Innovate!

Issue 1: November 2016

Midwest Torrance Center for Creativity

The Center for Gifted

a Northern Illinois University partner

Inside:

Plus.....

Innovate! is a publication of The Center for Gifted and Midwest Torrance Center for Creativity

Welcome to Our First Issue!

"Creativity is the highest form of mental functioning," said E. Paul Torrance, father of creativity in this country. We at the Center subscribe to this statement and all its marvelous implications and applications to the individual and to the classroom and the home. We think that you will enjoy the four articles highlighting the importance of creativity, originality, imagination, and depth of thinking in the lives of children and young people, particularly in advancing the growth of their talents and abilities.

We are pleased to include in this issue four authors: Janette Forman, Nancy Hertzog, Sylvia Rimm, and Harry Roman. They are outstanding contributors to the fields of gifted education and creativity and have extensive experience working with students, families, and teachers in their roles as authors of books and articles, consultants, teachers of children and young people, researchers, and instructors at the college and university levels, both undergraduate and graduate. Their fresh, intimate styles of communication are appealing. I think you will find their work informational and inspirational as well as delightful in their humor.

Innovate! is the first publication of its kind that the Center is producing. We treasure the privilege of reaching out to families, teachers, and professionals in this way, and seek to provide a platform for people to share ideas and practices that support more effectively the cause to which we are all committed. We define this commitment as active contribution.

This fall and winter we shall offer exciting courses designed to challenge and enthuse. We shall initiate and innovate new courses in the areas of science, technology, engineering, arts, and humanities. We think you will find these new selections stimulating for curious young minds.

This past summer the Center for Gifted / Midwest Torrance Center for Creativity welcomed great numbers of students at 27 programs throughout the Chicago area. The student and teacher response to these programs was most affirmative.

The Torrance Journal for Applied Creativity was just published with 28 articles by authors well-known in the fields of creativity and education for bright, talented, motivated children. Articles reflect keen insights in the area of creativity and its application and implementation in such settings as the classroom and the home. Copies may be obtained from the Center; the *Journal* is also available online at www.centerforgifted.org.

We hope you will like our first issue of *Innovate!* We treasure this new opportunity to communicate more perceptively and consistently with our readers.

Joan Franklin Smutny, Director
The Center for Gifted /
Midwest Torrance Center for Creativity

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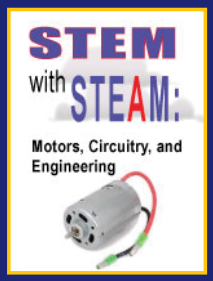
International Torrance Creativity Award Winner

Fall 2016 Weekend Workshops

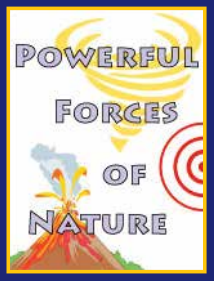


Orland Park
Saturday, November 12
Grades 1-8 (1:30 – 4:00)

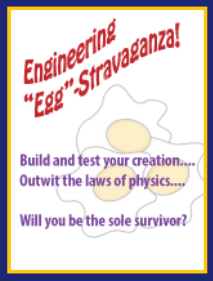
Lincolnshire
Saturday, December 3
Grades 1-8 (1:30 – 4:00)

Arlington Heights
Saturday, November 19
Grades 1-8 (1:30 – 4:00)

Winfield
Saturday, December 10
Grades 1-8 (1:30 – 4:00)



Elmhurst
Sunday, December 4
Grades 1-8 (2:00 – 4:30)



Crete
Saturday, December 10
Grades 1-8 (1:30 – 4:00)

Winter 2017 Weekend Workshops

Buffalo Grove (PreK-7)
1:30 – 4:00
Saturday January 21
Saturday January 28
Saturday February 4

- Science and Art (PreK-K)
- Science Puzzlers (1-2)
- Art Studio (1-7)
- Lego WeDo Robotics (1-4)
- Lego Mindstorms Robotics (3-7)
- Microbiology and More! (3-5)
- MaKey MaKey Makers Space (3-7)
- Engineering Escapades (4-7)

Arlington Heights (1-8)
Saturday February 18
1:30 – 4:00

- Lego WeDo Robotics (1-3)
- The Jet Engine (3-8)

