A Residential Program Focusing On Mathematics, Science and Technology At Michigan State University For Academically Talented Middle School Students


Partially funded by The Office of the Provost, Michigan State University and The W.B. and Candace Thoman Foundation
The Mathematics-Science-Technology (MST) program at Michigan State University (MSU) is a two-week summer residential program for academically talented students who are currently in grades seven and eight.

The program is conducted on the East Lansing campus of Michigan State University and is designed for 110 academically talented students selected from Michigan and across the nation. Qualifying students of all races and religious backgrounds are encouraged to apply.

The program has been designed to stimulate students to learn about new developments in mathematics, science and technology, and to explore related career fields.

**ACADEMIC FOCUS**

The academic focus of the program is on mathematics, science, technology, and applications in these areas. The goal is to match the intellectual abilities of talented adolescents with rigorous and challenging course work which provides enrichment, but does not duplicate or accelerate course work that is part of the regular K-12 school curriculum.

**FACULTY**

Leading professors from the various colleges and departments of Michigan State University have developed challenging courses. Working with noted secondary teachers, professors will teach courses using interdisciplinary strategies.

**STUDENTS**

MST at MSU offers opportunities for students:

- to experience active learning as they investigate problems that can be solved through a better understanding of mathematics, science, engineering, and technology
- to focus on intensive areas of study that allow for interdisciplinary research using tools of mathematics, science, and technology
- to link the tools of many career fields while focusing on real world problems.

**ADMISSION PROCESS AND ELIGIBILITY**

In order to be eligible for participation in MST at MSU a student must currently (2007/08 school year) be in grade seven or eight and meet the following criteria:

1) Have proof of SAT-critical reading or SAT-math score of 530 or above, or a total SAT score of 1010

- OR -

ACT Assessment Scores of 21 in ACT Math or ACT Reading, or an ACT Composite of 23

2) Have a positive recommendation from a teacher of mathematics, science, or technology

3) Have demonstrated potential in mathematics, science, or technology.

**ROLLING ADMISSION**

Applications are evaluated on a rolling basis, that is, as they are received. Students are notified of the status of their application within three weeks of receipt of a complete application. Only complete application packets are processed. A complete application packet has:

- a completed and signed application, including parent/guardian questionnaire
- a check or money order made out to Michigan State University for $100, which includes the non-refundable application fee of $25 and a $75 tuition deposit
- A photocopy of the student’s ACT or SAT score report form
- a copy of the student's 2006/07 grade report, and grades for the first semester of the 2007/08 school year
- the student’s essay
- a teacher recommendation form completed by the student’s teacher of science, math, or technology.

**RESIDENTIAL LIVING**

Although academic study and preparation are the main considerations of MST at MSU, careful attention has been given to providing a safe and pleasant environment that includes opportunities for social, athletic and other extra-curricular activities.

It is important to note that this is a closed program, meaning that students are expected to remain with the program for the full two weeks, not going home for the weekend. Parents cannot take students off-campus during the program.
POLICY ON FEES AND TUITION REFUNDS

The cost of MST at MSU is $1,500 for the two-week program. The cost covers participation in two intensive content-area courses in mathematics, science, engineering, or technology. Each student will also receive instruction in one of the Special Interest Clinics. Other items included in the program fee are: room and board, field trips, evening activities, a program T-shirt, notebook, and instructional materials.

• A check or money order of $100 ($75 tuition deposit and $25 application fee) must accompany all applications.
• Applications submitted after the postmarked date of April 25th must include a $10 late fee.
• The deadline for payment of the tuition balance is June 13th.
• Checks should be made payable to Michigan State University.
• The application fee of $25 is refundable only if the student is not accepted into the program.
• The tuition deposit of $75 is refunded only if: 1) the student cannot attend because of a medical emergency or serious medical problem documented by a doctor; 2) the student cannot attend because of insufficient financial aid; or 3) the student is not accepted into the program.

STUDENT CONDUCT

MST at MSU sets the highest expectations for its participants in both academic participation and personal deportment. Students will be dismissed from the program for use of alcohol, drugs, or tobacco, and for behavior that threatens the safety of themselves or other students.

