

Volunteer Professionals Enhance Learning in GRC's Summer Academies

For more than three decades GRC's Summer Academies have enriched the lives of children from throughout the St. Louis metropolitan area. Students have benefited from the energy and dedication of talented teachers who create unique and challenging curricula in varying subject areas.

The curricular content designed by these talented teachers has been further enriched by volunteers who have generously shared of their expertise, resources and time through the years. Whether it's with GRC's Space Academy or ECO Academy or Ancient Academy, dozens of parents, business leaders, research scientists and university professors have brought unparalleled insights, academic challenges and vast experiences to Gifted Resource Council's Summer Academies.

Three volunteers, who are each affiliated with Washington University in St. Louis, have been particularly notable in their dedicated service to GRC and the children that we serve. Through the work of these volunteers, students have been exposed to research and learning that would not be available to them in any other pre-collegiate environment. Although the volunteers don't actually teach GRC classes, they enrich them by providing expertise in their particular fields as guest presenters who hold "mini-classes" and guide GRC students through specific experiments and educational activities.

Dan Giammar, PhD, professor in WU's Department of Energy, Environmental and

Chemical Engineering, has worked with GRC students in ECO Academy since 2005.

His mini-courses have helped GRC "environmental engineers" study the impact of commercial and natural dyes on water quality, water and carbon sequestration, and the impact of paints and glues on the water supply.



Dan Giammar interacts with ECO Academy students as they experiment with fly ash and water.

This summer GRC's ECO Academy students were manufacturing garden stepping stones using pieces of recycled ceramic tile set in cement. Under Dr. Giammar's guidance, these young GRC scientists examined how adding two different types of fly ash to water could change the pH of the water. They finished

their work by examining how they could mix cement and fly ash to possibly create hardened materials that would use less cement than cement-only materials.

"As an educator it is always rewarding to design activities in which you can actively watch students learning," Giammar said. "Working with GRC students in ECO Academy helps my graduate students and me keep the 'big picture' in mind."

The son of an Italian immigrant, **George Pepe, PhD**, earned his doctorate in Greek and Roman philosophy, rhetoric and history. He has been teaching at WU since 1965 and at GRC's Ancient Academy since 1990. "Dr. Pepe was the first Wash U professor to volunteer with GRC, and he has inspired hundreds of GRC students

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Dialogue with the Director

As we pay tribute in this issue of *mindwonders* to the many volunteers who have enhanced Gifted Resource Council's programs for children, I realize once again the depth and breadth of opportunities that have been offered to bright and talented children through GRC. Classes and activities that have been "cutting edge" often times become the "norm".

Learning Lab classes offer an ever-changing panoply of topics to expand the interests and minds of youngsters, beginning even at the age of three! Harry Potter classes have been ably taught by Art Koenig ever since the first publication of that fascinating series of books. And those classes remain incredibly popular to this very day! LEGO robotics classes have likewise inspired countless "future engineers" both on Saturday mornings and during the summer.

GRC's "Moving & Shaking" class for middle schoolers provides a broad view of opportunities in the field of engineering – from mechanical to biomedical to environmental. This class, inspired by the vision of Dr. Ruth Okamoto to attract more girls to engineering as a profession, has been taught by professors from Washington University in their campus laboratories for more than a dozen years. One example of the "cutting edge" content of these engineering classes is this fall's demonstration of 3-D printing technologies.

GRC's Space Academy has been inspiring more than 100 youngsters every summer for thirty years. We all know that space exploration has taken many varied forms during that time – and GRC has addressed them all! Yes, space study always

captures the imaginations of children who aspire to "reach for the stars" in every aspect of their lives.



Sue Flesch, GRC executive director

Whether it's space science or ecological/environmental topics or conceptual mathematics, GRC's Summer Academies have continued to explore new and varied topics each year. Volunteer speakers like Rich Heuermann, Dan Giammar, George Pepe and many others have shared their particular expertise and brought wonderful insights to children who hunger to learn more and do more even during their summer days away from school.

Likewise, GRC has benefited incredibly from the creative thinking of a dozen former teachers, who each year devise new "problems" and challenges for children who participate in GRC's Creative Convention. "Thinking outside the box" is an attribute that comes quite naturally to these ladies. Sharing their love of learning creatively is what they are all about!

Yes, these volunteers – and so many more – inspire all of us at GRC to remain committed to our mission – that of helping bright and talented children achieve their potential...

Susan C. Flesch

Creative Convention Volunteers Par Excellence

Each fall a group of dedicated former teachers gathers to begin the process of creating new problems for Gifted Resource Council's annual Creative Convention. Creative Convention – offered for second and third graders – is one of the three friendly competitions sponsored by GRC during Academic Challenge Cup over seven days each spring. The other two competitions involve high-level verbal and mathematical challenges for somewhat older children.