Join Us for Winter Break! **Bensenville** (PreK-8)

December 19 – 22

- Eclectic Science Lab
- Choose Your Tech!
- Science Explorers

December 27 – 30

- STEM with SteAm!
- Choose Your Tech!
- Historic Games Day

- Enroll for single days, or all 8 days
- For each day you enroll, choose AM (9:00-11:40), PM (12:20-3:00), or both (9:00-3:00)
- Early and late extended hours available

Winter 2017 Worlds of Wisdom and Wonder

Naperville (PreK-7) 1:00 – 3:30
4 Weeks – Saturdays, January 21, 28, February 4, 11

Elmhurst (PreK-7) 2:00 – 4:30
4 Weeks – Sundays, January 22, 29, February 5, 12

Evanston (PreK-2) 1:30 – 4:00
4 Weeks – Saturdays, February 25, March 4, 11, 18

Barrington (PreK-7) 2:00 – 4:30
4 Weeks – Sundays, February 26, March 5, 12, 19

Additional details and online application available at www.centerforgifted.org

Get More By Giving Less: Encouraging Innovation, Imagination, and Invention

By Janette Forman

Have you ever noticed that creative juices flow when we give children open-ended resources and fewer instructions? Lego kits are fun, but a big box of mixed Legos is better for encouraging original design, especially if it includes some of the weirder blocks (usually scavenged from a Lego kit) to spark inspiration. Giant cardboard boxes have no instructions, no accessory packs, and require nothing more than scissors and markers to turn them into endless possibilities. As both a mom and a teacher, I've been moving in the direction of giving plenty of raw materials but less actual help and then watching what happens.

My students recently worked on two versions of the "marshmallow challenge." In small groups, they worked together to build a tall, free-standing structure using a limited number of straws and masking tape. Later, the same groups used marshmallows and spaghetti. Students brainstormed and tested designs, and when the initial design didn't work out, they adapted it to make it work, since they were under time and material constraints. They were forced to innovate when their designs collapsed, sagged, or tilted, which taught them more than if they'd copied specific structures. They designed their own flying buttresses, triangular towers, ladders supporting an antenna, and more.

The mother part of me was hesitant to embrace what felt like lazy parenting, but as I grew busier with the birth of children two through four I had little choice. Tasks like pre-cutting construction paper into specific shapes for a planned art project just weren't going to get done. Yet, left to their own devices (and with a large reservoir of art supplies) they've created unscripted, beautiful artworks, including amazingly expressive stick figures, a lemonade stand sign featuring jokes, and an enthusiastic homage to nature's many poisonous creatures.

One of my favorite pieces is a drawing that my six-year-old drew for Jackson Pollock. She read a book about him, drew a picture inspired by his style, and asked me to mail it to him. If I'd been hovering over her as she drew, I'd have told her earlier that Jackson Pollock didn't live to be 104 years old, so I couldn't mail it to him — but then she wouldn't have created that beautiful drawing for him at all.

My students came up with the best job roles for practicing their public speaking and interviewing skills. I've watched them apply to be a scuba diver who scrubs algae off the shark tank at Shedd Aquarium, an astronaut for a trip to Mars, and a doorknob inspector. It was far more original and far more fun than if I'd assigned them roles. They've designed their own companies to compete on a pretend stock market with similar ingenuity. Student-led debates exceeded my expectations in both the breadth and depth of arguments.

Every year my students astound me with their creativity. This year I plan to guide them only as much as is necessary to allow their originality to shine…and I cannot wait to see what amazing things they create!

Janette Forman, J.D., is an attorney, mother, educator, and butterfly gardener.

Six species of caterpillars and butterflies visited Janette Forman's Summer Wonders classes in Buffalo Grove, entitled "The Wonder of Bees and Other Pollinators."

Enhancing Your Child's Creative and Critical Thinking – Don't Throw Out Your Empty Boxes!

By Nancy B. Hertzog

As parents, you don't need expensive toys to stimulate your child's thinking. In fact, when children are young, they are as interested in the boxes that their toys come in as they are in their new toys. Children are naturally curious, creative, and persistent problem solvers. Our job as parents is to allow their natural tendencies to thrive. In this article, I will present three ideas for parents to encourage their children's growth in creative and critical thinking.