COSTS NOT COVERED

Program costs do not include transportation to and from Michigan State University. The parent/guardian must arrange for the student to arrive at the University before 1:30 p.m. on Sunday, July 12, 2008 and arrange for the student to leave the campus after the closing program on Saturday, July 26, 2008 by noon.

FINANCIAL ASSISTANCE

A limited number of financial assistance grants are available for students who could not participate in MST at MSU without financial assistance. All financial aid grants are offered on the basis of need only. Need must be documented as requested.

If you have questions, call:

Kathee McDonald, Director
Office of Gifted and Talented Education (GATE) Programs
A division of The Honors College
186 Bessey Hall
Michigan State University
East Lansing, MI 48824-1033
(517) 432-2129
or check our Web site: www.msu.edu/user/gifted
The overarching theme of MST at MSU will be the investigation of the microscopic, macroscopic, and artificial universes. The curriculum will include: problem solving, experimentation, and real world applications in mathematics, astronomy, mechanical engineering, genetics, physics, physiology, technology, zoology, and a variety of technology-related courses.

### MSU Faculty

- **David Ventimiglia**  
  Ph.D. Candidate  
  Physics and Astronomy

- **Hanni Nichols**  
  Academic Specialist  
  Lyman Briggs School

- **Mariam Sticklen**  
  Professor  
  Crop and Soil Sciences

- **Dr. Craig W. Somerton**  
  Professor  
  Mechanical Engineering  
  Busak Oguz  
  MS Candidate  
  Andrew Siefert  
  MS Candidate

- **Jon Pumplin**  
  Professor  
  Physics and Astronomy

- **Jill Slade**  
  Ph.D. Candidate  
  Physiology

- **Jennifer Elaine Smith**  
  Ph.D. Candidate  
  Zoology and Ecology

- **Dean Meyer**  
  MA Education

- **Diane Herder**  
  Video Chair  
  Michigan Interscholastic Press Association

### Secondary School Faculty

- **Stacia Devries**  
  Science Teacher & Department Chair  
  Lansing Catholic Central High School

- **Meghan Elliott**  
  Math Teacher  
  Hartland High School  
  Hartland Consolidated Schools

- **Colleen Palmer, B.S., A.P. Biology Teacher**  
  Okemos High School  
  Okemos Public Schools

- **Terry Ballinger, B.S.**  
  Chemistry Teacher  
  Lansing Catholic Central

- **Mark Lathrop, M.S., Physics Teacher**  
  Everett High School  
  Lansing School District

- **Bud Ellis, M.A., Biology & Chemistry Teacher**  
  Addison High School  
  Addison Community Schools

- **Lori Kindsvatter, M.S., Biology & Chemistry Teacher**  
  Pewamo-Westphalia Jr./Sr. High School  
  Pewamo-Westphalia Community Schools

- **Vicky Wickham**  
  Laingsburg Community Schools  
  Hadley Pantilla  
  Owosso Public Schools

- **Zach Garner**  
  Laingsburg High School  
  Technology Intern
ASTRONOMY

Astronomy has been one of the most popular offerings at MST for the past several years, and THIS year promises to be even better! Classes will be taught in the Biomedical and Physical Sciences Building at MSU, the new home of the Department of Physics and Astronomy. Lectures will be presented in a state-of-the-art electronic classroom, with easy access to rich multimedia facilities that will showcase some of the outstanding imagery that makes astronomy so fascinating to both young and old alike.

Our location is right across from the world-famous Abrams Planetarium, where we will be conducting a number of sessions, featuring award-winning shows developed at MSU, and making the night-sky come alive, even if the clouds are swirling overhead. During the second week of the program, we will have the chance to use modern computer-driven telescopes to explore the REAL night sky from the rooftop observing station in the new Biomedical and Physical Sciences Building. Students will also get a close look at the remote observing center that provides a real-time link to the new SOAR 4.2m telescope in Chile that MSU co-sponsored. This exciting new telescope was dedicated in April 2004. See how it is being used to bring astronomy to Michigan!

During this course, students will explore the theories of atomic structure, electromagnetism, and nucleosynthesis; the “physics of astronomy”, that professionals use to infer the nature of stars and galaxies up to half the distance across the visible Universe. A little closer to home, we will explore in detail:

• the scale of the Universe: How BIG is BIG? (Hint: Bigger than you think!)
• the reasons for the seasons, the phases of the Moon and the apparent motion of the Sun across the sky during the course of the year
• getting to know the constellations with practice at the Abrams Planetarium
• what happens when stars die, how black holes and neutron stars form and behave, and the nature of dramatic supernovae that often accompany stellar death.

