



**The 2009 I<sup>3</sup> Conference for Teachers of  
Mathematics and Science**  
(I<sup>3</sup> = Intensive Immersion Institutes)

**A grass-roots event of local teachers, by local teachers,  
and for local teachers**

**Wednesday, March 25, 2009**

**3:00 p.m. – 6:30 p.m.**

**[Doubletree Hotel, Lowell MA](#)**

## **Conference Program**

The Massachusetts Mathematics and Science Partnership (MMSP - Lowell Public Schools, EduTron Corporation, M.I.T., and Fitchburg State College) is supported by a grant from the Massachusetts Department of Education. The science courses are partially supported by a Massachusetts Board of Higher Education, Improving Teacher Quality Grant.

For more information: [www.edutron.com](http://www.edutron.com)

# Special Presentation

Concord Room

4:00-4:45

Dr. Andrew Chen

EduTron, Winchester

## Abstract

The name of the game is Intensive Immersion; the topics are mathematics and science. This Short Asian will reflect on his three-year experience dealing with a large number of characters in Lowell Public Schools. So many anecdotes; so little time. Please come to protect him from getting sued.

## Courses 2006-2009

- 2005-CI-MM Linear Equations and Their Foundations
- 2006-M1 Building A Rock-Solid Foundation in Mathematics
- 2006-M2 Perspective on Elementary School Mathematics
- 2006-CI-MM Linear Equations and Their Foundations
- 2007-M1 Conceptions and Misconceptions in Middle School Mathematics
- 2007-M2 Conceptions and Misconceptions in Elementary School Mathematics
- 2007-S1 Unlocking Physical Science
- 2007-S2 Unlocking Biological Diversity
- 2007-PDI-HM Towards A Unifying View of Common Equations, Functions, Inequalities, and Systems
- 2008-M1 The Arts and Science of Internalizing Math Connections
- 2008-M2 Digging Deep into Elementary Mathematics\*
- 2008-S1 Physical Sciences: Principals, Concepts and Applications
- 2008-S2 Exploring Science in Grades 3-8\*

\*Ongoing as of 3/25/2009

# List of Presentations

<b>Session</b> <b>__Keynote</b> Concord 4:00-4:45 Oral	<b>Can He Say That In Public?</b>  Andrew Chen, EduTron, Winchester	<b>All</b>
Jean Franco		

## Abstract

The name of the game is Intensive Immersion; the topics are mathematics and science. This Short Asian will reflect on his three-year experience dealing with a large number of characters in Lowell Public Schools. So many anecdotes, so little time. Please come to protect him from getting sued.

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<b>Session</b> _X1 Concord 3:30– 4:00 Oral	<b>Integrating Category 4 Strategies in the High School Biology Classroom</b>  Christina DiBenedetto, Lawrence High Learning Center, Lawrence	<b>9</b>
Paula Sweeney		

## Abstract

Writing can be a powerful tool to help build ELL students' capacities to understand Biology concepts. This brief presentation will offer ideas on how to use Double Entry Journals, Learning Logs and Quick Writes to facilitate comprehension in a Sheltered Immersion classroom. A sampling of student work and rubrics will also be shared.

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<b>Session</b> _X2 Concord 4:45 – 5:30 Oral	<b>That's Algebra?</b>  Jeff Gwiazda, Curriculum Office, Lowell	<b>k-12</b>
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Edith  
LaBran

### **Abstract**

This presentation will look at how algebraic concepts and procedures are currently being developed in grades K-8 using the Investigations in Number, Data and Space (K-5) and Connected Mathematics Project (6-8) curricular materials in Lowell. This "new" approach to teaching algebraic concepts will be compared to the more traditional approach of teaching Algebra I as a set of symbolic rules and procedures. The difference between, as well as the significance of both approaches will be discussed.

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#### **Session \_X3**

#### **Comprehension Strategies in a Standards-Based Mathematics Classroom**

**K-8**

Belvidere  
5:30 – 6:15  
Oral

Magaly Ronan, District, Lowell  
Rachel Michaud, Murkland, Lowell

Sandy  
Dunning

### **Abstract**

Are you in search of strategies for supporting students in making meaning throughout the curriculum? The use of reading comprehension strategies such as visualization and making inferences will promote student achievement when solving contextual math problems. Rich contexts help the transfer of new ideas into long-term memory. Join us for a brief presentation, some hands-on activities, and some take-to-school goodies!

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#### **Session \_Y1**

#### **Improving Instructional Technology Capacity through Content Area Coaching**

**All**

Belvidere  
3:30– 4:00  
Oral

Anne Sheehy, District, Lowell  
Jack Pinard, Lowell Educational Television 22, Lowell

Kathleen  
O'Connor

## **Abstract**

In order for instructional technology to positively enhance student achievement, technology use needs to be piggybacked on another core curricular area. Coaching allows teachers to look beyond the use of technology and allows them to focus on the actual application of the technologies. By starting with the content, and then adding the technology, teachers are more apt to consider applying technology to their teaching. Learn how to use video embedded pdfs to enhance coaching.

