. More than 15 classroom-ready modules will provide the basis for an exciting and effective curriculum in weather for upper elementary, middle and high school students. In addition, this course will provide an introduction to accessing weather information via the internet. Each day will begin with a weather briefing including looking at the latest satellite images, radar data and computer forecasts.

### **Take Those Standards on the Road: Mathematics - Grades 6-8 (JM Verona & WRVA)**

Presenter: Polly Goepfert, River Bluff Middle School, Stoughton, WASDI Lead Teacher

In this workshop you will experience many investigations of CMP, increase the awareness of the philosophy behind the CMP project, connect the standards to the investigations, make a cube by paper folding, apply authentic assessment to the geometry strand and develop a better understanding of the vision the standards are seeking.

### **Mathline - Grades K-12 (CHI)**

Presenter: Susan Cook, Oconomowoc, WASDI Lead Teacher

Learn how to use the Mathline videos to plan lessons and units that help students learn important math content, the ability to communicate and reason mathematically and be more confident problem solvers. The Wisconsin/PBS MATHLINE project is a nationally recognized, year-long program for K-12 teachers. The workshop includes an on-line component and a video series featuring classroom teachers modeling exemplary NCTM based lessons with their students.

### **Algebra for All - Grades 8-10 (SR Waukesha)**

Presenter: MaryLane Blomquist, Milwaukee, WASDI Lead Teacher

This workshop is designed to give middle school and high school mathematics teachers experience in NCTM standards rich, inquiry-based learning. Using a variety of resources including: The Graphing Calculator, Connected Mathematics Project (CMP) materials, Core Plus materials, PBS Mathline, and some teacher developed materials. Participants will learn to identify and create activities, lessons and assessment that will foster algebraic thinking.

### **Using Dynamic Sketching Software to Enhance the Teaching of Geometry and Algebra - Grades 8-12 (SR Waukesha)**

Presenter: Lee Schmidt and Jim Truszynski, Waukesha

Participants will primarily use the Geometer's Sketchpad as a means to foster an active learning atmosphere in their geometry and algebra classrooms. Attention will be focused on mastering the mechanics of this software package and establishing effective ways to implement it in the classroom.

### **Assessing the Standards in Mathematics - Grades K-12 (SR Waukesha)**

Presenter: Jim Marty, Waukesha, WASDI Lead Teacher

The purpose of this workshop is to get individual teachers more familiar with the Wisconsin Model Academic Standards in Mathematics and the Standards 2000 project currently being undertaken by the National Council of Teachers of Mathematics. You will examine an assortment of samples of assessment materials and then working in small groups by grade level, develop assessment instruments which reflect the Standards at that grade level to take back to your classroom.



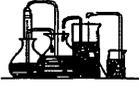
*Mathematics, Science and Technology for Teachers*



# WASDI Academies 1999



## ***Middle School Workshops - Science***



### **May the Force Move You! - Grades 5-8 (SR West Allis, CHI, GG & E)**

Presenters: Polly Knoll, Superior High School, WASDI Lead Teacher

Dan Rosa, Arrowhead Union Head High School, WASDI Lead Teacher

Learn basic physical science concepts through fun, hands-on activities developed by top notch teachers throughout the nation for Operation Physics. Constructivist and multiple intelligence approaches will be explored, and all material will be directly linked to our Wisconsin Eighth Grade Standards. Writing and assessment strategies will be developed and discussed, and ways to add technology will be demonstrated. Participants leave with practical "make and take" items to use in their own classrooms.

### **The Science, Mathematics and Technology of Aerospace: A Passport for Learning - Grades 4-8 (SR West Allis)**

Presenter: Bob Friedel, Washington High School, Germantown

Weather, air pressure, bubbleology, surface tension, the center for gravity, magnetism and electricity, recycling and the environment, bottle and model rocketry plus additional aerospace topics will also be investigated with their applications for classroom integration. Participants will take back to their classrooms a wide assortment of materials and hand-outs including instructional videos, computer disks, and technology aides. Participants will receive packets of ideas, tips and plans as how to integrate the science, mathematics, and technology of aerospace into the curriculum.

### **Using Toys to Teach Science - Grades 6-12 (SW), Grades 3-12 (JM Williams Bay), Grades 7-12 (CR)**

Presenter: Larry Scheckel, Tomah High School

Learn how to use toys to help students develop genuine inquiry problem-solving and higher level thinking skills. Emphasis will be on how to use toys effectively as part of the science curriculum. Lesson plans, concept development, hands-on learning and the learning cycle will all be part of this exciting week. Over two hundred science-related toys will be demonstrated. Participants will make and take several dozen toys and also receive many hand-outs.

