

Minnesota Institute

FOR TALENTED YOUTH



Summer 2012



ExplorSchool

Grades 4 – 6

June 18 – June 29



Expand Your Mind

Grades 7 – 12

Session A: June 18 – June 29

Session B: July 9 – July 20

www.mity.org

MITYWelcome

Minnesota Institute for Talented Youth offers academic enrichment for bright and motivated students in grades one through 12. Diverse students are given the opportunity to expand their knowledge, challenge their perspective and inspire their future.

Since 1967 MITY's rigorous classes taught by master teachers have attracted talented students from across the country and around the world.

If you are eager to discover, you will thrive at MITY. Imagine studying with passionate teachers and participating in exceptional experiences—best of all, alongside other students who also love to learn and will become lifelong friends.

MITY offers three academic enrichment programs for bright and motivated students in grades one through 12. Diverse students expand their knowledge, challenge their perspectives and inspire their future.

Learn more and apply today for an experience like none other in Minnesota. MITY will offer challenging enrichment and lifelong memories.

Roberta Seum
Executive Director
Minnesota Institute for Talented Youth

“MITY is their growing season. It provides the food, fertilizer, water and sunshine necessary for these students to grow. ”

– MITY parent 2011

MITY 2011 Supporters

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Thomson Reuters for their in-kind printing of this catalog.

Thank you to all the parents, staff, board members and friends of MITY for their support!

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“MITY’s robust programs should be accessible to all interested, qualified students. It embodies the very antidote to boredom, a toxic state for our children.”

-parent

ExplorSchoolWelcome

ExplorSchool is a full-day two-week summer experience for bright and motivated students currently in grades four through six.

You will expand your knowledge, explore your interests, challenge your perspective and inspire your future.

This is your chance to dive into your favorite topics – from acting to chemistry, mock trial to electricity, aerodynamics to photography.

Far more than challenging academics, ExplorSchool offers:

- **exceptional teachers** who are engaging, inspiring and excited to be there;
- **small class sizes** and individual attention so that everyone feels welcome to learn;
- **planned social opportunities** that might just result in lifelong friendships; and
- **half-day classes** for extended time to deeply explore topics of interest and take on new challenges.

ExplorSchool is held at St. Paul Academy and Summit School, centrally located in the Twin Cities. You'll also leave the building for unique, course-related field trips.

ExplorSchool is not just about classes. Each day students experience the noontime special events and recreation program to help build friendship and community. This "super rec time" includes activities such as chess tournaments, soccer, board games, ultimate Frisbee and relaxation. This is a chance to participate in an enjoyable, organized break between classes.

Sound like fun? Hundreds of students like you agree!

Learn more. Experience the perfect mix of academic challenge and summer fun. Decide if ExplorSchool is a good fit. If it is, apply today for a summer experience you'll anticipate year after year.

ExplorSchool Coordinator Kristin Matthews Long earned a B.A., psychology, from Macalester College. She has taught at the pre-school and elementary levels and is currently working in the Saint Paul Public Schools community education program. She has worked for a number of years with gifted children.

"It is another way to enjoy school and refresh students to return to their regular schools. Most importantly is the unity it breeds in the diversity of the student."

– parent



Dates: June 18 – June 29, 2012

Location: St. Paul Academy and Summit School, 1712 Randolph Avenue, St. Paul

Tuition: \$560

Tuition includes all instructional costs. Students bring their own lunch and snacks. A deposit of \$280 is required with the application; \$25 is non-refundable, the full \$280 is non-refundable after June 1. The balance of the tuition is due two weeks after you receive your acceptance package to ensure your spot in the class.

Admission:

Students in 4th, 5th and 6th grade during the 2011-2012 school year are considered for admission. No single factor decides an applicant's admission. All the supporting material is considered. Minnesota Institute does not discriminate on the basis of race, religion, color, gender, disability, national or ethnic origin in administration of its education policies, admission policies, or financial aid programs.

Application Procedure:

1. Send MITY the completed application, teacher recommendation, and a copy of most recent report card.
2. Write a short essay, no more than 200 words, about yourself and your interests.
3. Send a deposit of \$280 or completed Financial Aid Form
4. **The application deadline is Monday, April 23.** A student will be considered for admission when all of his/her application information has been received. Decisions are made on a rolling admission basis. Acceptance emails will be sent as soon as all application information has been received.

Financial Aid:

Financial aid for partial tuition is available for students whose family demonstrates financial need. Please go to MITY's website at www.mity.org or call the office at 651-696- 6590 for a financial aid form (FAF).

Daily Schedule:

Morning Classes 8:30 a.m.-11:45 a.m. Students may be dropped off at 8:15a.m.
Lunch/Rec Time 11:45 a.m.-12:45 p.m. Students need to bring their lunch
Afternoon Classes 12:45 p.m.-4:00 p.m. Students should be picked up at 4:00 p.m.

Extended Day:

Extended day is available for students in the morning from 7:30 a.m. – 8:30 a.m. and after school from 4:00 p.m. – 5:00 p.m. The cost is \$50 for before- or \$50 for after- school care or \$90 for both during the two weeks of the program. Register on the application form.