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**Session \_Y2**

### **Use Simple Activities to Teach fundamental Human Biology Concepts**

**5 and 8**

Belvidere

4:45 – 5:30

Oral

Ann Carpenter, Rogers Middle School, Lowell

Martha

Cohn

## **Abstract**

Overcome the impediments (planning time, expense, classroom control, and even fear itself!) to using hands-on activities in science class! Simple activities requiring easily available materials provide learning opportunities that impart understanding of fundamental science concepts. They also build background knowledge for future learning.

Use hands-on activities to achieve multiple goals:

- Gain experience using the scientific method
- Develop and integrate STEM and communication skills
- Teach science content standards for 7th grade
- Increase student participation and initiative in learning
- Build a lasting and working understanding of fundamental science concepts.

The 7th grade Human Biology content is used as an example, including:

- The concept of homeostasis
  - The circulatory and respiratory systems
  - How they work together
- 

**Session \_Y3**

### **The Daily Vote: A Standards-Filled Daily Routine**

Middlesex  
5:30 – 6:15  
Oral

Kevin  
Andriolo

Jessica Weintraub, McAuliffe, Lowell  
Martha Shelton, McAuliffe, Lowell  
Ellen McHugh, McAuliffe, Lowell  
Carl Bowden, McAuliffe, Lowell

**1-4**

### **Abstract**

We will demonstrate the Daily Vote, a standards-rich daily math routine that students love. This routine can be differentiated for students from first through fourth grade. The best part is that every student, regardless of academic needs, is able to participate, take ownership of the learning, and feel successful. Incorporates concepts such as odd/even, greater, less than, and equal to, factoring, GCF, prime and composite numbers, doubles, arrays, halves, number sentences, and algebra. Not to be missed!

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### **Session \_Z1**

Middlesex  
3:30– 4:00  
Oral

### **Exploring Statistics With Fathom**

**6-12**

Andy Katz, Humanities & Leadership HS, Lawrence  
Harish Chamarthi, Boston University Graduate School,

Patti Adams

### **Abstract**

Data and technology have altered how we live and what students need to learn. Data analysis is an integral component of high school mathematics. Fathom™ Dynamic Data integrates data analysis and effective technology use into engaging statistical explorations.

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### **Session \_Z2**

Middlesex  
4:45 – 5:30  
Oral

### **How to Present Science to Elementary school Students; innovations, hands-on & d. I.**

**3-6**

Lornie Bullerwell, Pearson publishing, Scott Foresman

Phil Maher

### **Abstract**

This presentation will attempt to show teachers how Science can be presented in their classes via hands-on activities, differentiated instruction modalities and teacher demos. It will showcase using leveled readers, some technology and visual learning approaches.

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#### **Session \_Z3**

#### **Mathematics Learning Community' and 'Problem Solving First'**

Concord

5:30 – 6:15

Oral

Kathy Lizotte, Gardner Middle School, Gardner  
Niel Albero, Gardner Middle School, Gardner

**3-8**

### **Abstract**

This two-part presentation will discuss adult learning as well as student learning. We will describe the challenges and successes of providing courses for peer teachers. The mathematics learning community thus formed leads to very desirable district culture and working environment. Then we will describe our experience using problem solving as a way to assess students' prior knowledge and relating the students' responses to scaffold the teaching of new skills. Through problem solving, teachers' can give the students the forum to discuss mathematical concepts and operations and see how their thinking links to new information.

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#### **Session A01**

#### **Accountable Talk**

3:30-6:15  
poster

Angela Bergeron, Sullivan, Lowell  
Cathy Clough, Sullivan, Lowell

**1-8**

### **Abstract**

Using accountable talk in the math classroom is an effective method of teaching. Students are able to share ideas, discuss with partners (or small groups), and gain a greater understanding of mathematical concepts, all while creating a caring and helpful classroom environment.

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**Session A02****Inquiry-based Marble Maze Project****4-6**3:30-6:15  
posterMarsha Downey, Daley Middle, Lowell  
Jolaine Muldoon, Daley Middle, Lowell  
Susan Wallace, Daley Middle, Lowell**Abstract**

Inquiry-based Marble Maze Project. Students use the engineering design process to design, build, and test a marble maze out of recyclable materials. The project's goal is to create a track that allows a marble to roll from start to finish in 12.0 seconds. Students discover how forces and motion affect the time of their marble run.