### **Farther Beyond the Dog & Pony Show - Grades 3-6 (CM) and Grades 3-8 (NW)**

Presenters: Bruce Oxley and Don Primmer, WASDI Lead Teachers

You will be presented with a wide variety of life, earth, physical, and environmental science activities that can be infused and integrated into your existing curriculum. Together we will explore science magic to arrive at ways to develop and increase your students science process skills. In addition, you will take a thorough look at the activities' relevance, applications, integrations, extensions and assessments, as well as their connections with Wisconsin's state standards.

### **Dinosaurs to Black Holes - Grades 3-8 (JM Williams Bay)**

Presenter: Don Vincent, West High School, Madison, WASDI Lead Teacher

Participants will experience hands-on methods for teaching about our Earth. From both an environmental and physical perspective, we will concentrate on Geology, Meteorology, Oceanography and Astronomy activities. You will learn many great, safe, inexpensive and teacher tested labs and demos. An emphasis will be on using and making low cost science equipment. Each participant will receive a packet of handouts in addition to making and taking materials that will be ready to take to school next fall.

### **Hands-on Activities, Projects and Explorations - Grades 5-10 (JM Williams Bay)**

Presenter: Peter Watts, Riverside Middle School, Watertown, WASDI Lead Teacher

This workshop will focus on a number of activities aimed at making science meaningful and fun. We'll look at surface tension, light and optics, aerodynamics, and density. We'll investigate bubbles, fingerprinting, catapults, bridges, flic-flacs, Rube Goldberg-like contraptions, and lots more stuff to make science come alive for students and parents alike.

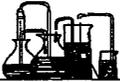
### **Criminalistics: An Introduction to Forensic Science - Grades 7-12 (WRVA, W & CHI)**

Presenter: James Hurley

Participants in this workshop will examine a one semester high school criminalistics course and the activities involved, survey books and videotapes related to introductory forensic science and perform experiments written as crime scene investigation scenarios.

# WASDI Academies 1999

## *Middle School Workshops - Science cont.*



### **Wisconsin Initiative for Space Education (WISE): Addressing the Science, Math and Technology Standards Through Space Science Education - Grades 5-9 (JM Williams Bay & Verona, E)**

Presenters: Sanjay Limaye, Planetary Scientist, Rosalyn Pertzborn, Research/Outreach Specialist, Space Science & Engineering Center UW Madison (Teams Encouraged)

Teachers will have the opportunity to work with scientists and educators to explore selected content rich, instructionally effective programs and hands-on activities that can be easily adapted for use in your own curriculum. Space exploration topics will include a student designed space mission to a solar system target, hands-on astronomy including an evening field trip to a local observatory, and an exploration of planets and other objects within our own solar system. Teachers will be encouraged to ask questions and work directly as partners with researchers and experts to develop their own classroom curriculum plans and ideas. At the end of the workshop you will be expected to formulate a preliminary plan for a classroom curriculum program, project or activity. Up to three credits may be earned for this workshop.

### **Crime Puppies! Introductory Forensic Science - Grades 2-7 (JM Verona)**

Presenter: Janet Hurley, West Cedar Elementary, Waverly IA

Interest in science will reach an all-time high when you present activities as crimes for students to solve! Activities will include investigating crime scenes, analyzing colors by chromatography, comparing handwriting samples, analyzing human and animal hair, visualizing and lifting invisible fingerprints, and making casts of footprints and tool marks. Throughout these activities the process skills of observing, collecting data, analyzing, interpreting, and working as a team member are emphasized. Other forensic science resources, such as videotapes, speakers, books and games, as well as suggestions for teaching across the curriculum will be discussed. Each participant will receive an extensive packet of information and activities.

### **Cooperative Competitions in Physical Science and Physics - Grades 7-12 (JM Verona)**

Presenter: Jim Hurley, Shell Rock High School, Waverly, IA

Fire up your students with competitions directly related to your course content! Design footwear that allows you to walk on water (you might want to bring your swimsuit or trunks!), construct mousetrap-powered dragsters, predict ranges for water balloon launches, compute the power generated by a tiny simple motor, and design and test catamarans (for the Rain Gutter Regatta!), catapults, parachutes, exotic paper airplanes, and pipette rockets. While these and other activities and projects culminate in competitions, the processes of hypothesizing, testing and modifying and working cooperatively are emphasized. Participants will receive an extensive packet of reproducible activities and have a lot of fun!