#1: - Value your children's ideas, and allow them to make choices.

Solicit their ideas from them whenever you can. For example, if they are picking out an outfit to wear, give them two choices, and then ask them why they chose the outfit that they chose; you might be surprised to learn about their reasons. Maybe they think certain colors go better together, or maybe they want to be prepared to get them messy. Just allow them to express their ideas without focusing on whether or not there are right or wrong answers. The more you ask your children for their rationale, the more you learn about them. Other opportunities you may give your children to express their reasoning may occur when you talk to them about food choices, or places to go. Would they rather have a picnic at the park or ride their bike in the neighborhood? Have them explain why they make a certain choice, and then show them that you respect their opinions by allowing them to do what they choose. The more opportunities you can give your children to share their thinking and reasoning, the more you can scaffold their ideas and embellish their thought processes by asking some clarifying questions (e.g., What might they see on the way to the park? What are they hoping to see if they take a ride in the neighborhood?).

#2 –Allow them to indulge in free play with open-ended materials.

Giving your children a large box to play with may seem ridiculous to you, but they may see it as a pirate ship, a cave on an island, or a secret city where only children live. Too often we think our children need toys to play with, especially electronic ones. Not so. My sons were always more excited about the boxes that came to the house than the toys we bought them. They made forts, caves, scenery, and props for plays and mazes. One day I came home to find every sheet and towel out of my closet strewed around some empty boxes that enveloped the entire playroom in a fort.

Children need time to create both with their hands and inside their imaginations. They need time to role play stories, books, and ordinary events they see during their day to make sense of the world around them. Although I eventually needed to have my sheets and towels back, that fort stood for weeks in our house one summer. I couldn't think of one thing that would have entertained them more. They even made themselves lunches and ate them in the fort. Not only that, they cleaned up their fort after lunch so that they wouldn't get their play spaces dirty or have the dog come in to destroy it. That really demonstrated critical thinking!

Other easily accessible and free materials are recyclable objects such as, empty soda bottles, toilet paper or paper towel rolls, egg cartons, yarn, scraps of fabric, etc. Making a small "creative studio" space where you have materials easily accessible for them to create or represent their ideas stimulates their creative thinking, and allows you to see how they put their ideas together. Creating with "boxes and junk" also affords tremendous opportunities to problem

Photo Credit: Nancy B. Hertzog, from the Preschool Prairie Project, University Primary School

solve. For example, if they want to make a fishing pole, they have to think of a way to tie their line to the pole, add a bobber, and make a handle. If they are building a rocket, they might have to think about how to represent the engines or how to make it stand on the launching pad. When parents see what their children are creating and representing, opportunities for conversation, learning new vocabulary, and working together are endless.

#3 Model inquiry.

We have questions all of the time, but how often do we say them out loud so that our children can watch us seek answers to our own questions? One frequent example is when we check the weather. We are curious about what to wear, how the weather might affect our plans, and how to change our plans if necessary. Sometimes you see a documentary or a movie about a real event and you want to learn more about the background story of the movie or characters. These are opportunities for you to show your children how you seek answers to your own questions. Sometimes you use the Internet to find the answers. Other times you use the weather APP, or sometimes you just ask people. Help your children find answers to their questions by following the inquiry with them. Lead them to find the resources they need to answer their questions. For example, suppose they want a pet in their house. You might ask them to find out what types of pets might be good for young children, if they are allergic to specific pets, how to care for them, how much they eat, and how expensive they will be at first and in the near future. Help them get answers to their questions about having a pet (and although it is tempting, don't just say, "No pets!").

When children have opportunities to explore answers to their own questions, they engage in meaningful learning, and they see that learning is not only happening in school, but all around them, every day in ordinary activities with the family. As a parent you have opportunities to engage with them in routine ways (shopping, mealtime, bed time), as well as in ways that inspire them to share their ideas with you, show you what they can make out of boxes and junk, and find answers to questions that may pique your interest.

Dr. Nancy B. Hertzog is a professor at the University of Washington.

Winter Break Wonders!