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**Session A03****My Vedic Math Journey****5-8**3:30-6:15  
poster

Terry Troutt, Daley Middle School, Lowell

**Abstract**

Vedic Math is as old as our base ten number system. Yet, I'd never even heard of it till I stumbled across it a little over a year ago. A whole new universe has opened before me. I'm fascinated by what I'm learning and would love to share the highlights with you.

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**Session A04****Now You See It.....Now You Don't  
Light****Refraction of  
Light****5-12**3:30-6:15  
posterMartha Cohn, Wang Middle School, Lowell  
Esteban Dominguez, Lowell High School, Lowell**Abstract**

Using simple materials show examples of the refraction of



light. When the refraction index is the same it appears to disappear. Take this from a simple demonstration to the mathematical comparisons of indices.

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**Session A05**

**Addition Continuum and Strategies in Grades K-4**

**K-4**

3:30-6:15  
poster

Julie Fairweather, P.W. Reilly Elementary, Lowell  
Margaret Shepherd, P.W. Reilly Elementary, Lowell

**Abstract**

We will present a continuum of addition strategies appropriate for grades K-4. Our presentation will help educators "locate" where their students currently are in terms of their problem solving abilities and it will also help teachers determine where to bring their students next.

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**Session A06**

**Routes Of Nine Sums**

**3-6**

3:30-6:15  
poster

Lois McLaughlin, Molloy, Lowell

**Abstract**

I would like to share my antique seventh grade math project with you. I have discovered many different routes to take that will add up to nine. There are short routes and long routes to take but they all end with the same result.

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**Session A07**

**How Does DNA "Speak" to My Cells?**

**7-12**

3:30-6:15  
poster

Malinda Pires, Lowell High School, Lowell

**Abstract**

How does DNA carry the instructions for everything happening in our bodies and in the bodies of all organisms? In order to truly understand the answer to this question we need to first look at the structure of DNA to see how it stores the genetic information. This poster will demonstrate ideas on how to teach Massachusetts State standard 3.1 and part of standard 3.2. It includes a project for students to create their own model of DNA. There is also a description for a short activity to help students understand how the sequence of bases in the DNA molecule directs the formation of proteins during gene expression.

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**Session A08**

**Meeting of the Mathematical Minds: A McAvinnue Math Study Group**

**K-4**

3:30-6:15  
poster

Shelly Marks, J. A. McAvinnue, Lowell  
Sheila McCabe, J. A. McAvinnue, Lowell

**Abstract**

Come and conquer your math fears in a non-threatening environment. In this presentation, we will walk through how we have designed and implemented a math study group for adult learners at the J. A. McAvinnue School. Adult learners will be able to apply the knowledge learned and strategies used to the classroom.

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**Session A09**

**Discovering the Algebra/Geometry Connection in the Diagonals of Any Polygon**

**8-9**

3:30-6:15  
poster

Michael Moretti, E. N. Rogers, Lowell

**Abstract**

What is the connection between the number patterns of diagonals drawn inside any polygon and Pascal's Triangle, combinations and permutations, and linear, quadratic, cubic, and quartic equations? Use area models, Unifix cubes, graphing, and a little Algebra to

discover the rules for the number of intersections, regions, and line segments to be found in any polygon. This Algebra unit brings together a wide array of related math topics that will challenge your students and encourage a spirit of playfulness and invention.

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**Session A10**

**Cooperative Learning Centers... with a Twist!!**

**6**

3:30-6:15  
poster

Amila Colon, Dr. An Wang Middle School, Lowell  
Reg Aubry, Dr.An Wang Middle School, Lowell

**Abstract**

Cooperative Learning Centers can be FUN!!! Students have 5 minutes at each station to solve a problem. The problems involve the use of FRACTION OPERATIONS to solve REAL-LIFE SITUATIONS. This activity requires a conceptual understanding of fraction operations (not just the algorithm) and also provides the opportunity for students to be engaged in ACCOUNTABLE TALK.

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**Session A11**

**Attributes - Traits - Characteristics - Features**

**K-4**

3:30-6:15  
poster

Paul Katler, Greenhalge, Lowell

**Abstract**

How are living things alike and different.

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**Session A12**

**Safety Net: Catch a Falling Mathematician**

**1-2**

3:30-6:15  
poster

Kara Burns, Washington Elementary School, Lowell  
Rebecca Hyde, Washington Elementary School, Lowell  
Susan Otero, Washington Elementary School, Lowell  
Nancy Weber, Washington Elementary School, Lowell

**Abstract**

Time and money, can you ever have enough of either? Well, students need lots of practice and opportunities to explore both and become proficient. Safety Net: Catch a Falling Mathematician offers a model differentiated instruction intervention/extension opportunity to three levels of math learners using game playing, problem solving, cooperative learning, and further practice through traditional and novel modalities. By offering differentiated activities, teachers can boost the learning of their emerging students, deepen the understanding and fluency of their nearly proficient learners and extend the inquiry of students ready for a challenge. Spend some time and cash in on this presentation!