### **Detectives, Dangers, Deductions: Dastardly Deeds! A Multidisciplinary Unit on Mysteries, Crimes and Forensic Science - Grades 4-9 (WRVA)**

Presenter: Christine Pace

Join us for the adventure of solving a real-life mystery! This class is not for the faint hearted! Teacher/Detectives will experience first hand crime solving techniques. Exciting centers, computer programs, field trips, simulations, puzzles, fascinating labs, and speakers will be components of the course. Fingerprinting, chromatography, blood/hair/dental/fiber analysis, criminology, autopsies, critical thinking, and problem solving skills are course highlights.

### **What's It Like Where You Live? - Grades 5-8 (WRVA)**

Presenter: Traci Roth, WASDI Lead Teacher

What's It Like Where You Live? is a curriculum developed by the Missouri Botanical Gardens that investigates the biomes of the world. Participants will get a peek at this multi-media curriculum, targeted at the intermediate grades and its activities, as well as other resources that can be used to develop an inquiry-based study of the world's biomes. Participants should come prepared to share ideas and resources.

### **Aviation - Grades 7-12 (WRVA & E)**

Presenter: Dan Fara

Explore the wonderful world of flight, with some hands-on experiences in aviation. This session is designed for the individual who wishes to learn about airplanes and how they fly. Participants will become familiar with the basic fundamentals of aeronautics. They will build a glider, work with aerodynamics, navigation, radio communication, FAA regulations, physiology of flight, map reading, flight simulation, reading weather reports, and go on an actual flight.



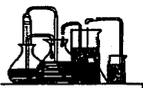
*Mathematics, Science and Technology for Teachers*



# WASDI Academies 1999



## ***Middle School Workshops - Science cont.***



### **Wisconsin Energy Education Program (KEEP) - Grades K-12 (WRVA & ST)**

Presenter: Jennie Lane

Through hands-on activities and class discussions, learn how you can enhance students' understanding of what energy is, where it comes from, and how it affects their lives. You will also receive a copy of KEEP's comprehensive, easy-to-use Energy Education Activity Guide and be introduced to additional energy-related educational materials. This course is designed for teachers who want to experience it today and teach it tomorrow.

### **Sorting Through Educational Reform: Classroom Implementation Activities for the Sciences - Grades 5-9 (E)**

Presenter: Floyd Henschel

This course will give detailed lesson plans and show you how to translate new theories into science classroom activities. Participants will learn how to incorporate hands-on science units utilizing Gardner's Multiple Intelligences in Integrated Curricula, Jensen's research on Brain Compatibility and Glasser's Instructional Strategies. Education reform science activities will be presented through a variety of teaching strategies: presentations, demonstrations, small and large group activities in cooperative learning groups, along with slides and videos.

### **Meteorology for the Teacher - Grades 6-12 (E)**

Presenter: Bruce Smith, AMS Atmospheric Education Resource Agent

The teaching of weather is going through a revolution. American Meteorological Society through Project Atmosphere provides materials and training to bring this new world of weather and climate into your classroom. The course will make use of teaching modules developed through Project Atmosphere. More than 15 classroom-ready modules will provide the basis for an exciting and effective curriculum in weather for upper elementary, middle and high school students. In addition, this course will provide an introduction to accessing weather information via the internet. Each day will begin with a weather briefing including looking at the latest satellite images, radar data and computer forecasts.

### **Developing a Notion about Motion: Putting the Student in the Driver's Seat - Grades 6-9 (E)**

Presenter: Brad Staats, WASDI Lead Teacher

This "hands-on" course will demonstrate the use of low expense virtual reality software and "make and take" projects to assist students in learning challenging concepts about motion. The entertaining areas of space, flight, and auto racing will be the center piece for your student's motivation. Through these areas, this grade 6-9 workshop will focus in on integrating science, mathematics, technology, geography and history. It will also assist your confidence in finding, choosing, and using appropriate software for your classroom.

### **Getting Onboard! Here come the Standards - Grades 6-9 (CR Core)**

Presenters: Kris Schilling, Rice Lake School District, WASDI Lead Teacher

Annya Fahey, Edgerton School District, WASDI Lead Teacher

You will explore a plethora of standards-based modules, programs and activities you can easily implement into your existing curriculum. Learn how this standards-based material can be incorporated into your existing curriculum or be used as a year-long course. Modules include concepts, processes and techniques that will make your middle school science relevant to the experiences of your students through personal, community experiences and global perspectives.