We will also have the chance to talk about new discoveries such as planets around other stars, the possibility of extra-terrestrial life, dark matter and the ultimate fate of the Universe. Every student will receive a copy of "Greatest Hits on the Web" - a tutorial on how to use the World Wide Web to explore and DO astronomy like a professional, written by Dr. Tim Beers and distributed to college students throughout the country. Come be a part of the excitement of Astronomy at MSU!

-David Ventimiglia,
Ph.D. Candidate and Stacia Devries.

Hands-On Video

Is it really this easy to create a full motion video? Can you slow action and create great music for videos? In this course we will learn both still camera and video camera handling for a full-length feature on the two weeks of MST camp. Using the newest editing tools for both video (Final Cut Pro and Motion) and music (Garage Band and Soundtrack Pro). Students will learn composition such as the rule of thirds, framing and leading lines. They will also explore depth of field using the video camera. Animation will help students make spectacular titles and moveable objects.

We will learn:
• Final Cut Pro--how to edit on a computer
• Photoshop--how to create video slides
• Camera Handling--both stills and video
• Use of tripods
• DVD Studio Pro--how to make DVD’s and DVD covers
• How to convert video for the web and podcasts

Every student will leave the camp with a copy of your DVD. Students will have the opportunity to create a personal movie as well.

-Diane Herder
Video Chair,
Michigan Interscholastic Press Association

CHAOS AND FRACTALS

Fractals are pictures that are infinitely intricate. Almost every modern movie uses computers to create “pictures” of landscapes that do not really exist, and the computers draw these pictures based on rules for creating fractals. One amazing feature of a fractal image is its self-similarity, how very small parts of the image may be magnified to look like the original.

We will find ways of using mathematics to create these beautiful images and we will find that repeated application of simple rules (such as pushing the “x^2” button on a calculator over and over) is the process. The process to create fractal images are very similar to the processes used to model and predict real-world events such as snow-storms, stock market growth, or slug populations. Much to our surprise, we will find that very simple rules can lead to chaotic behavior, where the flight of a butterfly in the Amazon can change the weather in Lansing, Michigan.

In this course we will learn how to draw fractal images, how to turn a drawing of a car into a drawing of a fern, how to play the Mathematical Game of Life, how calculators can create chaos, and how we can use our imaginations to precisely describe objects that have “fractional dimension”---neither 1-dimensional like a piece of string nor 2-dimensional like a piece of paper, but in between dimensions.

-Hanni Nichols, Professor, and Meghan Elliott
Can you really determine a killer’s identity from a blood sample? Can plants engineered with a firefly gene glow in the dark? Can plants be used for the production of biodegradable plastic and biofuel? How can physicians diagnose genetic disorders in a fetus? Can humans be cloned and how? What are concerns in modern genetics? Genetics is the scientific study of heredity and hereditary variation. Genetics began in the 1800s as a science designed to study the transmission of heritable traits that control an individual’s appearance. Since that time genetic methods and discoveries are catalyzing progress in other biological fields including medicine, veterinary medicine, pharmacology, agriculture, ecology, law, and even behavioral sciences. Modern genetics is also revolutionizing the military, computer science, bioming, and certain other areas of engineering. In our summer program we will begin with a study of DNA. DNA stores the information that directs the development and maintenance of every organism. Such biological blueprints are fundamental to life itself. Today scientists routinely manipulate DNA in the laboratory and use it to change the heritable characteristics of living organisms. In this course you will have an opportunity to work with the latest biotechnology equipment available and even manipulate DNA yourself. In addition we will:

• Assemble a model of DNA
• Extract your own DNA and make a DNA-necklace
• Discuss DNA fingerprinting by solving a simulated crime scene investigation
• Prepare a karyotype
• Genetically transform bacteria with a fluorescent gene from a bioluminescent jellyfish
• Discuss and observe PCR technology and the genome sequencing project
• Discuss the use of biotechnology in medical, pharmaceutical and veterinary sciences
• Separate fragments of DNA using a technique called gel electrophoresis
• Tour genetic engineering laboratories and view the operation of a Biolistic gun
• Debate concerns in the area of biotechnology

-Dr. Mariam Sticklen and Colleen Palmer
**Physiology**

Have you ever wondered how the amazing human body really works? If so, then you are already thinking like a physiologist! At the basic level, physiology helps you understand how living creatures do all the things they do: eat, run, jump, breathe, and keep their hearts beating. A more advanced understanding of physiology helps us lengthen our life span, push the limits of athletic performance, cure disease, and discover new medications. Physiology is the branch of the biological sciences dealing with the functioning of organisms.