Transportation:

The Institute does not operate school buses, but tries to assist in car pool arrangements. Families who indicate on their application form an interest in car-pooling will be included on a car-pool list. This list will be sent to all families of enrolled students in mid-May.

All payments and inquiries should be directed to:

Minnesota Institute for Talented Youth, 1600 Grand Avenue, St. Paul, MN 55105
Phone: (651) 696-6590 Fax: (651) 696-6592

For more details and maps please visit our website at www.mity.org

ExplorerSchool2012Classes

Morning Classes

Amazing Amusement Parks
The Art and Science of Special Effects
Creating Cool Chemistry
Crimes and Clues
History Scouts
Picture This!
Sports: A Scientific Approach
Whose Line is it, Anyway?

Afternoon Classes

The AEROBIC Newspaper:
Telling St. Paul Stories
Creating Cool Chemistry
Crossing the River
Exploring Electricity and Magnetism
Exploring Aerodynamics
Feel the Glee
Mock Trial

MORNING CLASS DESCRIPTIONS

Amazing Amusement Parks: A Scientist's Playground

Your stomach is tensed up and you begin to sweat ever so slightly. You inch up the roller coaster's steep slope; you are nervous and excited and hope the designers knew what they were doing. Amusement parks are a scientist's playground. Thrill rides and midway games use basic laws of nature. Why do roller coaster cars stay on the track? Why do people get motion sickness? What are the odds of winning a game? Explore how forces, laws of motion, energy, and probability make the amusement park fun. You will investigate G-forces and why people throw up on coasters. Get ready to design and build your own roller coaster and midway games as we explore the science behind the fun!

The Art and Science of Special Effects

Ka-boom! Special effects help to make your favorite movies and television shows more exciting, suspenseful, and engaging. Have you ever wondered how special sound and visual effects are created? Some of the most appealing special effects reach back to the early stages of theater and are still fun to create today! Explore how to construct your own effects and the artistic and scientific principles behind them. Learn why medieval special effect artists were called the "Master of Secrets." You will work with your fellow artist and technicians to create unique recordings, performances and the effects to support them. Discover the Master of Secrets within you!

Creating Cool Chemistry

Have you ever looked carefully at the word chemistry and noticed the last three letters? TRY!!! To explore the mysteries of chemistry you will try many experiments in this hands-on class. Discover how the chemicals used on winter roads are used to make ice cream! Transform milk into glue! Implode a pop can without even touching it! Eat marshmallows frozen in liquid nitrogen! Extract iron filings from Total® cereal! Make hot and cold packs! Curious and intriguing results will be observed while improving your lab skills. Come discover chemistry concepts that will change the way you look at the world around you.

Crimes and Clues

Have you ever thought about becoming a forensic scientist? Would you like to learn more about DNA, fingerprints, blood, mystery powders, and the analysis of tracks, hair fibers, and handwriting? This is your chance to learn the basics of what it takes to become a forensic scientist. You will learn how to gather physical evidence, clues, and observations of crime scenes. After exploring the basics of crime science investigation you will use your skills to collectively solve a crime. Can you crack the case?

History Scouts: Collecting, Curating and Making Sense of Things Through Museum Craft

What's the difference between a junk drawer—with its spare keys, lone marble, lost Lego guy and old rubber coated baby spoon—and a museum exhibit? Not as much as you think: Imagination and organization make the difference, the key components of the art and science of museum craft. As History Scouts, we will bring beauty, order and meaning to the collections of things we now have—or collect in the class. We will do this through the use of exhibit theory and display arts, and development of historical context. Field trips to the Minnesota History Center and local museums will ground you in using historical resources to make the most of your collections, and to prepare you for applying these same skills to creating winning National History Day projects in middle school. So plumb the depths of your messy drawers, check under the bed, bag it up and bring it in for a History Scout makeover!

Picture This! (A.K.A. Turning A Negative into a Positive)

Do you like to take pictures? Then come and explore black and white photography. First, you will learn how to take pictures and experiment with various photo compositions. You will also explore different types of pictures. We will be taking fun field trips and nifty neighborhood excursions to find festively photogenic material. Next, we will develop our film, crop negatives, and enlarge photos. Finally, you will frame your best photos for exhibition in the annual Picture This gallery show. Note: Your own 35mm camera is helpful, but not necessary; if you have one you should bring it to the first day of class.

Sports: A Scientific Approach

Do you love science, sports and experiments? Do you wish you could run faster, throw farther, or score more goals? This is the class where it all comes together! In this hands-on, minds-on, and bodies-on class we'll use the scientific process to look at sports and analyze them from a scientific point of view. You will investigate the fascinating relationship between physiology, physics and sports, while enjoying the process of 'playing' with science. You will use formulas to calculate speed and acceleration while learning about and experiencing Newton's laws of motion. You will ask questions about sports and discover the answers through investigations and experiments on the field or at the court. Invent a new sport or take your game to the next level. Discover the science behind the sports you see, play and cheer for.

Whose Line is it, Anyway?

Swing from the tangly vines of a Brazilian rainforest...escape the wrath of a 14 foot lizard...Become a rock star and perform for thousands of screaming fans! Anything is possible when you use your imagination! In this class, students will learn the basic rules of improvisation through theater games, vocal exercises and physical warm ups. Students will also learn how to create characters and build a scene. Zaniness will most likely ensue, so beware!