December 19-22 and December 27-30, 2016 in Bensenville

BSD2

Preparing Students for a World of Opportunity

Blackhawk Middle School
250 S. Church Rd., Bensenville

Full day: 9:00-3:00
A.M.: 9:00-11:40
P.M.: 12:20-3:00
Extended Care: 8:00-9:00 and 3:00-6:00

Tuition:
Full day: $90/day
Half day: $45/day
Extended Care: $8/hour

Eclectic Science Lab

Explore a different area of science each day through hands-on experiments and building projects!

12/19: Chemistry Concoctions
12/20: Microbe Hunting
12/21: Physics, Forces, and Motion
12/22: DNA: The Blueprint for Life
A.M.: Grades 4-8 P.M.: Grades 1-3

STEM with SteAm!

Explore science, technology, engineering, and math with an artistic twist through experimentation, rapid prototyping, and construction! Soldering required for Electronics Lab.

12/27 & 12/28: Electronics Lab (4-8) *$10 lab fee/day*
12/27: Moto-Pets (1-3) *$10 lab fee*
12/28: 3-wheel racer (1-3) *$10 lab fee*
12/29: Makers Mania! *(1-8) $5 lab fee*
12/30: Engineering a Skyscraper (1-8)
A.M.: Grades 4-8 P.M.: Grades 1-3

Choose Your Tech!

Explore, innovate, program, and create in this student-centered class. Choose to explore robotics with WeDo, Mindstorms, and Finches, electricity with squishy circuits, or programming with Scratch and Hour of Code. Or choose to be more artistic and create stop-motion movies, design interactive sculptures and robots, or create musical instruments with MaKey MaKey. Bring your ideas and creativity! *$5 lab fee/day*
December 19-22 and 27-30
A.M.: Grades 1-3 P.M.: Grades 4-8

Historic Games Day

Immerse yourself in strategies for winning World War II, conquering ancient Britain, creating a railroad empire, exploring south sea islands, or building successful world empires through playing board games that re-enact history. Select from a variety of games, such as *Axis and Allies, Britannia, Empire Builder, Age of Imperialism, Conquest of Paradise, History of the World,* and *Settlers of Catan.*
December 27
Full day (Tuition: $65) **or half day** (Tuition: $35)
Grades 5-12

Science Explorers

Bring your curiosity and your questions! Investigate all kinds of science through creative hands-on experiments, projects, and activities in an interdisciplinary context with math, art, drama, history, and literature. Discover laws of physics, intriguing animals, wonders of nature, and amazing chemical phenomena!
December 19-22 and 27-30
Choose Full day or half day (PreK-K)

Honing the Edge for Creative Gifted and Talented Students

By Harry T. Roman

Background

I get the opportunity often to work with young folks, teaching them about invention, building something, or showing them how to unleash their creativity to solve problems. After 40+ years of doing this, I am convinced we need to try and see problems and world challenges more through the eyes of uninhibited young students.

Why so creative? In a nutshell, kids are incredibly creative because they don't know yet, what they don't know. This is a not a cute turn of phrase, but absolutely true. This makes them fearless. They approach new challenges with a clean slate, no preconceived notions, no inhibitions, and no investment in the old ways of doing things. They just have an enthusiastic desire to be part of a solution—something new to help change the world.

Kids are born disruptors, iconoclasts. The great disruptors who changed the course of this country's technologies and founded incredible new industries were grown-up children in their outlook, those who still retained a sense of awe at the world, excitement at tackling something no one else had done before. It is almost impossible for large corporations to foster this kind of wonderment. They are mired in history, outmoded paradigms, traditions, and toxic politics.

Small companies are the ones who dream. Just look where the new jobs are being created—certainly not the Fortune 500. Startups know how to live by their wits and spunk. They see opportunities with a gleam in their child-like eyes. Your little cherubs there in gifted and talented classes are the future powerhouses of the economy, there for you to nurture and mold with care and intellectual challenge.

Retaining the Edge Your Students Naturally Have

Study modern and past disruptors—what they did and how they did it. Discuss their techniques, trials, and tribulations, especially their failures and what they learned from them. Understand their lives and view of the world. Understand the history of their times, the social trends, and what technology was doing to transform the lives of the people back then.

Practice team-based problem solving. Get the heads and hands involved. Make models, draw pictures and diagrams, keep invention notebooks; encourage a sense of professionalism, making the G/T students act almost like consultants. Let them rise to the challenge. Encourage teams to use their initiative and creativity to make their ideas come alive.