The MST physiology course will be held in the state-of-the-art Biomedical & Physical Sciences Building at MSU. MSU Physiology is home of the largest undergraduate physiology program in the world. Classes include the use of much of the same equipment that college students use, and performing some of the same experiments as college undergraduate students.

The class will be a "hands-on" and "minds-on" experience, where you will learn whole-body and cellular physiology. We will also integrate body "minds-on" experience, where you will participate in and study:

- The web of life
- Feeding competition between lions & hyenas
- Predator-prey relationships
- Prey Capture & Feeding Strategies in Snakes
- Wildlife monitoring
- Small mammal capture & release
- Animal diversity at the MSU Museum
- Experimental design
- Research projects at the Potter Park Zoo

Students will embark on this experience by testing the predictions of ecological theory. They will research the complex relationships among plants and animals in the Serengeti ecosystem by creating a "living web of life" and a field guide on the organisms living in African grasslands. Students will witness predator-prey interactions first hand while watching snakes use their fascinating adaptations to feed on live prey. Students will also have the opportunity to hold several friendly snakes, including a 4-foot ball python! Have you ever wondered how biologists locate and monitor patterns of wild populations? Students will learn about techniques used to track wild animals. They will get up close and personal with local small mammals by setting live traps, and then handling and releasing these furry creatures back into their natural habitat.

Why do animals behave the way they do? To figure this out students will first analyze video footage of lions and hyenas fighting over large carcasses at Jenn Smith’s field site in Africa. Students will then apply their observation skills to design and conduct their own research projects at the Potter Park Zoo in Lansing.

We are looking forward to sharing this incredible adventure with you!

-Jennifer Elaine Smith, Ph.D., Candidate, and Lori Kindsvatter, M.S.

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**Zoology**

All animals within the ecosystem are interconnected within the web of life and shaped by the forces of natural selection. During this hands-on, research based course students will participate in and study:

- Cardiovascular System & Blood
- Respiratory System
- Nervous System
- Muscular & Skeletal System
- Exercise Science
- Metabolism & Body Temperature Maintenance
- Experimental Design, Statistics, and Data Analysis
- Animal Diversity at the MSU Museum
- Experimental Design
- Research projects at the Potter Park Zoo

Students will first analyze video footage of lions and hyenas fighting over large carcasses at Jenn Smith’s field site in Africa. Students will then apply their observation skills to design and conduct their own research projects at the Potter Park Zoo in Lansing.

We are looking forward to sharing this incredible adventure with you!

-Jennifer Elaine Smith, Ph.D., Candidate, and Lori Kindsvatter, M.S.

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**Digital Communication**

Did you know Christopher Columbus was wrong? We do live in a flat world. The international borders have shrunk and with the onset of Web 2.0 technology, digital communication can instantaneously connect groups of people across the globe using audio & video. This digital communications workshop will immerse learners in the Web 2.0 world of online collaboration, connectivity, and creativity.

Students will work on bringing their creativity to life using a variety of tools. Using iMovie, students will create short vignettes to persuade, entertain, and inform their audience. Have you enjoyed such movies or shows as Robot Chicken, Wallace & Grommit, Chicken Run, or Creature Comforts? Well if so, then you'll absolutely love our claymation project! Students will take an idea through the entire creative process from brainstorming to publishing their project on the web.

Join us to learn more about blogs and wikis. These wonderful tools allow individuals to become connected to the "flat world" in wonderful and interactive way. Discover the joy of blogging and making connections with peers around the globe through blogging. The web 2.0 world takes having a "pen pal" to a new level. Students will explore the wide range of possibilities that the world of web 2.0 connectedness has to offer via online with such tools as Skype. Students will develop a class wiki incorporating our classroom lessons and projects into an online resource for collaboration.