This group of retired teachers has shared their invaluable expertise and experience to design ways to engage, stimulate and challenge bright young children. Their dedication to GRC and the students that we serve has provided a resource of immeasurable proportions.

Sometimes it's a single teacher focusing on a specific task. Kathy Hilgeman, for example, helps future coaches learn how to prepare their children for GRC's Creative Convention. Her workshops teach parent and teacher coaches how to structure fun activities - such as creating a tower out of a deck of cards - that involve teamwork and prepare their children for the unique hands-on conceptual and construction challenges that are revealed to them only when they arrive at Creative Convention.



*Phyllis Richter, Linda Horton, Bev Berla,
and Sandy Kalin*

"Creative Convention encourages cooperation, creative problem solving and the highest level thinking skills - traits that are taught in all good classrooms," said Hilgeman, a retired teacher of the gifted in the Parkway School District. "Using Creative Convention as the culminating event for that learning is not only great fun for the students, it allows them to learn from other teams and their creations.

"Recently NBC carried a national feature about a New York school that partnered with a recycling center to foster creative problem solving among its students. Innovative for certain, but GRC has been offering thousands of students a similar platform for creativity and teamwork for over 25 years."

Parents recognize the social benefits of their child learning to work on a team with other bright students. They also see how much the children enjoy it and are inspired to continue coaching. Preparing students for Creative Convention is an

easy way for parents and teachers to get involved as coaches. Later, many continue as coaches of the more complex math and language games involved in Academic Challenge Cup.

Sometimes it's a team. Each year a team of retired teachers designs new problems to engage the imaginations and problem-solving skills of 2nd and 3rd grade participants in Creative Convention. These amazing volunteers design fresh challenges that promote teamwork and collaboration as well as thinking "outside the box." They also provide on-site support for all three Academic Challenge Cup competitions, held annually on the campuses of Washington University and the University of Missouri-St. Louis.



*Carolyn Krumrey, Elaine Unell, Susan Blandford,
and Nancy Reeves*

Elaine Unell, a former teacher from the Parkway School District, has been actively involved with this effort for the past 10 years. "I love volunteering for GRC and helping to create the problems we use in Creative Convention," she said. "I am able to work with a great team of people who give me an outlet for my creative thinking! We get to practice brainstorming and piggybacking our ideas, just as we ask the students to do. Working together ensures that we create a problem much more challenging and appropriate than any one of us could by ourselves. It's very rewarding for all of us to see these young minds respond to the challenge, cooperate and think creatively."

Some Creative Convention Problems to Challenge Young Teammates

2004 *A Fair to Remember*

- create a new monument to celebrate St. Louis in 2004

2007 *The Game Plan*

- create a board game of St. Louis area attractions

2010 *It's Your Move*

- design a school building of the future

2011 *Fit for Fun, of Course!*

- design a fitness course with stations for kids

2013 *Face-Look*

- create a totem pole of facial expressions that represent feelings

How can we help our child become more confident and self-sufficient? (He's very bright, but surprisingly limited in what he can do for himself.)

by Dennis O'Brien

Parenting a gifted child is certainly challenging and sometimes confusing. Loving parents may unwittingly limit a child's development by doing too much or expecting too little. As a result, their child fails to learn key developmental skills, such as being self-sufficient with practical things or advocating successfully for herself. Here are some strategies to help your gifted child thrive and become more self-sufficient.

Rightsizing Expectations

- **Ask yourself if you expect enough of your child.** Children should assume as much responsibility for handling the details of their lives as they can effectively manage. Depending on his age, a child should handle routine personal tasks such as getting ready for school, making his bed, keeping his room clean or doing his own laundry and perhaps walking to school with other children in the neighborhood. He should certainly do family chores, such as helping prepare and clean up after meals. He should cooperate with all family schedules and rules and limits regarding use of television, phones and computers. This is true for all children, whether gifted or not.

- **Expect more and structure family life accordingly** so that handling age-appropriate responsibilities becomes routine. Consult with your spouse and generate lists of the chores and responsibilities you expect each of your children to handle.

Keep in mind that having low expectations at home about what she can do for herself not only limits a child in practical ways. It also makes it difficult for her to develop a realistic sense of how to function in the larger world where she must contend in order to succeed.

- **Provide clear guidelines, timelines and feedback.** Structuring home life involves more than simply telling a child to do something. Parents need to make clear what's expected with each task, why it's important, and what the timeline is for completing it. Understanding the reasons for doing what's asked of him helps a child come to appreciate the connection between his actions and the outcome. It teaches cause and effect, effort and result.