### **Health Care: Using Mathematics, Science and Technology to Save Lives Grades K-12 (CR)**

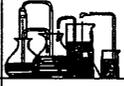
Presenters: Margaret Dickens-Grosskopf, Kay Scham, Karen Taylor, Steve Schreiner, Corey Weinfurter, Patricia Griffen, Patricia Traphagan, All CVTC Instructors

During this week-long workshop, participants will focus on the many applications of math, science and technology in the health care industry. Participants will analyze tissues and disease-causing organisms, apply sonographic technology in scanning body organs, discover how computers enhance X-ray diagnosis, and explore how technology is applied in the critical few moments when a heart has stopped beating. Using a hands-on approach, participants will discover how math and science, applied K-12 support these cutting-edge technologies in saving lives. This workshop will be conducted from the Phillips building on the CVTC campus in Eau Claire.



# WASDI Academies 1999

## ***Middle School Workshops - Science cont.***



### **I Didn't Know you Could Do That in Science! - Grades 5-8 (CHI)**

Presenter: Linda Neiman, Kenosha

Learn how to enhance the teaching and learning of science through the use of literature, the language arts - reading, writing, speaking and listening as well as the implementation of rubrics and portfolio assessment in your science classroom. During this workshop's interactive approach you will use writing to increase comprehension of scientific principles, learn the principle of portfolio assessment, implement the use of rubrics, use literature to enhance the teaching and learning of science and create a science unit incorporating the language arts.

### **Activity-Based Integrated Science - Grades 6-8 (CHI)**

Presenter: TBA

This standards based workshop will present middle level science teachers with solid content in earth/space, life and physical sciences in an integrated curriculum. The focus will be on best teaching/learning practices which result in higher students achievement on standardized testing. Be prepared to experience inquiry based activities which use constructivist, multiple intelligence, and other brain based theories. Opportunities for cross curricular integration will also be explored

### **Chemistry/Biology Institute - Grades 8-12 (CHI)**

Presenter: TBA

Presented by Teachers Teaching with Technology. Secondary science and math teachers will explore biology and chemistry concepts using the TI-83 graphing calculator, Calculator Based Laboratory System (CBL), and electronic probes. Explore innovative ways to teach concepts and emphasize new ways to collect and analyze data. See how this portable, low-cost technology provides an exciting and effective way to integrate math and science.

### **GEMS (Great Explorations in Math and Science Developed by UC-Berkeley) - Grades 4-8 (CHI)**

Presenter: Anne Reichel, Grayslake, IL

During this interactive workshop, participants will have the opportunity to gain first hand experience with an inquiry based approach to science. Activities from GEMS (Great Explorations in Math and Science) will serve as the foundation for investigating science concepts and processes through a guided-discovery approach. Course activities will be linked to standards and performance assessments.

### **T.O.Y.S. (Teach Our Youth Science) - Grades K-8 (CHI & WRVA) Grades K-6 (CR & SR Waukesha)**

Presenter: Jaime Malwitz, Eden, WASDI Lead Teacher

This program uses toys as a launching pad to teach science, integrated with mathematics and technology, in the classroom setting. Not only is it hands-on, but it is also a minds-on approach to actively involve all students in grades kindergarten through fourth grade while applying the Benchmarks for Science Literacy to mathematics, science and technology. DUPLOS, beads, gummi bears, and GAK are some of the manipulatives used in the activities to introduce the novice teacher to the user-friendly aspects of science, mathematics and technology through an inexpensive, yet comprehensive application of materials readily available to teachers and students. For the more experienced teacher, toys will be used as extensions of their current curriculum and include helpful additions to SCIS, FOSS and GEMS.

### **Wanted: Potential Space Station Residents - Grades K-12 (CHI)**

Presenter: Judy Beck, LaCrosse

Numerous hands-on activities will illustrate the range of materials and training opportunities available through activity guides, videos, CD ROM's and Internet websites. This course will introduce participants to the opportunities available to educators through the NASA Regional Educator Resource Centers. Participants will leave with plenty of materials to use in their classroom and many more ideas!

### **Rock Camp - Grades K-12 (CHI)**

Presenters: Tom Repine, Don Primmer, Deb Hemler, Robert Behling, Paula Waggy & Karen Parlett, West Virginia and Wisconsin

Look at rock, mineral, and fossil samples, take "field trips", and evaluate earthquakes. Construct life size topographical maps, dig for fossils and check out the insects from the Paleozoic era. Explore mineral resources in everyday life and local links to Wisconsin geology. All participants will receive an activity book and tons of great ideas!