Creativity and having fun is a must for the digital communication class. Students will have the opportunity to explore their own creative side through guerrilla movie-making. We'll analyze some interesting film making techniques that the professionals use and put our own "twist" on them. Be ready for hilarity and hi-jinks!

On a more serious note, we'll discuss the implications of the "new permanent digital record" Internet users have. Myspace, facebook, youtube, blogs, etc. are a hot topic for moral, ethical, and legal implications parents and teachers have concerning students' use.

We will discuss the seriousness of what content students are putting out on the web, Internet safety, and create a Public Service Announcement regarding the importance of being "web savvy."

-Dean Meyer, MA Education and Vicky Wickham and Handley Pantilla
DESCRIPTIONS OF SPECIAL CLINICS

On the application form, students will indicate their preferences for the special interest clinics. Every effort will be made to match students to one of their two highest preferences.

Basketball Clinic
Instructor: Mari Croze
Basketball is a team game that is fun and great for fitness. In the basketball special clinic due to popular demand we will play a lot of 3-on-3, 4-on-4, and 5-on-5 games. You will also learn the importance of flexibility and which muscles are used when shooting jump shots and slam-dunks. We will have plenty of fun scrimmaging in preparation for our annual game with the MST faculty and staff.

Creative Writing Clinic
Instructor: Kristi Vartanian
This will be a fun, upbeat clinic focusing on the creative and expressive elements of writing. Students will write each day and share their work with their peers with an emphasis on positive expression and encouragement. Daily exercises will vary and may include: a descriptive piece, a humorous narrative or critique, writing for mystery, etc. Each student will complete a short story as the final project of the clinic. Students are encouraged to bring pencils, paper, a folder of their work, a creative spirit and a sense of humor to class.

Flash I: Motion Graphics and Animation
Instructor: Deon Foster
Do you like cartoons, music videos, or anime? Using the same computer techniques and tools as famous animators, you will learn just how easy it is to bring your dreams to life. If you can think it, you can do it. Start your engines and prepare for flight, for in a few short moments you will be animating like the pros. All aboard, it's time to blast off to a world where your imagination never ends.

Flash II: Interaction and Games
Instructor: Ben Rhodes
In this class we take animation to the next level by giving control to the user. Adobe Flash is a tool that we can use to build animations, games and applications that can be viewed on the web. We will start with motion design and quickly move on to building controls to interact with our creations. We will be learning how we can use ActionScript, Flash's programming language, to accomplish this. Whether you are into art & animation or math & programming, this class will challenge and engage you.

Basic Martial Arts & Self Defense
Instructor: Dean Matsudo
Students will be introduced to the basics of Martial Arts & Self Defense. The class will be a mixture of various martial arts with an emphasis in basic Tae Kwon Do. Students will be instructed in warm-up and stretching exercises, basic techniques of kicking and punching, self defense awareness and techniques, customs of the Orient, and they will learn to break a board. Each student will be provided with a uniform shirt. This class will challenge you mentally and physically while you learn about the traditional Oriental values. By the end of the class, all students will achieve the goal of breaking a board with their hand or foot. YES, each student will learn the technique that it takes to break a wooden board (there is no magic or trick involved). This may be the start of the path of a future black belt or Master.

Visual Arts Clinic
Instructor: Heidi Irvine
The Visual Arts Clinic will involve a medley of art projects and mediums. The group will begin with a ceramic project to be fired and taken home by the end of camp. Other projects will include 3-D materials (jewelry making, sculpture) as well as 2-D projects (pencil, ink, printmaking, painting). This class can be enjoyed by any level of art student and will help build basic skills and improve on the talents already possessed. This class is a study of self-exploration and simply tons of fun.