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**Session A13**

**Content Coaching with an ESL Lens**

**Pre-K-4**

3:30-6:15  
poster

Ana Vasconcelos, McAvinnue, Lowell  
Sue Carmona, McAvinnue, Lowell

**Abstract**

English Language Learners at various proficiency levels are in every classroom. Teachers are expected to insure that all students meet grade level standards and are able to access the content. Hence, staff need support, guidance, and assistance in delivering instruction that meets the language needs of their students, is standards based, rigorous, and purposeful. One-to-one coaching and lesson studies with an emphasis in using ESL strategies are the foci of this model. This collaborative coaching model will provide teachers with a forum that is certain to improve the instruction of mathematics, motivate and resurface teachers' enthusiasm for teaching and learning.

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**Session A14**

**Pi**

**5-6**

3:30-6:15  
poster

Sherrin Trombly, Laura Lee, Lowell  
Olga Armas, Bartlett, Lowell

### **Abstract**

Does Pi have you going in circles? Don't go off on a tangent...come to my presentation and we'll discuss the diameter of the problem and how to get around it.

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#### **Session A15**

#### **Math Jeopardy**

**3**

3:30-6:15  
poster

Olga Armas, Bartlett, Lowell  
Sherrin Trombly, Laura Lee, Lowell

### **Abstract**

Using a Jeopardy set up to implement a range of challenging questions for kids. Sort them by categories starting simple and getting more difficult. Covering different terms and problems in math. From word problems to measuring.

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#### **Session A16**

#### **Negative Integers and Order of Operation**

**7-8**

3:30-6:15  
poster

Ellen Savage, Stoklosa Middle School, Lowell

### **Abstract**

Negative integers and order of operation are two concepts that we teach but are not retained by students. This presentation offers some suggestions about instruction and reminders about some pitfalls. The lack of mastery of these two math concepts can impede the learning of Algebra.

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#### **Session A17**

#### **Math Intervention**

**1-5**

3:30-6:15  
poster

AnnMarie Carolan, Butler, Lowell  
Karen Themistocles, Butler, Lowell  
Gerri Manolopoulos, Butler, Lowell

### **Abstract**

We will be presenting The five A's of intervention. This will include the following: Alignment to Curriculum and Instruction; Assessments which include pre and post tests for grouping students; Activities used during intervention and in the classroom to help support instruction; Analysis of Data and the use of technology;

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#### **Session A18**

#### **Geometric Motion Commotion**

**5-8**

3:30-6:15  
poster

Becky Cox, Stoklosa, Lowell  
Mary Riddell, Robinson, Lowell

### **Abstract**

What kind of transformations have you encountered lately? Join the Geometry Gals and learn to handle mathematical object transformations as you flip, rotate and reflect multiple ways to transform objects using a super-sized coordinate grid. Line reflections, point reflections, translations and rotations will leave you and your students totally transformed as you explore geometry.

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#### **Session A19**

#### **Scientific Inquiry: The Mystery of the Smoke-Blowing Student**

**6-8**

3:30-6:15  
poster

Eilish Connaughton, Butler Middle School, Lowell  
Maryalice Foley, Butler Middle School, Lowell  
Emilia Kwiatkowski, Butler Middle School, Lowell  
Patricia Adams, Butler Middle School, Lowell

### **Abstract**

Inspired by true events...Our presentation investigates the seemingly impossible middle school fad of creating smoke using only the human mouth. Can it really be done? Where does the smoke come from? How does it work? We will explore and share the science behind the phenomenon.

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<b>Session A20</b>	<b>Differentiating Instruction to Meet Student Needs in Mathematics</b>	<b>3</b>
3:30-6:15 poster	Erin Abrams, McAvinnue, Lowell Sarah Fleming, McAvinnue, Lowell Kaitlin Chandonnet, McAvinnue, Lowell	

**Abstract**

Have you every given a standardized test and your students are all over the board? Now what do you do with the data? You can start by determining where each child is at and how you can move them to the next level. Come to our presentation to examine how our 3rd grade team works together to support each child at multiple levels.

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<b>Session A21</b>	<b>Did I Mention Intervention?!?</b>	<b>1-6</b>
3:30-6:15 poster	Jackie Carr, Butler, Lowell Karen Seibel, Butler, Lowell	

**Abstract**

Using the MCAS as a baseline, and the district benchmark math tests to identify a key power standard that the Butler grade 6 students are still struggle with mastery. We will create a differentiated math intervention unit to support positive mastery within intervention for grade 6.