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# WASDI Academies 1999



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## ***Middle School Workshops - Science cont.***



### **Classroom Tested and Approved Science - Grades 3-8 (SR Waukesha)**

Presenter: Sharon TeRonde, Franklin & Dave Kowal, Wauwatosa

Join us in an active, problem-solving workshop which will involve you in numerous discrepant events, challenges, puzzles and activities designed to challenge one's thinking. These inquiry-based ideas can be easily adapted for your own classroom. These classroom tested (and approved) activities use simple and inexpensive materials.

### **Watershed Stewardship: Using Scientific Skills and Technology to Address Environmental Concerns - Grades K-12 (GG)**

Presenters: Sue O'Halloran, Dr. Mary Balcer, Dr. Jack Zaengle, Dr. Susan Heidi and Jeri Schwerin, UWS and Extension Staff

This workshop will provide teachers with the scientific background needed to understand watershed ecology and will familiarize them with the methods for conducting water quality monitoring. The focus will be on basic watershed hydrology concepts. Participants will gain experience in taking standardized quantitative measurements of water quality. Teachers will be introduced to the Global Learning and Observations to Benefit the Environment program and protocol and activities. This workshop will be in the new Northern Great Lakes Visitor Center with field days provided on-board the UW-Superior research vessel and at local natural resources agencies. Participants will have access to a bus provided for daily transportation to and from the class.

### **Where's the Beef? Real Science for All Students - Grades 7-10 (GG)**

Presenter: Wayne Snyder, Caltech Precollege Science Initiative

In this workshop, participants will increase their awareness and understanding of implementing an inquiry-based science curriculum, analyze and discuss development and implementation of student assessment, increase awareness of the unifying patterns and processes in science and participate in several mini-curricula which represent a cross section of the science content areas and relate the lessons to the areas of standards, curriculum, technology, methodology, and assessment.

### **Building Responsible Environmental Behavior - Grades K-8 (GG)**

Presenter: Sandra Roggow, Minocqua 1997 Wisconsin Environmental Educator of the Year

This hands-on interactive workshop will address both the "why" and "how" of integrating environmental education across the curriculum. Participants will create units which will help students build the knowledge and skills needed to become stewards of our natural resources. The use of journals will be closely examined as a tool for students to record information, reflect on learning and connect actions to real-life situations. Participants will also develop assessment tools to evaluate critical and creative thinking.

### **Nature-alizing Your Students - Grades K-8 (WRVA, CM & SR West Allis), Grades 2-6 (SW), Grades 1-8 (W)**

Presenter: Scott Lee

It doesn't matter what the season, what resources you have available how knowledgeable you are of our natural world or what age you teach. There is a lot you can do to help your students learn about the natural environment. Many hands-on activities, make-and-take projects and games to teach about nature to all age levels will be presented throughout the week. You will be presented many ideas to "environment-alize" and "nature-alize" your students in a fun and educational way.

### **Aerospace Education Services Program (NASA) - Grades 7-12 (ST)**

Presenter: Ralph Winrich, Aerospace Education Specialist

This workshop enables the participant to gain a perspective of Aerospace Education through a hands-on look at the Wisconsin Earth and Space Science standards. At the end of this session, participants will be certified to receive lunar and meteorite samples for classroom use.

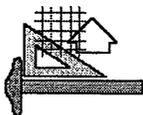
### **Science and Standards: A Motley Mix for Student Success in the New Millennium - Grades 6-12 (W Holmen)**

Presenter: Kerry Hogan, Western Wisconsin Technical College, LaCrosse

Participants will become proficient in applying the principles of performance-based instruction while embedding the new Science Model Academic Standards into the curriculum. Topics to be addressed include performance-based instruction, types of academic standards, approaches to embedding the standards, performance assessments, and the high school graduation exam. Effective practices from local practitioners will be shared.

# WASDI Academies 1999

## *Middle School Workshops - Technology*



### **Ingenuity Engineering - Grades 5-9 - (CR - Core Program)**

Presenter: Mike Jensen, Paonia High School, Paonia CO

Engineering through activities is the mode of this workshop. Engineering engages math, science and technology to solve for problems in kite flight, structures, materials and aerodynamics. Designing and developing technological systems will aid in the problem solving process. Creating projects and examples to take into your classroom will demonstrate your abilities in the processes and knowledge of technology education standards. Totally activity oriented with knowledge embedded in every fun-filled project. The processes and knowledge aspects of the standards will be addressed with an emphasis on the linkages that occur in technology education, several contexts will be pursued.