AFTERNOON CLASS DESCRIPTIONS**The AEROBIC Newspaper: Telling St. Paul Stories**

Can you march, do squats or pushups while you write and type? Does your idea of summer fun include walking to research St. Paul's historic neighborhoods such as Summit Avenue? Or sleuthing out the history of cookies in local bakeries? If so, we need you—and your active feet, hands, minds and imaginations—on our staff of The Aerobic Newspaper. We will engage mind and body in fitness learning while we tell stories in print, on the Web site we build and through an interactive iPad magazine we design with Adobe's Digital Publishing Suite. Walking 1-3 miles a day, we will report, research, interview, photograph, film, write, edit, design, lay out and publish while we apply a continuous-movement theory of metabolism known as NEAT, short for Non-Exercise Activity Thermogenesis.

Creating Cool Chemistry

Have you ever looked carefully at the word chemistry and noticed the last three letters? TRY!!! To explore the mysteries of chemistry you will try many experiments in this hands-on class. Discover how the chemicals used on winter roads are used to make ice cream! Transform milk into glue! Implode a pop can without even touching it! Eat marshmallows frozen in liquid nitrogen! Extract iron filings from Total® cereal! Make hot and cold packs! Curious and intriguing results will be observed while improving your lab skills. Come discover chemistry concepts that will change the way you look at the world around you.

Crossing the River

Solve puzzles, crack codes, and deconstruct math games in this course on mathematical puzzles and problem solving. Students will develop strategies for attacking tough puzzles and problems, solve classic insight problems and riddles, and get together for small- and large-group problem solving tasks. Aside from just being fun, this class will be great preparation for math competitions like Math Masters and MathCounts, and a challenging supplement to intermediate and middle school math courses.

Exploring Electricity and Magnetism!

Have you ever felt static on a dry winter day and wondered why you sometimes get a shock when you touch the doorknob? Not only will we answer this question, we'll play with simple electrical circuits, explore lightning on a small scale, build the world's

smallest motor and try to turn on a light bulb with just a battery and a couple of wires. We'll build an electromagnet and determine how much power is used in simple, every day appliances. Finally, we will discover how a Van Der Graaf generator can make your hair stand on end! Become familiar with the "leaping" electrons - join us for a multitude of hands-on electricity and magnetism experiments!

Exploring Aerodynamics

Have you ever wondered how birds fly? Are you interested in understanding how something as large as an airliner is able to move through the air? Would you like to learn how to design and build successful hot-air balloons, gliders, propeller aircraft and more? This class is dedicated to the aspiring designer and pilot. We not only have planes that fly everywhere we also have craft that explore the farthest reaches of our solar system. We will explore the history of flight and we will be actively involved in designing and testing our own flying machines. Join us for a chance to build and test large hot-air balloons, paper gliders of all kinds, balsa gliders that you design, propeller-driven balsa aircraft, rockets and more.

Feel the Glee

"If you have always wondered what it would take to be an actor on the TV show Glee, or The Children's Theater Company, this is the class for you. Each day we will practice vocal exercises, physical games that train your body as a performer and of course we will be acting! Bring your voice and your body and you will learn how to use both...??? You will have a chance to perform in a monologue, be part of an ensemble, or director others from scripts of your favorite plays, movies or TV shows. We will add to your acting arsenal and give you more tools on your way to becoming a performer."

Mock Trial: The Best Defense Doesn't Have To Be Offensive

Have you ever thought it would be fun to be a lawyer or a judge or to be part of a trial? Learn how to do an opening statement, objections and closing arguments. Learn how to lead witnesses and influence your friends. Perfect your public speaking skills, your persuasive skills and your problem solving skills. Perform such famous roles as judge, bailiff, lawyer and witness. You will learn basics of research and trial preparation as well as improve your ability to think on your feet. Our two weeks will culminate in a trial performed in front of a jury of your peers

"The whole experience at MITY is very complete. They combine academic with recreation. The combination of both is necessary for all minds to act more productive."

– parent

ExpandYourMindWelcome

EYM is a two-week summer experience for bright and motivated teenagers in grades seven through twelve.

You will expand your knowledge, challenge your perspective and inspire your future.

This is your chance to immerse yourself in an intense study of a single course – from acting to chemistry, jazz band to mock trial, Latin to creative writing, psychology to engineering.

Far more than challenging academics, EYM offers:

- **exceptional teachers** who are engaging, inspiring and excited to be there;
- **small class sizes** and individual attention;
- **lifelong friendships** with like-minded students;
- **residential or commuter** options;
- **recreational activities** and social events between classes;
- **a high level of learning** without the focus on letter grades;
- **expert guest speakers** to enhance and expand your thinking; and
- **course-related field trips** to destinations like Guthrie Theatre and MN Supreme Court.

EYM is held on the campus of Macalester College in Saint Paul, Minnesota. Centrally located in the Twin Cities, the campus has a neighborhood feel. From its stages to chemistry labs, rehearsal halls to classrooms, cafeterias to athletic fields, you will catch a glimpse of what college life will really be like.