Your child needs parental feedback, both of an instructive nature if he is mishandling his responsibilities and positively to let him know you notice his efforts and value what he is accomplishing.

Of course, there need to be predictable consequences when any child does not behave responsibly. Enforce these consequences consistently and matter-of-factly. Learning to handle personal tasks and family chores will help your child mature and gain confidence.

Advocating Appropriately

- **Reign in your protective instinct to advocate for your child.** Take a moment to evaluate whether it's necessary or even appropriate to advocate in each specific situation. Sure, it may seem easier and more efficient for you to contact the school on behalf of your child. But should you? Whenever you do, you deprive your child of a chance to learn how to advocate for herself. So before hastening to advocate for your child, ask yourself: Am I depriving my child of a chance to learn how to speak up appropriately for herself and, in doing so, develop confidence that she can?

- **Keep in mind that your advocacy may not be in your child's best interest.** Teachers often perceive parents as adversarial, whether you intend that or not. This can be especially true of parents who expect the world to recognize their child's brilliance and make exceptions for him. Coming on too strongly can provoke resistance from a teacher that would not be a factor if your child advocated appropriately for himself.

- **Coach and role-play with your child.** Begin by discussing with your child what her issue is and what she wants to happen. Help her clarify what she would like to say to her teacher as well as the emotional tone and appropriate language with which to express it.

Then role-play the part of the teacher while your child rehearses. Don't agree with her immediately. Object. Resist. Raise questions. Let her patiently practice explaining clearly what she wants and why she wants it. Then praise her, critique her and repeat the rehearsal until she feels clear about what she wants to communicate and confident that she can.

With practice and experience, your child can learn how to talk persuasively to adults in positions of authority. The same role-playing procedure can also help your child learn how to speak up tactfully without alienating peers—a skill that is as rare among gifted children as it is important.

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- **Follow up afterwards.** Ask your child what she said and how the teacher responded. Don't grill her, and don't overreact if what you hear is disappointing. Remain calm and positive. Let her know you care. Evaluate whether it's important enough for her to try again or, as a last resort, for you to get involved. Help her accept the outcome if it seems final, even if she's disappointed.

- **Praise and encourage your child for trying.** No matter what the outcome, celebrate her efforts. In the long run, learning to try is more important than individual outcomes along the way. If there is something to be learned for the future, help your child learn that lesson. But keep her focused on the importance of making the effort, regardless of the immediate result. Remind her that falling short sometimes is part of the process of learning any skill. My mother taught us early on that "if it's worth doing at all, it's worth doing." That's how you get things done—and get started getting better. Learning this is an important life-lesson that will help your child develop grit, courage and perseverance—essential character traits of successful people.

Bottom line: Although helping a gifted child develop age-appropriate self-sufficiency can be challenging, it's very important and must be done intentionally. The good news, though, is that it can be done and that helping a child do so will not only enrich her life, but will also enhance her chances of success in all her endeavors.

Dennis O'Brien is a licensed clinical social worker, experienced educator and therapist. In addition to writing educational materials used by the Washington University School of Medicine Dept. of Psychiatry and weekly columns on parenting for the Suburban Journals, he has written monthly columns for St. Louis Moms and Dads, and regular columns for CHARACTERplus, Family Connection (Mo. Dept. of Mental Health) and Gifted Association of Missouri. O'Brien's April 6 column, "Prevent teen suicide by addressing it," won the 2010 Missouri Institute of Mental Health award for outstanding reporting on suicide.

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with his passion for learning about events today by studying the history and cultures of ancient Greece and Rome," said Susan Flesch, GRC's Executive Director.

"Dr. George Pepe has graced Ancient Academy classes with his erudition, enthusiasm and dry sense of humor for as long as I have been teaching with GRC," said veteran GRC teacher Art Koenig. "He has been generous with his knowledge of classical literature, history and personalities and has packaged it in a way the kids could understand. We are most fortunate to have benefited from his expertise."

Rich Heuermann, MS, is retiring this year as Administrative Officer in the Department of Earth and Planetary Sciences and Outreach Program Coordinator of the NASA-Missouri Space Grant Consortium (MOSGC) at Washington University. Nonetheless, Rich plans to continue sharing his expertise with young astronauts enrolled in GRC's Space Academy as he has since 1999. His mini-courses have included field trips to the Earth and Planetary Remote Sensing Laboratory at WU and demonstrations of three types of telescopes. Students have learned about the Birth and Death of Stars, the Martian Environment and Future Bases in space. This past summer's mini-courses included Rocks from Space and Exploring the Moon.