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<b>Session A22</b>	<b>Literacy Based Science Research Projects for Middle School</b>	<b>5-7</b>
3:30-6:15 poster	Jenny Murphy, Sullivan Middle School, Lowell Arlene Terrazzano, Sullivan Middle School, Lowell Kathleen Larocque, Sullivan Middle School, Lowell	

### **Abstract**

Grade 7 research project challenges students to evaluate whether their assigned micro-organism is “Friend or Foe” and cite evidence for their determination. Accompanying Grade 5 project explores the mysterious dangerous world of invasive species and their affects on the environment, as well as the consequences resulting from human interventions.

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#### **Session A23**

#### **Math Journaling**

**K-4**

3:30-6:15  
poster

Grace Basile, Pawtucketville Memorial, Lowell  
Kerry Gavin, Pawtucketville Memorial, Lowell

### **Abstract**

We will share math journaling ideas and products from our new initiative at the Pawtucketville, undertaken in order to improve the students' ability to think more deeply and communicate their understanding of content knowledge and also to improve their ability to express their problem solving strategies clearly.

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#### **Session A24**

#### **Physical Science - LS 1 & 2**

**1-7**

3:30-6:15  
poster

Lisa Noel, Bartlett, Lowell  
Stephanie Rennie, Morey, Lowell  
Rich Deshler, Washington Elementary School, Lowell

### **Abstract**

Physical science in the elementary years lays the foundation for future middle and high school years. Since everything is made up of matter, the team decided to explore the properties of matter. The goal was to explore the properties of mass in grades 1, 3, and 7. Each grade level will explore activities that foster students understanding of mass/volume/density. Please stop over and visit our elementary and middle school posters that display activities done in the classroom. Better yet, please feel free to try some of our experiments.



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**Session A25****Physical Science - LS 1 & 2****1-7**3:30-6:15  
posterSally Davis, Bartlett, Lowell  
Stephanie Clark, Bartlett, Lowell**Abstract**

Physical science in the elementary years lays the foundation for future middle and high school years. Since everything is made up of matter, the team decided to explore the properties of matter. The goal was to explore the properties of mass in grades 1, 3, and 7. Each grade level will explore activities that foster students understanding of mass/volume/density. Please stop over and visit our elementary and middle school posters that display activities done in the classroom. Better yet, please feel free to try some of our experiments.

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**Session A26****So, What Are L.E.D.'s Anyway?****7-8**3:30-6:15  
poster

Virginia Burke, Robinson Middle School, Lowell

**Abstract**

So, What are L.E.D.'s anyway?

Students today are using more and more Light Emitting Diodes (L.E.D.), but do they really know what they are and how they differ from traditional incandescent and florescent light bulbs? Using prior knowledge about light emitting diodes and new information, students may begin to piece together new information with old, vocabulary and experience 21st century technological advances in indication and illumination lighting. This display may be a useful, interactive tool that students could use to bridge incomplete, nonexistent or erroneous prior knowledge. This information would be a good foundation to build further knowledge about electrical components. My target audience is 7-8th grade.

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**Session A27****Math Fun, Games and Tricks****4-8**3:30-6:15  
poster

Liz Kabriel, H.J. Robinson, Lowell

**Abstract**

Need to re-engage your students with the fun and wonder of numbers? Want a quick fun reward that is still mathematically oriented? Here are some fun games, activities and math tricks that will engage your students and make them laugh. Some require calculators some do not. Come and get a resource of math tricks you can pull out to wow your students.

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**Session A28****The Art Of On-The-Spot Examples, Questions, or Problems****all**3:30-6:15  
posterAmy Dubois, B.F. Butler, Lowell  
Samnang Hor, Lowell High School, Lowell**Abstract**

Lesson planning is important, indeed. What is even more important is for us to be able to make up probing questions, problems, and examples on the spot. Based on student input, a teacher needs to think quick on one's feet, improvise, and come up with optimal problems at the right level on the spot. Such problems serve to clarify student misconceptions, to challenge students, and to advance student knowledge. It is an art and also a science. We will share some examples with you to get the conversation going. Please bring your own stories so we can improve our craft.

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**Session A29****What We Know About Andrew****all**3:30-6:15  
poster

Leona Giovannini, Lincoln, Lowell

### **Abstract**

I am sure that I am not alone in just loving taking classes with Andrew Chen. Since he has such clear characteristics, I think that an "Andrew Poster" will be a delightful addition to the more serious mathematical and scientific presentations that we will see at the EduTron Conference. A Lincoln School team of teachers presented at last year's conference and truly enjoyed not only presenting but in browsing the work of others. If you have any thoughts that you feel MUST be included in the poster, please e-mail Leona at lgiovannini@lowell.k12.ma.us or at lgiovannini@rcn.com.