EYM is not just about classes. Each day there is a mid-day break where we offer a full slate of recreation activities and special events. From chess tournaments to ultimate Frisbee, from Bocce Ball to beading workshops and “Bubble Magic”, all our students find the right fit for their interests and opportunities to meet students from other classes.

Learn more. Experience the perfect mix of academic challenge and summer fun. Decide if EYM is a good fit. If it is, apply today for a summer experience that promises to inspire your future and foster connections that last a lifetime.

“This was an utterly incredible experience; everyone was humorous, engaging and well-informed. The activities were spectacular and the teachers amazing!”

- student



Dates: Session A: June 18 – June 29, 2012
Session B: July 9 – July 20, 2012

Location: Macalester College, 1600 Grand Ave., St. Paul, MN

Tuition: Commuter: \$560 per session Residential: \$1400 per session

Commuter tuition includes all instructional costs. It does not include lunch; students should bring their own lunch and snacks, or they can purchase their lunch at the Campus Center grill. Residential tuition includes instructional costs, supervised dorm room, and meals. A deposit is required with the application (\$280 commuter, \$700 residential); \$25 of the deposit is non-refundable, the full deposit is non-refundable after June 1. The balance of the tuition is due two weeks after you receive your acceptance package to ensure your spot in the class.

International Students: Please check website for more information.

Admission:

Students in grades 7 through 12 during the 2011-2012 school year are considered for admission. No single factor decides an applicant's admission. All the supporting material is considered. Minnesota Institute does not discriminate on the basis of race, religion, color, gender, disability, national or ethnic origin in administration of its education policies, admission policies, or financial aid programs.

Application Procedure:

1. Send MITY the completed application, teacher recommendation, and a copy of most recent report card or transcript.
2. Write a short essay, no more than 200 words, about yourself and your interest.
3. Send a deposit (\$280 commuter, \$700 residential) or completed Financial Aid Form.
4. Students will be considered for admission when all application information and deposit have been received. Acceptance emails are sent when application materials are complete.

Financial Aid:

Financial aid for partial tuition is available for students whose family demonstrates financial need. Download the financial aid form on the website www.mity.org or call the office 651-696 6590 for a financial aid form (FAF) to be sent to you.

Daily Schedule:

Students take one class per session from 8:30 a.m. to 4:00 p.m. Lunch is at 12:00 p.m. and our recreation program is from 12:30 p.m. to 1:30 p.m., offering students numerous extracurricular options.

All payments and inquiries should be directed to:

Minnesota Institute for Talented Youth, 1600 Grand Avenue, St. Paul, MN 55105
Phone: (651) 696-6590 Fax: (651) 696-6592

For more details and maps please visit our website at www.mity.org

Session A (June 18 – June 29)

Math, Science, Technology

Algebra & Trigonometry
Body and Environment
CSI - MITY
Electricity and Engineering
Math: Programming – *Let the games begin*
Physics Phenomena
Seeing Things with Cameras and Computers

Humanities

All Roads Lead to Rome
Beyond Twitter
Creative Writing
Experimental Economics
Say What?
World Religions

Arts

Acting Symposium
The Art of Film Making
MITY Jazz Band

Session B (July 9 – July 20)

Math, Science, Technology

Astrophysics
Chemistry is a Blast
Energy Explorations and Alternatives
Forensics – *You Can't get away with Anything*
Mathematics of Music
Pre-Calculus

Humanities

Beginning Debate
Mock Trial and Current Legal Issues
Pstimulating Psychology
Social Issues and Action
Write Stuff – *Produce, Polish and Publish*

Arts

Architecture and Place
Improvisational Project
Lyric Theater Magic
Studio Art



Session A – MATH, SCIENCE, TECHNOLOGY**Algebra and Trigonometry: Gateway to Calculus**

This comprehensive and challenging course prepares the students for the SAT and ACT as well as calculus. It is structured to meet the ever-increasing demands of the mathematics classroom and the ever-increasing variety in the needs and interests of students.

Function is the underlying and unifying concept of almost every topic in this course: polynomial, logarithmic, exponential, and circular. Language is clarified by concisely worded definitions and explanations. The greatest contribution a course at this level can make to learning calculus is to provide a firm foundation through topics such as limit and continuity. This course is designed to challenge and motivate students who want to deepen and expand their knowledge of mathematics.

Body and Environment

As a student biologist, you will learn and understand how all aspects of the natural world interact. We'll study how an organism is dependent on the efficient functioning of its body systems and how those systems are affected [positively and negatively] – by their environment. We will use discussion, hands-on activities, and dissection to develop a greater understanding of how these systems perform extraordinary functions. We will also explore how organisms are affected by both their biological (parasites and diseases) and physical environment (air/water quality and ecosystems). At the end of this two week adventure, student biologists will be able to demonstrate how body systems function independently and collectively, and how different environmental conditions alter how our systems work.

CSI: MITY

Have you ever thought about becoming a forensic scientist? Have you wanted to examine documents and analyze fingerprints and DNA? Here's your chance to learn and practice some of the scientific techniques forensic scientists use to solve crimes. Forensic scientists are trained to use science as it relates to the law. We will learn about evidence, how to collect and process it, how to analyze DNA and fingerprints, and how to solve the clues left at a crime scene. We'll talk to experts in forensics. We'll also look at the legal and ethical issues involved in crime solving. Students should have basic curiosity and a problem solving attitude.