Adopt and relentlessly practice 360-degree problem solving, whereby all problems are evaluated multi-dimensionally—from technical, social, economic, environmental, and political perspectives. Seek mediated or blended solutions. Most of the problems we experience today stem from those we solved incompletely decades ago.

Teach the gifted ones to ask really good questions. Amassing huge stores of knowledge is fine, but questions cut to the chase and sharply focus one's intellect and problem-solving paradigm. Question everything! The quality of the questions asked determines the quality of the solutions achieved. You literally can answer any question posed to you, but in order for it to be robust and lasting, it must begin with a thorough inquiry into the problem at hand.

Teach your gifted charges how the world works and how the economy operates. Tie this to the profit motive and how small, nimble companies differ so much compared to large, complex organizational structures. Teach them how the low, flat organizational structure of student project teams mimic a small company, where ideas freely flow back and forth. This is exactly the Thomas Edison formula for his invention factory—the codification of R&D. It is arguably his greatest invention of all time—the invention of the technology driven economy. Ban from your classroom, the stigma of failure. Adopt the "Edisonian" mantra "Fail your way to success".

Study the economics of new products, how they can be marketed, and integrate this into G/T student team projects. Learn how many popular products of today were originally conceived and marketed. Identify behind-the-scenes actions that motivated new product development.

Use your school as a natural and handy invention laboratory. Solve school problems and work to put them into practice. Establish a rapport with school leadership and connect your problem-solving classroom to the goal of improving the facility for everyone. Try and establish a connection to your school district and town/city and solve even bigger problems!

Don't rush headlong into establishing a maker lab with 3-D printers and such, just because everyone else is doing it. A maker lab can be students making cardboard models and other hands-on stuff. Yes, the world is digital and kids will need to learn about coding and computerized manufacturing. Concentrate on getting the students to think and ask questions first. This will be the bedrock for the fancy stuff later.

Bring engineers, inventors, architects, entrepreneurs into the classroom to excite those gifted minds. Integrate this with parents who visit and discuss how they solve problems on-the-job. Soak the students in problem-solving projects. Stimulate their creativity with special projects. Help them build confidence in their abilities. Strive to teach them to maintain that child-like sense of awe of the world. Try and solve some problems that exist right there in your community. Make their school work directly relevant to everyday life!

Harry T. Roman is an engineer, educator, inventor, and author.

The Creative Advantages of Feeling Different

By Sylvia B. Rimm

Many gifted students confide to their parents or teachers that they feel different and even feel isolated by their differences. They sometimes say peers do not accept or include them and they also comment on how different their interests are from their age mates. Some parents and teachers respond with empathy and reassurance. Some assume these young people are in the "wrong" peer group while others conclude that they should learn better social skills. While empathy, relocation, or teaching social skills are all good solutions, depending on the issues, it is also possible that fearful, lonely feelings can positively influence children to have the power and courage to step out of their proverbial box and not confine themselves to thinking as most others do.

Kids Who March to the Beat of a Different Drummer

Feeling different can be good for children. In my clinical work with underachieving gifted children (www.sylviarimm.com), they may mark these feelings of difference by unusual dress or friends or may find themselves so lonely they turn to drugs or suicide. They may show great potential but can feel too paralyzed to produce assignments or products. These children, their parents, and teachers sometimes see only the disadvantages of feeling different.

Who Are These Different Children?

The risks of feeling different can come from many origins. Below are examples:

1) Immigrant children and first generation Americans brought up by immigrant parents: They are at high risk for feeling different because cultural and language differences cause them to feel that way. (See poem by Snehal Choudury.)

2) Profoundly gifted children: They may be so far beyond age mates in their thinking and thus often identify themselves as feeling completely different. (See poem by Lisa Lovance.)

3) Handicapped children: Their limitations can cause them to feel different from others.

4) Birth order: Sibling competition in the family can lead to labeling one of the children as the "creative child" and thus different from others.

How Parents and Teachers Can Help

The Midwest Torrance Center for Creativity can be an excellent resource to help parents and teachers investigate feelings of difference to promote opportunities for these "different" children to develop their creativity. Adults can guide children toward understanding that children who feel isolated and lonely can connect these feelings to positive creative production to share with others. (See examples of children's poetry expressing both loneliness and courage.)