### **Computer Tech-Knowledge-Gee! - Grades 3-8 (JM Verona)**

Presenter: Jeff Lucas, Spring Road School, Neenah, WASDI Lead Teacher

Learn how MacIntosh computers can upgrade your teaching. Many ideas and activities for integrating computers into your math and technology curriculums will be explored using drawing, painting, word processing, database and spreadsheet ClarisWorks applications. These integrated curricular activities teach computer procedures as they expand classroom learning using authentic computer files. You will also learn to use the computer as a professional tool for assessment, record keeping, and creating a variety of other useful classroom products.

### **Key For Success: Motivation, Experimentation and Competition - Grades 7-12 (WRVA)**

Presenters: Charles Berben and Mark Vrieze

Boggle your brain with Robo Pong, satisfy your need for economy with a mousetrap-powered vehicle. Cross a chasm with only kite sticks and an ounce of glue. Within lies the problems; you supply the solvent in making them dissolve. Problem-solving activities that have proven to be great incentives in the classroom using technology, math and science.

### **Technology Institute for Educators - Grades K-12 (CHI)**

Presenters: Marie Ellis, WASDI Lead Teacher and Associates

Use technology to enhance learning and address the Wisconsin Model Academic Standards. The format of this program is in three phases-summer institute, follow-up and sharing results. Developed for educators, by educators. Participants **must** sign up for the 2 credit registration option.

### **World In Motion II - Grades 6-8 (SR Waukesha)**

Presenters: Sandra Swietlik, Milwaukee, WASDI Lead Teacher and Kim Gleffe, Milwaukee Association of Scientists and Engineers

This workshop will teach you how to introduce young students to the excitement of integrating mathematics, science, engineering and technology concepts in the context of an authentic engineering design experience. Teachers will work with this ground-breaking curriculum unit to design, build and market a new toy. Participants will receive a "Request for Proposal" from the fictitious toy company, "Mobility Toys," asking them to submit design for a motorized toy vehicle that can be marketed to a 6-10 year old population. Professionals from the engineering field work side-by-side with teachers.

### **Impact Learning and Teaching Through Technology - Grades K-8 (SR Waukesha)**

Presenter: Jeanne Anderson, Waukesha

This workshop will feature classroom-tested projects and methods for using current technologies and resources in the K-8 classroom. Participants will discuss how to best integrate technology into curriculum areas to support both learning and teaching. The class will focus on best practices, implementation issues and ways to measure the effectiveness of technology in the classroom.

### **Best Practices in Technology Education - Grades 7-12 (SR Waukesha)**

Presenters: Dennis Skurulsky, Waukesha and Alan Gomez, Madison

Participants will have the opportunity to get hands-on experience and evaluate contemporary learning activities from across the nation. Participants will be exposed to engineering case studies, material science experiments, and modular technology activities and projects that contribute to a successful program that will help prepare students for the next millennium.



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# WASDI Academies 1999

## *High School Workshops - Mathematics*



### Using Dynamic Sketching Software to Enhance the Teaching of Geometry and Algebra - Grades 8-12 (SR Waukesha)

Presenter: Lee Schmidt and Jim Truszynski, Waukesha

Participants will primarily use the Geometer's Sketchpad as a means to foster an active learning atmosphere in their geometry and algebra classrooms. Attention will be focused on mastering the mechanics of this software package and establishing effective ways to implement it in the classroom.

### Assessing the Standards in Mathematics - Grades K-12 (SR Waukesha)

Presenter: Jim Marty, Waukesha, WASDI Lead Teacher

The purpose of this workshop is to get individual teachers more familiar with the Wisconsin Model Academic Standards in Mathematics and the Standards 2000 project currently being undertaken by the National Council of Teachers of Mathematics. You will examine an assortment of samples of assessment materials and then working in small groups by grade level, develop assessment instruments which reflect the Standards at that grade level to take back to your classroom.

### Connecting Mathematics and Science - Grades 9-12 (GG)

Presenter: TI Instructor

The primary focus of the CMS institute is collection of data and the analysis of it from both scientific and mathematical standpoints. Participants will gain hands-on experience collecting data with the CBL/CMR and modeling it with the powerful statistical tools of the TI-83. This program is for secondary math, physical science and physics teachers designed around the TI-83 graphics calculator and the Calculator-Based Laboratory System and the Calculator-Based Ranger.

### CPM Math 1 - Grades 9-12 (GG)

Presenter: Duane Frankiewicz, Spooner

CPM is an investigative mathematics program that has developed from teachers' input. The following philosophical statements guide the program: change takes time, effort and support; in a balances program skill development is based upon problem solving and beginning understanding; teachers are responsible for actively guiding, supporting, and summarizing; students must be actively involved in their learning. Follow-up sessions to this workshop will be conducted in the fall.