"I always look forward to Rich Heuermann sharing his scientific expertise with my Space Academy students," said Susan Jesse, longtime GRC teacher who recently retired from the Mehlville School District. "Not only does he design his slide presentation to cover the space theme for that session, but Rich is very good with the Space Academy cadets. His talks are age-level appropriate. He is patient with the children and welcomes 'far out' questions—always answering them to the child's satisfaction."



GRC's Pioneer cadets simulate the challenges that astronauts face while working in a space suit.

Remembering Ron Unell

Inspired by the interest in GRC of his wife and daughter, Ronald E. Unell joined the GRC Board of Directors, bringing with him 30 years of experience as a CPA and partner with GKUPR (Goldman, Kottler, Unell, Pearlstein and Rehtien) Accounting firm. Sadly, Ron was recently diagnosed with a very rare heart disease and passed away on September 18, 2014. He was a dedicated member of GRC's Board and will be greatly missed.

"Ron brought several important attributes to his service on GRC's Board of Directors," said Susan Flesch, GRC's Executive Director. "Not only was he an experienced accounting professional, but Ron also understood the importance of gifted education in the lives of children, by virtue of the fact that his wife Elaine and her daughter Robin are both gifted educators. Ron cared deeply for children, as evidenced by the fact that he served on three boards of local organizations – all of which focused on children."



Ron Unell



A Creative Convention team plans a presentation about their totem pole of facial expressions.

Professors Use Cutting Edge Science to Inspire GRC Students

Washington University professors Dr. Ruth Okamoto and Dr. Shelly Sakiyama-Elbert have been offering a special GRC Learning Lab course designed to generate interest among middle school girls for careers in science and engineering since 2001. Students (including a few boys) fortunate enough to take their "Moving & Shaking" course are exposed to cutting edge science in a variety of engineering fields. For example, in a recent class Dr. Mark Meacham demonstrated some 3-D printing technologies, including one he invented himself. Under their guidance, students created objects with the "Makerbot Replicator" using "material extrusion" techniques that can create objects with multiple materials, such as plastic and metal. Meacham's research is focused on making replacement parts for humans, such as prosthetic jaw bones, internal organs or ears.

"I would have liked to have been able to participate in a program like this when I was younger," said Chelsey Dunham who serves as a Washington University teaching assistant for the course. "But it was not available." Chelsey is in her first year of graduate school pursuing a doctoral degree in biomedical engineering. "My first look at engineering was when I met a biomedical engineer who was completing diagnostic testing on my father's pacemaker. He found that one of the pacemaker leads had pulled out of my father's heart. This event made me realize that I wanted to learn how medical technology could interact with the human body to help people."

Her sentiments are echoed by 13-year-old Courtney Cole who said, "I really like the 'Moving & Shaking' course. It helps me get insights into all sorts of engineering fields, and that's important because it helps society and the future of the world."

These professors hope that many of the students in the "Moving & Shaking" course will be motivated to pursue careers in engineering as Chelsey is. Perhaps Courtney will be one of them.



Dr. Ruth Okamoto with three participants in "Moving & Shaking: An Introduction to Engineering"

Mark Your Calendar

January 31, 2015 – Summer Opportunities Fair at Whitfield School, 175 South Mason Rd.

February 7-March 14, 2015 (Six Saturdays) – Winter Learning Lab at

Wydown Middle School, 6500 Wydown Blvd. Parenting Classes will be offered.

February 24 & 25, 2015 – GRC's Academic Challenge Cup **Equations** Competitions at

University of Missouri-St. Louis. Parenting classes will be offered.

February 26 & 27, 2015 – GRC's Academic Challenge Cup **Creative Convention** at

University of Missouri-St. Louis. Parenting classes will be offered.

March 10, 2015 – GRC's Academic Challenge Cup **LinguiSHTIK** Competition at

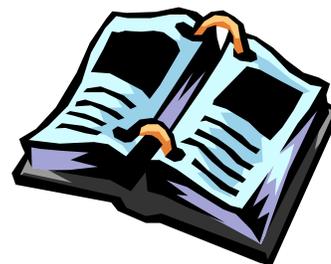
Washington University in St. Louis. Parenting classes will be offered.

March 11 & 12, 2015 – GRC's Academic Challenge Cup **Equations** Competitions at

Washington University in St. Louis. Parenting classes will be offered.

June 15-July 24, 2015 – **GRC's Summer Academies** at Crossroads College

Preparatory School, 500 DeBaliviere Ave.



**For more information on any of these events, contact GRC:
314-962-5920 or info@giftedresourcecouncil.org**

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mindwonders

informs the public about activities of Gifted Resource Council and about issues relevant to the development of bright and talented children and youth.

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Gifted Resource Council is a not-for-profit education agency serving the greater St. Louis Metropolitan area. Its purpose is to bring together the resources of the community, the schools and parents to help bright and talented children achieve their potential.