Electricity and Engineering

Every day we interact with hundreds of electronic devices without thinking about it. This hands-on course will show how electronics and mechanics are used to engineer solutions to the world's problems. Specifically, we will investigate one of the more interesting applications in engineering: robotics. We will also explore questions such as: How do circuits work; How do magnets convert electricity to motion; How do linkages achieve a desired motion? Also, there will be an introduction to the various engineering disciplines and the roles engineers play in high-tech organizations. If you have ever looked at electronics or mechanisms and wondered, "How does that work?" this will be the class for you. Hopefully you will come away with some answers and a lot more questions.

Math and Programming: Let the Games Begin!

Did you ever wonder how that video game was really made? In this class you will uncover the mystery behind video games and create one of your very own. It will be complete with tunnels, ramps, and whatever else you can dream up. Yes, this class is all about games. Did I mention Mini golf? Bring your putter and Let the Games Begin! So, where's the math? It's everywhere! We will use algebra topics to move the ball, and geometry to bounce it off the wall. Throw in some linear equations, Pythagorean theorems, random integers, and inequalities and we all start to see the math method behind the madness of programming. Prerequisite: Algebra 1 or instructor's approval. Please bring your own TI83 or TI84 if you have one.

Physics Phenomena

This class explores how and why objects move the way they do. Spend the time to learn what the laws of Physics mean and then apply them, pick them apart, and experience their implications. We will examine the simplest sorts of motion, figure out the forces involved and apply them to real life situations. Why do you feel the way you do when riding a high-speed elevator? How fast is a roller coaster? Does gravity act the same on all bodies? How do rockets actually work, and can you build one that will actually launch? Your mathematical skills will be honed with actual data, collected with a variety of equipment. Field trips to a local amusement park and other off-campus activities are anticipated.

Seeing Things with Cameras and Computers

This class is all about how to see and be seen. We will use still and video cameras and the computer in creative ways to see things and express ourselves. We will discover many ways of seeing people, ideas, relationships, feelings, music and nature. We will learn how to see a good idea and creatively express it with words and images. We will make a media rich montage of still photographs, writing and videos. We will share our work on social media like Facebook and TUMBLR. We will explore some of the consequences and effects of social media. The class is designed for students at all skill levels. No previous technical experience is necessary.

Session A - HUMANITIES

All Roads Lead to Rome: An Introduction to Latin and to Roman Culture

Is Latin a dead language? Minime! That's Latin for "No way!" Latin and the culture of ancient Rome are very much alive in our own language and society. In fact, 60% of the English language comes from Latin. Using the Cambridge Latin course, we will learn the fundamentals of the Latin language with special emphasis on word roots, suffixes, prefixes and vocabulary building. We will also study ancient Roman—its art, songs, customs, architecture and myths. An "architectural scavenger hunt" in downtown St. Paul and a visit to the Minneapolis Institute of Art's art collection will be two highlights of this course. An authentic Roman banquet will be the culmination of this course!

Beyond Twitter

To get into the college of your choice and then land that dream job you will need to know how to present yourself well. In this course you will master the art of the interview. You will learn how to focus your response to questions and how to ask questions that

get you the answers you need. We will be working with video cameras so you will be able to watch as you improve your communication skills. You will learn that everything about how you look, how you sound and how you act sends a message. We will study the differences in the way males and females communicate. We will also work resume and letter writing. Our guest speakers will be people who use interview skills in their professions and people who are frequently interviewed. We will also invite wardrobe and style consultants to our class for their advice. If your parents were taking this course we would call it "Communication Skills for the Busy Executive." When you are done with this course you should be ready to face those tough interviews in your future.

Creative Writing: "Stories are light. Tell...a story. Make some light."

Be you India Opal Buloni, a soldier brave and true (and a boy of ten), Edward Tulane almost entirely made of china, a dirty dog named for a grocery store, a small mouse (named for sadness) with ears too big, or even a princess named Pea we hope you will join us as we celebrate a decade of dancing with wondrous words. Kevin and Ellie would love to see you as MITY writers embark yet again on our own miraculous journey. Like Despereaux we will challenge ourselves to confront foes and forms, knowing our poems, stories, essays, and peers will lead us back to the light. As always we will be swept away, though hopefully not overboard like Edward, in the whackiness and wonder of MITY time. In the end, though, we will wend our ways back home, though our journeys and jottings may have led us far afield. Perhaps, soup may even be served, regardless of any laws against it - or at least a stew seasoned with the special strengths of stunning MITY minds.

Experimental Economics

Have you ever wondered why people buy bottled water when tap water is just as good? Or why families in Africa typically have many more children, while in wealthier societies like Japan the birthrate is so low. Or why athletes and entertainers get paid so much, while teachers and nurses get paid so little? In this course, you'll learn that economics is about much more than money, the stock market, unemployment and inflation. It's about how and why people make the decisions they do. Economists know that we can't have it all, so we're constantly facing choices. Study or play outside? Learn piano or guitar? Take a European vacation or buy a new car? In this course, we will use simulations, games, experiments and current events to learn and apply the economic way of thinking. At the end of two weeks, student economists will be experts in analyzing the problem of scarcity and applying it to current economic issues, as well as to their own decisionmaking processes.