### Graphing Calculators: From the Box to Your Classroom - Grades 7-10 (ST)

Presenter: Rich Sterry, Menomonie, WASDI Lead Teacher

This workshop takes the participant from the ground floor up with graphing calculators. TI-92's and CBL devices will be integrated into the session that offers real-world models.

### Math Standards: The Formula to Improved Student Performance - Grades 6-12 (W Holmen)

Presenter: Bonnie Olson and Robert Deml, Onalaska

This workshop will help middle and high school teachers translate the new math standards into improved student performance in the classroom. Participants will learn how to analyze the standard, how to embed the standards into their own curriculum, and how to assess and document student achievement. Emphasis will be on the role of the teacher as a facilitator.

### When Are We Ever Going to Use This? - Grades 9-12 (W Holmen)

Presenter: Michael Nerbovig, Chippewa Falls, WASDI Lead Teacher

This workshop will present a non-traditional curriculum which replaces applied math courses and is tied together as a life experience simulation of real-life financial transactions and activities. Each participant will be given the complete curriculum on six disks along with a historical perspective and rationale. The content will be examined, discussed and then modified to suit the needs of individual school districts. Participants will develop necessary models for various activities and use pertinent software. At the conclusion of the workshop, each individual will have a 300 plus page document ready to implement in the fall of 1999.



# WASDI Academies 1999

## High School Workshops - Mathematics cont.



### TIAC^2E-II Institute - Grades 9-12 (WRVA)

Presenter: Provided by Texas Instruments

This workshop is a week-long professional development program for teachers of Algebra I and high school algebra. The primary focus of the activities is to explore algebra concepts and problems using hand-held calculator/computer technology as a tool for teaching and learning. The goal of the institute's program is to instruct teachers in new and innovative ways to effectively teach mathematics using technology in the spirit of NCTM's Curriculum and Evaluation Standards for School Mathematics and Professional Teaching Standards.

### TI IM92 (Integrated Math for the TI92) - Grades 9-12 (WRVA)

Presenter: Provided by Texas Instruments

IM92 is a one-week institute for all high school mathematics teachers. The institute will introduce participants to a wide range of context-based investigations emphasizing the relationships of topics within mathematics as well as between mathematics and other disciplines. Each topic will incorporate many of the features of the Texas Instruments TI-92 and the multiple perspectives this tool enables. Pedagogical and classroom management issues related to the routine use of the TI-92 level of technology will be addressed. Assessment, testing and grading issues will be approached "hands-on" during each day of the institute. Time is also set aside each day to focus on a variety of critical meta-issues such as how algebra understanding should be developed in an integrated mathematics environment based on technology.

### Everything you Need to Know about Using Graphing Calculators (TI-83) and Computer Based Laboratory (CBL) in your Classroom From Start to Finish - Grades 7-12 (E)

Presenter: Tony Pickar, WASDI Lead Teacher

Activities will be provided for math, science, biology, physics, chemistry. Participants will use the TI-Graph Link to interface between calculator and computer and will download software and programs off the internet. Graphing equations, plotting statistics, storing graph data bases, transferring data and downloading programs from TI and Vernier will be some of the activities covered. Participants will be allowed to try their own experiments in the workshop to help them feel comfortable enough to use in their classrooms.

### Advanced Algebra, Data and Technology - Grades 9-12 (CR)

Presenter: Provided by Texas Instruments

Experience a model learning environment, teaching approach and curriculum that will give your students opportunities to think, create, analyze and predict together. Participants will engage in hands-on learning investigations and discover how to better use graphing calculators (TI-83's), Calculator-Based Laboratory Systems (CBL's) and Calculator-Based Rangers (CBR's) to develop and reinforce algebraic concepts, in the spirit of the NCTM standards. Teachers will receive and use the new 1998 Key Curriculum Press text *Advanced Algebra Through Data Exploration: A Graphing Calculator Approach*, which integrates graphing calculators, hands-on investigations and data exploration into a meaningful and useful algebra curriculum.

### Mathline - Grades K-12 (CHI)

Presenter: Susan Cook, Oconomowoc, WASDI Lead Teacher

Learn how to use the Mathline videos to plan lessons and units that help students learn important math content, the ability to communicate and reason mathematically and be more confident problem solvers. The Wisconsin/PBS MATHLINE project is a nationally recognized, year-long program for K-12 teachers. The workshop includes an on-line component and a video series featuring classroom teachers modeling exemplary NCTM based lessons with their students.