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### **Session A30      Learning Mathematics and Science through Models of Mind & Brain**

**K-16**

3:30-6:15  
poster

Daniel Franklin, Community College, Other

### **Abstract**

The Center for Excellence in Education, Science, and Technology (CELEST), an NSF Science of Learning Center, is developing a unique educational curriculum based upon models of mind brain, and behavior that integrates science and mathematics. Teachers, administrators, and governments are naturally concerned with how students learn. Students are greatly concerned about how minds work, including how to learn, and thus are motivated to learn. CELEST curricula not only meet current U.S. standards in mathematics, science, and psychology but may influence plans to improve those standards. Software and support materials for primary and secondary levels are in development; materials for undergraduates are available at [http://cns.bu.edu/celest/ug\\_curriculum/](http://cns.bu.edu/celest/ug_curriculum/).

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**Session A31**

**Electrical Effects (Electricity can break down compounds apart)**

3:30-6:15  
poster

Oswaldo Santos, Wang Middle, Lowell

### Abstract

The exercise will prove that applying electricity to salted water will create a chemical reaction that will separate the sodium and the chlorine, proving that using electricity we can break compounds apart.

### Session A32

### Solar System

1-8

3:30-6:15  
poster

John McHale, Sullivan, Lowell

### Abstract

A possible way to teach "Earth & Space Grades 6-8 Learning Standard # 10" From Mass. frameworks and noted as mandatory in Lowell's Curriculum guide.

### List of Pre-registered Participants

FirstName	LastName	District	School
Ransford	Aboagye - Kodjoe	Lawrence	Math, Science & Technology High School
Erin	Abrams	Lowell	McAvinnue
Claire	Abrams	Lowell	Curriculum Office
Judith	Alaimo	Lawrence	James F Hennessey
Niel	Albero	Gardner	Gardner Middle School
Shirley	Albert	Lynn	Lynn public K-12
Kevin	Andriolo	Lowell	Curriculum Office
Olga	Armas	Lowell	Bartlett Community Partnership School

Reginald	Aubry	Lowell	Dr An Wang Middle School
Ken	Baron-Carvin	Substitute	Various
Angie	Bergeron	Lowell	Sullivan Middle School
Denise	Bergeron	Lowell	Peter W Reilly
Judith	Boccia	Lowell	UMass Lowell
Carl	Bowden	Lowell	McAuliffe
Courtney	Breen	Lawrence	Arlington Middle School
Lynne	Brophy	Lawrence	Arlington Middle School
Susan	Brostowin	Lawrence	Notre Dame High School
Lornie	Bullerwell	Pearson publishing	Scott Foresman
Virginia	Burke	Lowell	Robinson Middle school
Kara	Burns	Lowell	Washington
Marcia	Burns-Mittler	Bedford, MA	Bedford High School
Altagracia	Cabrera de Soto	Lowell	Sullivan
Leon	Calitri	Somerville	Winter Hill Community School
Sean	Carabatsos	Lowell	Robinson Middle school
Mary Jo	Carabatsos	Andover	Andover High School
James	Cardaci	Lowell	Stoklosa Middle School
Jillian	Carelli	Lawrence	Arlington Middle School
Susan	Carmona	Lowell	McAvinnue
Ann Marie	Carolan	Lowell	B. F. Butler Middle School
Ann	Carpenter	Lowell	E.N. Rogers Middle
Jackie	Carr	Lowell	B. F. Butler Middle School
Jorge	Castillo- Navarro	Worcester	Sullivan Middle School
Harish	Chamarthi	Lawrence	Lawrence High school
Kaitlin	Chandonnet	Lowell	McAvinnue
Andrew	Chen	Lowell	EduTron
Donna	Chevaire	Lawrence	Lawrence High School
Stephanie	Clark	Lowell	Bartlett Community Partnership School
Catherine	Clough	Lowell	Sullivan Middle School

Kelly	Clough	Lowell	McAvinnue
Martha	Cohn	Lowell	Dr An Wang Middle School
Amila	Colon	Lowell	Dr An Wang Middle School
Eilish	Connaughton	Lowell	B. F. Butler Middle School
Anne	Cook	Lawrence	District Office
Mary-Jane	Corry	Lowell	Stoklosa Middle School
Rebecca	Cox	Lowell	Stoklosa Middle School
Mickaela	Cremin	Lowell	Stoklosa Middle School
Carolyn	Cremin	Lowell	Stoklosa Middle School
Bob	Cronin	Lawrence	James F. Leonard School
Meghan	Crowley	North Middlesex	North Middlesex regional HS
Dianne	Cruz	Lawrence	Math, Science & Technology High School
Cheryl	Cunningham	Lowell	Moody
Peter	Dallaire	Lawrence	Bruce
Jessica	Daugherty	Lawrence	Arlington Middle School
Sally	Davis	Lowell	Bartlett Community Partnership School
Rich	Deshler	Lowell	Washington
Andrea	Deyermond	Lawrence	South Lawrence East Middle School
Christina	DiBenedetto	Lawrence	Lawrence High Learning Center
Esteban	Dominguez	Lowell	Lowell High School
Marsha	Downey	Lowell	Daley Middle School
Amy	Dubois	Lowell	B. F. Butler Middle School
Vandy	Duch	Lowell	Daley Middle School
Sandra	Dunning	Lowell	Lincoln
Jocelyn	Durkin	Lawrence	Wetherbee
Jeannine	Durkin	Lowell	Freshman Academy
Carolyn	Elliott	Lowell	Murkland
Julie	Fairweather	Lowell	Peter W Reilly
Colleen	Farrell	Lawrence	Arlington Middle School