Say What?

This speech course is designed for any talented youth—whether you like to dazzle people with data, persuade them with passion, move them with melodrama, or lighten their moods with laughter. This course will help you overcome and cope with stage jitters, give you the confidence needed in any public speaking situation, hone your communication skills, and allow you to explore various types of speech and performance. The beginner speaker will be able to start to show off his/her new skills in a safe environment; the intermediate speaker will be stretched to new levels; and the advanced speaker will have an opportunity to further his/her skills. We will have several experts share their knowledge, watch national high-school competitors, and enjoy lots of activities and games.

World Religions

World Religions is a survey course which introduces students to the study of religion as well as the world's five major religious traditions: Hinduism, Buddhism, Judaism, Christianity, and Islam. Teacher-created Power Point presentations, articles, excerpts from textbooks, student Internet research, guest speakers, and field trips are included to help students gain an understanding of each tradition's history, main beliefs, and impact on the world. The following four areas are used as framework to understand and compare each religious tradition:

- What is the nature of the “ultimate”? What is the ultimate reality?
- Who are we as human beings? In what ways are we “good”?
- What has “gone wrong” with us?
- What is the nature of redemption? How is human life restored to wholeness?
- What is the nature of the spiritual life? How is life to be lived within the context of the new redemption?

Session A – ARTS

Acting Symposium

Acting Symposium introduces students to many of the disciplines and methods of acting, including stage and on camera work. Acting as a career will be discussed, and students will have the opportunity to work with professional actors from the Twin Cities area. An interest in theater and a willingness to perform on stage and on camera are important prerequisites for the course. Activities will include work with both improvisation and scripted pieces. Music and movement will be included. The workshop will culminate with a presentation of selected class activities.

The Art of Film Making

In this class we will examine techniques used in filmmaking. Students will watch and discuss classic films and look at the artistic techniques and film theory used to produce these works. Students will examine the dramatic effects used in filmmaking, such as stop motion animation, lighting, and sound and how these effects work together to make a story visual. This course will provide students with the basic tools and methods for film making, and film critique. The goal is to conceive, storyboard, shoot, edit and produce, in cooperative groups, a short film.

MITY Jazz

The Jazz program is a concentrated study of jazz music and performance. Based on auditions, students are placed in one of two big bands and a combo. Music listening, jazz history, jazz technique and style, and improvisation are an integral part of the daily schedule for these groups. Visiting guest artists demonstrate and teach techniques, style and interpretation through demonstration and discussion.

*Public performances are important to these classes. Both bands will play for several audiences. MITY Jazz ends with evening performances in the Janet Wallace Concert Hall at Macalester College. **Auditions are required for all applicants and determine acceptance into the class.** Audition dates will be determined in February. Applicants will be contacted by email with addition information and to schedule auditions. Indicate on your application the instrument you play.*

Session B – MATH, SCIENCE, TECHNOLOGY

Astrophysics: Light, Waves, and the Physics of Stars

Human beings have always been intrigued by the stars in the night sky. How can we claim to know so much about objects that are so far away from our planet? The answer? *Astrophysics* Examine the science behind “light” and electromagnetic waves. Use Reflection and Refraction to understand how lenses and mirrors work; combine these optical elements to learn about telescopes. Other activities include analysis of the motion of local objects (Moon, Sun, etc) as well as an optional late-night observation session in the Macalester Observatory. Use computer simulations and other resources to learn about how stars form, evolve, and finish their life in our universe. A field trip to the Bunker Hills Wave Pool is anticipated.

Chemistry is a Blast!

Explore the world of chemistry in an outstanding Macalester lab. In two short weeks, you will investigate many of the topics reserved for high school chemistry. You will experiment with wondrous materials and find out what makes them tick. You will discover the balancing forces of nature. You will take a look into the nature of matter itself. This class is all about labs: Develop your fingerprints with iodine! Freeze marshmallows with dry ice! Measure the energy content of different foods by burning them! Titrate vinegar to measure its acid content! Dissolve styrofoam! Create slime! Bring your questions and your curiosity. When we combine fun experiments with useful information, using a catalyst of curiosity, the product is some real chemistry! Will there be explosions? YES!

Energy Explorations and Alternatives

Have you wondered how fuel cells work? Are you interested in the design and testing of wind turbine blades, solar powered cars and solar thermal technologies? This class will explore the many faces of energy and how they are and could be used by a modern society. All students will be involved in a series of hands-on activities, projects and contests as we explore this most essential area of interest in today’s modern world.

Forensics – You Can’t Get Away With Anything!!!