Soccer Clinic
Instructor: Andrew Floyd
Come take part in the world's most popular sport! This clinic will cover soccer basics such as passing, dribbling, and shooting. We will focus both on improving individual technical ability and learning team tactics. Friendly competition and games will make for a great time for everyone. Whether a beginner or an expert, this clinic has something to offer players of all ability levels.
Student's Name
___________________________________________________________________________________

Social Security Number ____-____-____ Date of Birth ____/____/____
Age __________ Gender: M ______ F ______ Grade Level in 2007/08__________________________

Address ______________________________________________________________
City __________________________________________ State ______ Zip ______________

Telephone (_____) ______________________ E-mail Address __________________________________

Name of School Attended in 2007/08 ______________________________________
School Address _____________________________________________________________
City __________________________________________ State ______ Zip ______________

School Telephone (_____) ______________________ Local School District ______________
Intermediate School District ___________________ Expected Year of Graduation from High School _____
(For Michigan residents only)

Parents' or Legal Guardians' Names:
Father
Last                                                            First                                              Middle Initial
Daytime Telephone ______________________  Evening Telephone ______________________

Mother
Last                                                            First                                              Middle Initial
Daytime Telephone ______________________  Evening Telephone ______________________

Parent Address ________________________________________________________________
(If different from student address above)

Please check here if you previously attended MST at MSU ______________

SAT Scores: MATH ________ Critical Reading ________ TOTAL ________ DATE ___________
(The College Board Scholastic Aptitude Test)
ACT Scores: MATH ________ READING ________ COMPOSITE ________ DATE ___________
(The ACT Assessment)

Please prioritize the courses in rank order from 1 through 9. One (1) is your first choice, two (2) is your second choice, etc. Students will be placed in two classes. Please carefully read the course descriptions in the brochure before choosing.

Astronomy _____ Chaos and Fractals _____ Desktop Publishing_____ Digital Communications_____ Genetics/Biotechnology_____ Hands-On In Video_____
Mechanical Engineering______ Physics______ Physiology______ Zoology_____

For Office Use Only

Date Received ___________________
Status __________________________
Scholarship ____________________
Each student will be scheduled for one (1) Special Interest Clinic for the two weeks. Each applicant must rank his/her preference of clinics from 1 to 7. One (1) is the first choice, two (2) is the second choice, etc. (See clinic descriptions in the brochure.)

☐ Basketball  ☐ Basic Martial Arts & Self Defense  ☐ Creative Writing
☐ Flash I  ☐ Flash II  ☐ Visual Arts Clinic  ☐ Soccer

SIGNATURES

A. The following statement must be read, signed and dated by the student applying for admission to MST at MSU.

I have carefully read the brochure describing MST at MSU and agree to abide by all rules and regulations of the program if I am accepted for participation.

__________________________________________________________  ______________________
Signature of Applicant                                         Date

B. The following statement must be read, signed and dated by the parent/guardian of the student applying for admission to MST at MSU.

I have read the brochure describing MST at MSU and approve my child’s application for admission.

I am enclosing a check or money order for $100.00 made payable to Michigan State University with this application. This check includes a $25.00 application fee, which I understand is non-refundable unless my child is not accepted.

Should my child be accepted, I understand that the balance of the tuition of $1,400.00 ($1,500.00 less $100.00) must be paid by June 13, 2008. Scholarship students must pay partial tuition by June 13, 2008.

I give permission for my child to be photographed, interviewed or surveyed as the effectiveness of the program is measured. I understand that the photographs and direct quotes from the students may be used for program promotion, which includes the GATE office website. I understand that no photographs or quotes used this way will have my child’s name connected to them. I also give permission for my child to participate in program field/study trips.

__________________________________________________________  ______________________
Signature of Parent/Guardian                                      Date

MUST BE POSTMARKED
BY APRIL 25, 2008

Be sure you have included:
☐ Completed MST application form
☐ Complete current grade report
☐ Parent/Guardian approval form
☐ Teacher recommendation
☐ A copy of the SAT or ACT scores
☐ Student’s essay (section 4)
☐ $100.00 deposit
☐ Financial aid request form (if used)
☐ Documentation on school letterhead of free or reduced lunch qualification -OR- any additional support documents

Please return to:
Office of Gifted and Talented Education (GATE) Programs
186 Bessey Hall
Michigan State University
East Lansing, MI 48824-1033
Student’s Name _____________________________________________________________

Last                                                First                            Middle Initial

Check only those statements that are true.
My son or daughter:

____   is comfortable with other students.
____   is comfortable with adults.
____   can function independently when necessary.
____   accepts direction from others.

Please comment on any of the above items if you think the information will help us make MST at
MSU a more positive experience for your son or daughter.