Below are some recommendations for parents and teachers for encouraging children who feel different toward productivity, confidence building and creativity.

1. Explain to children that feeling different can be advantageous to sharing feelings since they communicate well to others who may also feel different.

2. Children who feel paralyzed by their difference can take small steps toward productivity without expecting great creativity all at once.

3. Children who feel different should understand that everyone feels different some of the time, but if they keep those feelings to themselves others won't share their different feelings either. No one needs to feel different all the time.

4. Engaging in activities that offer routine rules and opportunities for creative expression empower children to express themselves more imaginatively. Art, music, drama, writing, technology, invention, science, math, debate, Future Problem Solving, and crafts all provide experiences for fulfilling creative learning needs.

5. Keeping busy and active fosters positive feelings about oneself and converts lonely differentness to productive creativity, confidence, and contribution.

Dr. Sylvia B. Rimm is Director of Family Achievement Clinic and Clinical Professor at Case School of Medicine.

NEW WORLD

Snehal Choudury, age 10, Torrance Creativity Award Winner (2015)

I can barely wheeze out a sentence in English,
my lips struggle to recite the alphabet.
When I make a noise,
it isn't a word;
it's a sound
of fear and humiliation.
This rambling code
tongue-twists me.

Back in India,
chicken biryani was chock-full of spicy chilies,
like alligator-infested waters.
Just nearing my face
made my eyes smart with tears.
My tongue's taste buds
prolonged the unwanted presence
of chili
whenever it came in contact;
I'd scream
for a cooling raita.

Now,
it's the simpleton hamburgers, fries,
and the elephant-portioned milkshakes
that taste like shortening.
Full of grease, fat, and unwanted saltiness.
My mouth aches and pleads
for smoky paprika and pungent mustard powder.
And I don't eat at funky restaurants like McDonald's,
Burger King, and Wendy's.
I savor the most delicious butter chicken
and palak paneer
back at my haven home.
Girls strut fancily,
noses arched snootily,
feet clacking like potential missiles.
I wear dingy, golden, clingy bangles on my wrist,
shining carnation red, robin's egg blue, and chick yellow,
making me feel I'm not elegant
compared to those fashion models.
My brain spins a cyclone every minute,
trying to work a simple problem,
wondering about an advanced topic,
or basically thinking,
like gears rotating to operate.

People think I'm peculiar in ways,
probably due to the way I eat, drink, and speak,
or even the way I do
simple everyday tasks.

While I write
two page equations for one amateur problem,
my peers do the dinkiest,
most shortcut methods
of math for the same thing;
I always feel peer-pressured by my peers that way.

People push me around like I'm a doggy chew toy,
giving me silence because I'm diverse,
but I'm confident soon
I'll be used to their social ways
I won't even bother.

With the lack of friendships
and a surplus of loneliness
that I have,
I hope life goes smooth and tranquil
for a ten year old immigrant:
me.

THE GIFT*

Lisa Lovance, age 11

She was a wild flower
refusing to be bred
Into a hybrid
just like the others.
Didn't they know
she was perfect already?
She may have been revolting
to others' eyes
But to her the
shelves she saw
With identical plants
were the most revolting sight.
Zombie slaves to human monsters,
that she will not become.
She will not be one of many,
but she will keep her individuality.
She refuses to bloom,
except on the wild forest floor
Or will wait until the pressure builds
and crushes her velvety petals.

*Rimm, S. (1990). Gifted Kids Have Feelings Too. Apple Publishing Company.

Robot Petting Zoo Makeathon

Bensenville

Blackhawk Middle School
250 S. Church Road
December 19, 20, 21
9:00-3:00
Grades 5-10
Tuition: $250

Experience a fun introduction to programming, design, and engineering at our Makeathon, presented in partnership with Birdbrain Technologies, where the goal is to introduce technology in a creative and welcoming way.

Create interactive robotic pets by working collaboratively in teams, learning coding, electronics, and physical prototyping. The goal of these animatronic animals is to delight the public, which makes art, creativity, and humor essential to the design process! Learn how to use the CREATE lab visual programmer to operate a Hummingbird Duo microcontroller. The Hummingbird will essentially serve as the "brain" of the robotic pet, while its body will be constructed using a variety of materials. Imagination, ingenuity, and programming skill will bring these robotic creatures to life!