Michael	Fiato	Lawrence	Humanities & Leadership High School
Anita	Finn	West Newton	Learning Prep
Cathy	Fisher	Lawrence	Henry K. Oliver
Sarah	Fleming	Lowell	McAvinnue
Jan	Flynn	Lowell	Moody
Elaine	Francis	Fitchburg	Fitchburg State College
Dan	Franklin	Unknown	North Shore Community College
Gilbert	Fuhr	North Middlesex regional, MA	North Middlesex regional HS
Jeff	Gaglione	Lowell	Lowell High School
Maryanne	Gauthier	Dracut Public Schools	Lakeview Junior High
Barry	Gelston	Lawrence	South Lawrence East
Jamie	Glennie	Lawrence	South Lawrence East Middle School
Anita	Greenwood	UMass Lowell	Graduate School of Education
Susan	Guerrera	Lawrence	Arlington Middle School
Jeff	Gwiazda	Lowell	Curriculum Office
Anthony	Helinski	Lawrence	Arlington Middle School
Marta	Hersek	Lowell	LHS
Dina	Hickey	Lawrence	South Lawrence East Middle School
Terri	Hoffman	Lowell	Laura Lee
Aram	Hollman	(subbing)	various
Samnang	Hor	Lowell	Lowell High School
Stephen	Humphrey	Lowell	Stoklosa Middle School
Rebecca	Hyde	Lowell	Washington
Amy	Jackson	Leominster	Samoset Middle School
Naseem	Jaffer	Consultant	Consultant
George	Johnston	Lowell	EduTron
Bill	Jumper	Lowell	LHS & UML

Elizabeth	Kabriel	Lowell	Robinson Middle school
Edward	Kalajian	TBA	currently unemployed
Karen	Kane	Lowell	Sullivan Middle School
Paul	Katler	Lowell	Greenhalge
Andy	Katz	Lawrence	Humanities & Leadership High School
Mary Lou	Kennedy	Lawrence	James F. Leonard School
Jim	Keydel	Lowell	Stoklosa Middle School
Jessie	Klein	Lowell and Bedford	Middlesex Community college
Emilia	Kwiatkowski	Lowell	B. F. Butler Middle School
Edith	LaBran	Lowell	Sullivan Middle School
Carol	Lach	ESE	ESE
Susan	Lamontagne	Lowell	B. F. Butler Middle School
Sally	langlais	Lowell	Stoklosa Middle School
Joanne	LaRivee	Lawrence	Parthum
Kathleen	Larocque	Lowell	Sullivan Middle School
Teresa	LeMasurier	Lowell	J.J. Shaughnessy
Colleen	Lennon	Lawrence	Emily G. wetherbee
Chinsan	Lim	Lowell	Stoklosa Middle School
Kathy	Lizotte	Gardner	Gardner Middle School
Randy	Macdougall	Lawrence	Lawrence High School
Jackie	Macharia-Hagan	Lancaster	Luther Burbank Middle School
Marylou	MacKenzie	Lowell	Dr An Wang Middle School
Kelly	MacMullin	Newton	Mount Alvernia High School
Anastasia	Mahoney	Lowell	C.W. Morey
Gerri	Manolopoulos	Lowell	B. F. Butler Middle School
Shelly	Marks	Lowell	McAvinnue
Jennifer	Mason	Lawrence	Arlington Middle School
Roberta	Mayo	Worcester	Union Hill
Sheila	McCabe	Lowell	McAvinnue
Timothy	McCarron	Lawrence	James F. Leonard School
Cheryl	McDonough	Malden	Beebe
Tim	McGillicuddy	Lowell	E.N. Rogers Middle