How would you like to learn about normal and abnormal brain functions and characteristics of notorious serial killers? Maybe you would like to learn how investigators interrogate suspects. Maybe lying and polygraph techniques interest you. *Forensics- You Can’t Get Away With Anything* will take you through an in depth journey exploring such topics as handwriting analysis, blood splatter analysis, the secret art of surveillance, making and breaking secret codes, and much more! A special field trip to the Ramsey County Adult Detention Center where the SWAT team trains will complete the experience. Join us for an exploration of forensics and learn why–*You Can’t Get Away With Anything!!!*

Mathematics of Music

Music has pitch, harmony, rhythm, and many other dimensions. This class explores the many ways that mathematics can be used to understand what makes music tick. We will study a variety of music, including classical, popular, jazz, rock, and world music. Like everyone else I have my preferences, but my goal is to teach methods that you can use to analyze your own favorites in music. There will be plenty of time for students to

present analyses of their own using the methods we describe in the course. We will use a variety of free musical software, with lots of hands-on audio processing of music. Attention will be paid to methods of creating new music, and analyzing performance (for those students who play an instrument). We will have a session of performances for those students who wished to record themselves in performance, and we will use those performances as examples in the course. It should be great fun. For further info, go to www.uwec.edu/walkerjs/MITTY/

Pre-Calculus

This course covers topics that traditionally follow an algebra course and are arranged in two broad components:

Component 1 covers elementary functions. These include polynomial, exponential, logarithmic, and trigonometric (circular) functions and their combinations. A section covers sequences, series and combinatorial problems, and eventually moves into differential

Component 2 contains a treatment of plane geometry including vectors. The usual work with lines and planes is presented along with concepts dealing with conic sections, other coordinate systems, and parametric representation of curves and surfaces. Prerequisites: Algebra and trigonometry (either completed or taken simultaneously); student must be extremely motivated and a team worker.

Session B - HUMANITIES

Beginning Debate

Have you ever pictured yourself as a lawyer defending clients or prosecuting an accused person? Can you see yourself persuading the Congress to vote for your proposed law? Do you enjoy learning and arguing about controversial issues? Do you like to win arguments with others and impress your teachers in class debates? You will learn how to research, argue, and speak effectively on controversial issues using different debate formats. You will use your skills to persuade debate judges and convince audiences to accept your ideas. You will gain that will help you in high school, college, your future career and life. This class is for students with little or no debate experience. You should be interested in researching, working with other students, and speaking in front of audiences.

Mock Trial and Current Legal Issues

Are you interested in the legal system? Do you enjoy discussing issues? Do you want to improve your public speaking skills? If you do you should take the exciting new course: Mock Trial. Taught by a former trial attorney and a history teacher, this course takes you inside the courtroom, to learn what it's like to be an attorney, or a witness in this exciting setting. You will spend time exploring fact situations and legal issues, and will participate in two full-length mock trials, one civil and criminal. Guest speakers with experience in competitive mock trial, as well as the legal system will help deepen your understanding. This course is perfect for students interested in performance, debate, speech, or the legal system.

Pstimulating Psummer Psychology

How is it that you remember a conversation from seven years ago, but forget the quadratic formula when you need it on a quiz? What determines what you like and dislike? Is your personality something you're born with or does it change over time? Are dreams your brain's way of telling you something? In this course we examine a variety of topics including learning, memory, intelligence, nature vs. nurture, states of consciousness, emotion, psychological development and personality. We will look at the theories of Freud, Watson, Skinner, Jung, Erikson and others to help discover why we are the way we are. Personal inventories, lively class discussions, and numerous experiments will help us gain a better understanding of ourselves and others.

Social Issues and Actions

Using the study of sociology and culture as a foundation, students in this course will become more familiar with the unique community of the Twin Cities by experiencing the diverse cultures and perspectives the metro area has to offer. Additionally, this course will offer students the opportunity to take part in getting involved in the community and making a positive impact on the lives of those they encounter. Students will learn the fundamentals of sociology, local political structures, and cultural groups represented in the area. Students will also gain experience identifying and confronting various social issues through research and action. Young people looking to positively influence the world around them will learn valuable knowledge and skills that will enable them to go out and make a difference.

Write Stuff: Produce, Polish and Publish

Get to write, including in a college computer lab. Get your creative writing abilities stretched. Get how to break through writer's block. Get to look at it again and again to make it better (ReReRe*Vision). Get constructive feedback from a professional writer. Conference. Get to meet with a professional editor. Get fellow young writers who love to write. Leave with ideas and experience and confidence. Leave with your writing polished and ready to publish, a professional cover letter, a list of names and addresses of likely markets looking for YOUR writing. Leave a submission package in the mailbox. Leave the world changed.

Session B – ARTS

Architecture and Place

When people buy and furnish a home, or when they make a space on a table to do homework, or find a seat on the bus, they are constructing places that meet their emotional and physical needs. Architects do the same things, with more permanent materials. This course will introduce students to how architects see the world, and the tools they use to study it. Students will explore architecture through drawing, model making, computer models, and critical questioning. Studio reviews, an opportunity for students to present and review work, will introduce students to the vocabulary of architecture: site, material, structure, scale, form, and space. Students are challenged to

see inside their work. What is it like to be there? Photography and computer rendering are used to increase engagement. Past field trips include visits to a home by Frank Lloyd Wright, and a public space by Maya Lin.

The Improvisation Project

Come try a class where our work is our play! We'll think on our feet, have fun meeting new people and nurture our imaginations while creating theatre out of thin air. There's singing, dancing, stage combat, acting challenges, and comedic stunts of astonishing proportions! We take a group of diverse people who may not know each other or know a lot about improvisation, and in two short weeks, we're performing a completely improvised show together like we've been a troupe for years. A great choice for the budding or seasoned actor, but also for anyone who wants to experience fresh and useful ways of interacting with new friends, The Improvisation Project is an event!