### Algebra for All - Grades 8-10 (SR Waukesha)

Presenter: MaryLane Blomquist, Milwaukee, WASDI Lead Teacher

This workshop is designed to give middle school and high school mathematics teachers experience in NCTM standards rich, inquiry-based learning. Using a variety of resources including: The Graphing Calculator, Connected Mathematics Project (CMP) materials, Core Plus materials, PBS Mathline, and some teacher developed materials. Participants will learn to identify and create activities, lessons and assessment that will foster algebraic thinking.



Mathematics, Science and Technology for Teachers



# WASDI Academies 1999



## *High School Workshops - Mathematics cont.*



### **Making an Integrated Fashion Statement - Grades 9-12 (CR - Core Program)**

Presenters: Lorna Vasquez and Doug Dalman, WASDI Lead Teachers

Curriculum materials are now appearing which teach high school mathematics in an integrated fashion. That is, each year covers some topics from each of the major areas of study in mathematics with a strong emphasis on connections. This workshop will introduce such materials, work through many activities present in these curricula, answer concerns about classroom organization for maximizing learning under these formats, address issues of articulation with post-secondary education, and model the constructivist teaching style necessary to implement these curricula.

### **Technology, Toys & Teaching Math - Grades 7-12 (CM, JM Williams Bay & Verona, E, WRVA)**

Presenter: John Katz, Menomonee Falls, WASDI Lead Teacher

This course will help you use both computer software and TI-92 graphing calculators to transform a traditional math classroom into an interactive hands-on learning environment your students will look forward to entering. Activities will include applications to geometry using Geometer's Sketchpad software, use of the Cabri II geometry software on the TI-92, use of the calculator based laboratory (CBL), integration of science and math using graphical analysis experiments, application of the TI-92 courses to algebra and calculus, and hands-on experience applying geometric transformation to miniature golf and billiards.

### **The Five C's of Mathematics: Toy Cars, Computers, Calculators, CBLs, and CBRs! Grades 9-12 (SR West Allis & WRVA)**

Presenter: Lauren Jensen, Wisconsin Heights High School, WASDI Lead Teacher

Along with toy cars, participants will be working with other "toys" (weights/rubberbands/string, playground balls, and other easy to find equipment), with graphing calculators (TI-83 and TI-92), CBLs (Calculator Based Laboratory), and CBRs (Calculator Based Ranger) to obtain realistic data. You will explore various models of the data with the use of residuals. Internet projects and an investigation of geometry with the Geometer's Sketchpad will be included.

### **The Real World of Math - Grades 9-12 (SW)**

Presenters: Ann Krause, Blackhawk Technical College, WASDI Lead Teacher and

Judy Jones, Madison Area Technical College, WASDI Lead Teacher

At this workshop you will explore projects that emphasize connections within and across disciplines, take measurements traditionally and with CBL's, find your way to internet resources, use the computer for student projects, reflect on activities with alternative assessments, take back to your school a better understanding of mathematics needed for the real world, a better understanding of what business and industry wants in employees, activities to use in all secondary level math courses, experience different teaching/learning strategies including technology as a tool and a bibliography of resources.

### **Uses for the Graphing Calculator in Math - Grades 9-14 (NW)**

Presenter: Barb Bredel, Crandon School District, WASDI Lead Teacher

This workshop is for secondary and post-secondary math teachers who are somewhat familiar with the graphing calculator and would like some help incorporating it into the classroom. Applications will cover Algebra I through Pre-Calculus. Materials will include lessons from the Graphing Calculator Enhanced Algebra Project and the Core-Plus Mathematics Project. Participants will be provided a TI-83 graphing calculator for the week and will have a chance to try the TI-92.

### **Core-Plus Mathematics Project (CPMP) - Grades 9-12 (WRVA, CHI, ST & W Onalaska)**

Presenters: Mary Rosin and Marcia Olson, WASDI Lead Teachers (WRVA)

Bob Lovell (CHI)

Jim Adams, Chetek, WASDI Lead Teacher (W & ST)

This workshop offers an exciting opportunity to explore an integrated high school curriculum. The Core-Plus Mathematics Project is based on the philosophy that all students can learn mathematics, if it is presented in a way that makes sense to them. The curriculum is challenging, yet accessible to all students who are willing to learn. The four major strands which run through this curriculum are algebra/functions, geometry, trigonometry, statistics/probability, and discrete mathematics. This project incorporates technology and relevant problems as a means for learning and doing mathematics.