_______________________________________________________________________________
_______________________________________________________________________________
_______________________________________________________________________________
_______________________________________________________________________________
_______________________________________________________________________________

I/We have read the description of MST at MSU and I/we approve of my/our child’s participation in the
program from July 13 – July 26, 2008.

___________________________________________________________________________________
Signature(s) of Parents/Guardians                                                                                 Date
Student’s Essay (to be completed by the student)

In at least two paragraphs, please describe the following:

1) Why you would like to participate in MST at MSU, and
2) Why you feel you should be selected for MST at MSU.

This can be done on a word processor and attached if you wish.
TEACHER RECOMMENDATION

(To be completed by the student’s teacher of science, mathematics, or technology)

Student’s Name ____________________________________________________________________________________

Last                                                     First                              Initial

Address ________________________________________________

City ________________________________________  State _____ ____  Zip __________________________________

Please present the reasons you believe the above-named student has demonstrated sufficient knowledge and skill to participate in a program that focuses on challenging learning experiences in mathematics, science and technology.

What are the student’s personal and/or academic strengths and weaknesses?

Teacher ________________________________________ Course Taught _____________________________

School __________________________________________________________________________________

Address __________________________________________________________________________________

City ________________________________________  State _________________  Zip __________________

Please return this sheet to the student in plenty of time for the student to send with the rest of the application by April 25, 2008 to:

Office of Gifted and Talented Education (GATE) Programs
186 Bessey Hall
Michigan State University
East Lansing, MI 48824-1033
A **FEW PARTIAL** financial aid grants will be available for students who would not be able to attend the program without financial assistance. If you wish to be considered for financial assistance, please complete this form and furnish the information requested.

Student’s Name _______________________________________________________________

Address _______________________ City ___________________ State and Zip ____________

Telephone ________________________________

1. Parents or Guardians please provide verification that your child qualifies for free or reduced lunch on official school letterhead to be considered for GATE financial aid.

2. Parents or Guardians should include any additional information which will support the student’s need for scholarship assistance such as federal financial assistance.

3. Given that MST at MSU will cost $1,500.00 per student, how much financial assistance do you feel is essential? $___________. MST@MSU scholarships will range from $100.00 to $750.00.

4. Please do not apply for financial aid unless you can document need by sending the requested information.

Parent’s/Guardian’s Signature                                                                Date

Return this form postmarked by April 25, 2008

Office of Gifted and Talented Education (GATE) Programs  
186 Bessey Hall  
Michigan State University  
East Lansing, MI 48824-1033
Daily Schedule

7:00 a.m.  Wake Up
7:45 a.m.  Breakfast
9:00 - 11:00 a.m.  First Academic Class
11:30 a.m.  Lunch
12:30 - 2:30 p.m.  Second Academic Class
3:00 - 4:15 p.m.  Special Interest Clinic
5:30 p.m.  Dinner
7:00 - 9:30 p.m.  Study Period or Planned Group Activity
9:30 p.m.  Snack Time
10:00 p.m.  All Students in Rooms, Preparation for the Next Day
10:30 p.m.  Lights Out

Program Calendar

July 15, 2007  12:00 - 1:30 p.m. Registration
July 15, 2007  2:00 - 4:00 p.m. MST at MSU Orientation for students, parents, faculty and staff
July 16 through July 27, 2007  MST at MSU classes in session from 9:00 a.m.-4:15 p.m. on Monday - Friday for the two weeks of the program
July 21, 2007  Field trip to Camp Highfields at Onondaga, Michigan
July 23, 2006  Planned activities
July 27, 2007  Evening of talent by program participants
July 28, 2007  8:30 - 9:15 a.m. Check out of residence hall
July 28, 2007  10:00 - 11:30 a.m. Closing Program for participants, parents, and guardians

Administrative Staff

Director
Kathee McDonald
Gifted and Talented Education Programs
Michigan State University

Coordinators
Troy Haney
Teacher
8th Grade Science
Mason Public Schools

Shannon Duncan
Teacher
Lakeview High School
St. Clair Shores, MI
Teacher for the Deaf/Hard of Hearing

 Resident Advisors

There will be one (1) resident advisor per ten (10) students, with an equal number of female and male RAs. All are current students or recent graduates of MSU.