Lyric Theater Magic! (Musicals, Operettas, and Operas)

Join the lyric theater team of James and Melinda McKeel as you perform fully-staged songs and scenes from the greatest musicals, operettas, and operas of all time! We start with an introduction to the rich history of lyric theater and then begin two exciting weeks of individual and group instruction and rehearsals in drama, music, improvisation, and singing. We end with a fast-paced and entertaining lyric theater performance for family, friends, and your MITY peers. We are looking for talented young singer/actors who enjoy working in a supportive, challenging, and creative environment! When you send in your application and recommendation, remember to tell us the following:

1. Are you a soprano, alto, tenor, or bass?
2. Do you read music?
3. Do you play any instruments?

Studio Art: Personal Vision through Visual Communication

Developing an artistic personal vision and expression will be the focus of this course. The elements and principles of drawing and painting will be explored through line, space, shape, value, perspective, proportion and composition. You will use a variety of media such as pencil, charcoal, ink, pastel and acrylic paint and experiment with a range of techniques, including silk painting. The first week we will cover such basics as still life, the human figure, portraits, and landscapes. The second week you will work on communicating artistically around themes and issues that are important to you. This is an intensive studio art class which will include demonstrations and class critiques.

Prerequisite: Students new to the class must submit one to two examples of their strongest works: a self-portrait and/or a still life.

ExpandYourMindApplication

Current Grade (2011-12): _____ Male Female Date of Birth ____/____/____

Last Name First Name Middle Name

Street Address

City State Zip

Name of School/City

Student Cell Phone Number

Name of Parents or Guardians

Home Phone Cell/Work Phone

Parent Email (print clearly)

I would like my information on a carpool list.

Application Check List (include with application form)

- Deposit (\$280 commuter, \$700 residential): check made out to MITY or go to www.mity.org to pay by credit card
- Copy of most recent report card or transcript
- One teacher recommendation (new EYM students only, Explor students are considered a new student)
- Write a short essay (no more than 200 words) about yourself. (new EYM students only)

EYM COURSE CHOICES IN ORDER OF PREFERENCE:

Please check website for up-to-date information about classes.

Session A (June 18 – June 29)

- Commuter (\$560)
- Residential (\$1400)

1. _____

2. _____

Session B (July 9 – July 20)

- Commuter (\$560)
- Residential (\$1400)

1. _____

2. _____

MAIL TO:

Minnesota Institute for Talented Youth, 1600 Grand Ave., St. Paul, MN 55105

Phone: (651) 696-6590 Fax: (651) 696-6592 fax

www.mity.org

ExplorSchool Application

Current Grade (2011-12): _____ Male Female Date of Birth ____/____/____

Last Name First Name Middle Name

Street Address

City State Zip

Name of School/City

Name of Parents or Guardians

Home Phone Cell/Work Phone

Parent Email (print clearly)

I would like my information on a carpool list.

Application Check List (include with application form)

- \$280 deposit: check made out to MITY or go to www.mity.org to pay with credit card
- Copy of most recent report card or transcript
- One teacher recommendation (new Explor students only)
- Write a short essay (no more than 200 words) about yourself. (new Explor students only)

EXPLORSCHOOL COURSE CHOICES IN ORDER OF PREFERENCE:

Please check website for up-to-date information about classes (www.mity.org).

AM Classes

1. _____
2. _____

PM Classes

1. _____
2. _____

Extended Day

Extended Day is available to assist working parents during the ExplorSchool session. Students may use extended day either in the morning from 7:30 a.m. – 8:30 a.m., or after ExplorSchool classes, from 4:00 p.m. – 5:00 p.m.

Sign my child up for extended day: morning (\$50) afternoon (\$50) both (\$90)

MAIL TO:

Minnesota Institute for Talented Youth 1600 Grand Ave., St. Paul, MN 55105
Phone: (651) 696-6590 Fax: (651) 696-6592 fax

www.mity.org

Teacher Recommendation Form

For ExplorSchool and Expand Your Mind New Students Only

Student's name (please print or type)

is applying for admission to a MITY summer program. Complete and return to student or to:
Minnesota Institute for Talented Youth, 1600 Grand Ave., St. Paul, MN 55105
Phone: (651) 696-6590 Fax: (651) 696-6592 fax www.mity.org

Please rank the student: 0=lowest 10=highest

_____ Language skills

_____ Imagination, creativity

_____ Motivation

_____ Math skills

_____ Critical thinking skills

_____ Intellectual Curiosity

_____ Attitude

_____ Completes Assignments

Teacher's general comments on student. For 4th grade student recommendation, please include comments on their ability to maintain focus and work with older students.

Name (please print)

Teaching Position

School

School Address

School Phone Number

Teacher's Email

Minnesota Institute

FOR TALENTED YOUTH

1600 Grand Ave.
St. Paul, MN 55105

Non-Profit Organization
US Postage
PAID
St. Paul, MN
Permit No. 394

ADDRESS SERVICE REQUESTED

MITY curious?

Find out more on our website:

www.mity.org

"MITY is a place to bond with others, share stories, have fun, and most of all, get out into the world and figure out what you want your role in it to be."

– MITY alum