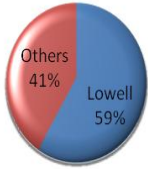


John	McHale	Lowell	Sullivan
Ellen	McHugh	Lowell	McAuliffe
Lois	McLaughlin	Lowell	Molloy
Paula	McPhillips	Lowell	Cardinal O'Connell School
Paul	Mears	Greater Lowell Tech	GLTHS
Leonardo	Medina	Lawrence	Humanities & Leadership High School
Rachel	Michaud	Lowell	Murkland
Ernest	Middlemiss	Lowell	Lowell ALternative High School
Elaine	Mistretta	Haverhill	Haverhill High School
Norma	Montano	Lawrence	Arlington Middle School
Jolaine	Muldoon	Lowell	Daley Middle School
Jenny	Murphy	Lowell	Sullivan Middle School
Brian	Myers	Lowell	Laura Lee Alt
Patricia	Nastasi	Lawrence	Henry K. Oliver
Jeffrey	Nellhaus	Lowell	ESE
Ben	Netedeo	Dracut	High School
Ellen	Netishen	Lowell	Moody
Todd	Nguyen	Lowell	Daley Middle School
Arthur	Norman	Fitchburg	Retired
Leonidas	Nunez	Lawrence	Humanities & Leadership High School
Kathleen	O'Connor	Lowell	Central Office
Susan	Otero	Lowell	Washington
Kim	Palmer	Bridgewater-Raynham	Raynham Middle School
Thea	Paras	Lowell	Wang Middle School
Malinda	Pires	Lowell	Lowell High School
Jennifer	Priest Inero	Lawrence	South Lawrence East Elementary
Joe	Rappa	Cambridge	Open Learning Exchange
Stephanie	Rennie	Lowell	C.W. Morey
Mary	Riddell	Lowell	Robinson Middle school
Lauren	Rock	Lowell	Salem State College

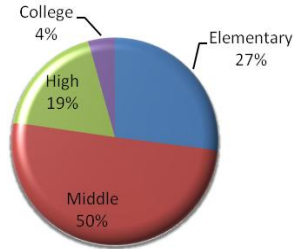
Juan	Rodriguez	Lawrence	Arlington Middle School
Magaly	Ronan	Lowell	District specialist
Anne	Rounce	Lawrence	Arlington Middle School
Keri	Ryan	Lawrence	Arlington Middle School
Ellen	Savage	Lowell	Stoklosa Middle School
Paul	Schlichtman	Lowell	Central Office
Karen	Seibel	Lowell	B. F. Butler Middle School
Michelle	Shanker	Lawrence	Arlington Middle School
Anne	Sheehy	Lowell	Moody
Martha	Shelton	Lowell	McAuliffe
Margaret	Shepherd	Lowell	Peter W Reilly
David	Siegel	Lowell	Lowell High School
Stephen	Skaff	Lawrence	Arlington Middle School
Barbara	Smith	Lowell	P.W.Reilly
Matthew	Stahl	Lowell	Washington
Megan	Stewart	Lawrence	Wetherbee
Paula	Sweeney	Lowell	Lowell High School
Arlene	Terrazzano	Lowell	Sullivan Middle School
Karen	Themistocles	Lowell	B. F. Butler Middle School
Michelle	Tiberio	Lowell	E.N. Rogers Middle
Sherrin	Trombly	Lowell	Laura Lee Alt
Terry	Troutt	Lowell	Daley Middle School
Ana	Vasconcelos	Lowell	McAvinnue
Monique	Verville	Dracut Public Schools	Lakeview junior High School
Kathleen	Voller	Bridgewater- Raynham	Raynham Middle School
Grace	Wai	Lowell	Bartlett Community Partnership School
Susan	Wallace	Lowell	Daley Middle School
David	Walsh	Lawrence	South Lawrence East Middle School
Nancy	Weber	Lowell	Washington
Jessica	Weintraub	Lowell	McAuliffe

## Conference Staff

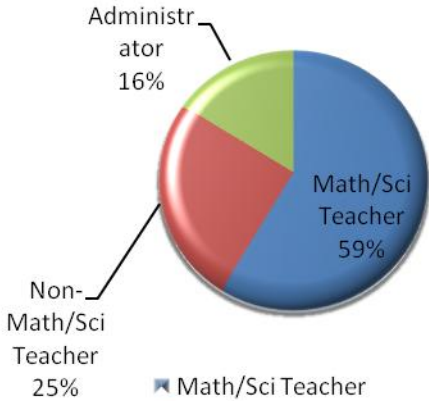
FirstName	LastName	School	District	Position
Jean	Franco	Central Office	Lowell	Conference Chair
Joyce	Tapper-Benham	Central Office	Lowell	Conference Co-Chair
Claire	Abrams	Central Office	Lowell	Conference Co-Chair
Bonnie	Allum	Central Office	Lowell	Conference Facilitator
Marta	Rosario	Central Office	Lowell	Conference Facilitator



Lowell Others



Elementary Middle High College



Math/Sci Teacher  
Non-Math/Sci Teacher  
Administrator