The Robotic Petting Zoo will be showcased at the Students in Technology (SIT) Conference in Bensenville on February 11, 2017. Students are encouraged to share the intricacies of their robotic pets by participating in the SIT Conference as presenters.

HUMMINGBIRD ROBOTICS KIT

BirdBrain TECHNOLOGIES LLC

A call for innovative thinkers, inventors, designers of new ideas, engineers, educators, experts in . . .

You are invited to share ideas with us at the Center, ideas expressive of ingenuity, inspiration, innovation, or invention! We would like to hear from parents, educators, and everyone who would share with us new, fresh ideas for courses and activities. We welcome fresh vision and original dimensions for our workshops, courses, programs, etc.

Please email jsmutny@centerforgifted.org or call Joan Smutny at 847-256-1220, Mike Gorelick at 847-338-5485, or the Center at 847-901-0173. We cherish receiving your ideas to advance the cause of creativity and innovation in our work with children and young people.

Thank you!

Ensure creativity thrives in our community!

The Center for Gifted/Midwest Torrance Center for Creativity is a not-for-profit organization under IRC Section 501(c)(3).

Creativity is expensive! We are grateful for your tax-deductible contribution of ANY amount!

Materials donations and volunteer opportunities are also welcome! Please contact the Center's administrative offices at 847-901-0173 for more details.

Winter 2017 Saturday Workshops!

Buffalo Grove

Meridian Middle School
2195 Brandywyn Rd.

January 21, 28, February 4
1:30-4:00 p.m.
Grades PreK-7
Tuition:
All 3 Saturdays: $135
Individual days: $45 each

Science and Art: Can science experiments create art? Can art be found in science? Discover answers as you explore both science and art through creative, hands-on experiments and projects. **(PreK-K)**

Science Puzzlers: Investigate unusual scientific phenomena. Discover the wonders of science through hands-on experiments. **(1-2)**

MaKey MaKey Makers Space: Design, create, and program with MaKey MaKey microcontrollers and all kinds of materials from egg whisks, tin foil, and cardboard to play dough, fruits, and vegetables. Bring your creativity and imagination! **(3-7)** $5/day lab fee

Microbiology and More! View amazing sights through a microscope and grow your own petri dish culture! Have fun learning about bacteria, viruses, fungi, and parasites, and how advances in sanitation and medicine have changed the world! **(3-5)**

Engineering Escapades: What constitutes a sound design? How much weight can your bridge hold? Can your building withstand an earthquake? How accurate is your catapult? Tackle STEM challenges via hands-on design and building projects **(4-7)** $10/day lab fee

Art Studio: Does art ignite creativity in you? Explore a variety of media while experimenting with a range of artistic styles and techniques. Each workshop will focus on a different form of artistic expression. **(1-7)**

Lego WeDo Robotics: Explore principles of engineering and programming. Select from a dozen plans to build robots, such as alligators, birds, or soccer players with Legos, motors, gears, and sensors. Connect your robots to a computer to program actions and sounds. Experienced students may try their hands at designing their own robots. **(K-4)** $5/day lab fee

Lego Mindstorms Robotics: Tackle engineering challenges! Construct a robot with motors, gears, wheels, and different sensors attached to a programming brick. Connect to a computer and explore vast programming possibilities. Bring your innovative ideas and be prepared to experiment! **(3-7)** $5/day lab fee

Arlington Heights

South Middle School
400 S. Highland Ave.

February 18
1:30-4:00
Grades K-8
Tuition: $45

Lego WeDo Robotics: See Buffalo Grove course description above. **(K-4)** ($5 lab fee)

The Jet Engine: Investigate flight and the science behind the Jet Age! Explore the mechanics of the Jet engine while constructing an innovative 3D model that you can keep! **(4-8)** ($5 lab fee)

Save the Dates! Summer 2017!

Summer Wonders - Buffalo Grove

I. June 7-16
II. June 19-23
III. June 26-July 7
IV. July 10-14

Worlds of Wisdom and Wonder

Crete
July 17-28

Naperville
June 12-23

Skokie
I. June 26-30
II. July 10-14

Wheaton
I. July 17-21
II. July 24- 28

....plus more locations coming soon!

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