



TOM TOBIAS
ARTS EDUCATION DIRECTOR

BEN MARTIN
DIRECTOR, MISSOURI ALLIANCE FOR
ARTS EDUCATION

ARTS INTEGRATION AND STEAM

August 1, 2016

Missouri Department of Elementary
and Secondary Education



BETWEEN MINDS

AN ONGOING TAXONOMY OF TEAM DYNAMICS



- INFO PROCESSING
- PROJECT ENGAGEMENT
- PERCEPTION
- WORKFLOW
- PROBLEM SOLVING

PROCESS INFO IN A LINEAR MANNER



IDENTIFY IMPORTANT DETAILS



ANALYTICAL



MOVE IN A SEQUENTIAL ORDER



USE LOGIC TO SOLVE PROBLEMS

PROCESS INFO HOLISTICALLY



SEE END RESULT WITH CLARITY



CREATIVE



MOVE RANDOMLY FROM TASK TO TASK



USE INTUITION TO SOLVE PROBLEMS

Mindjet & JESS3

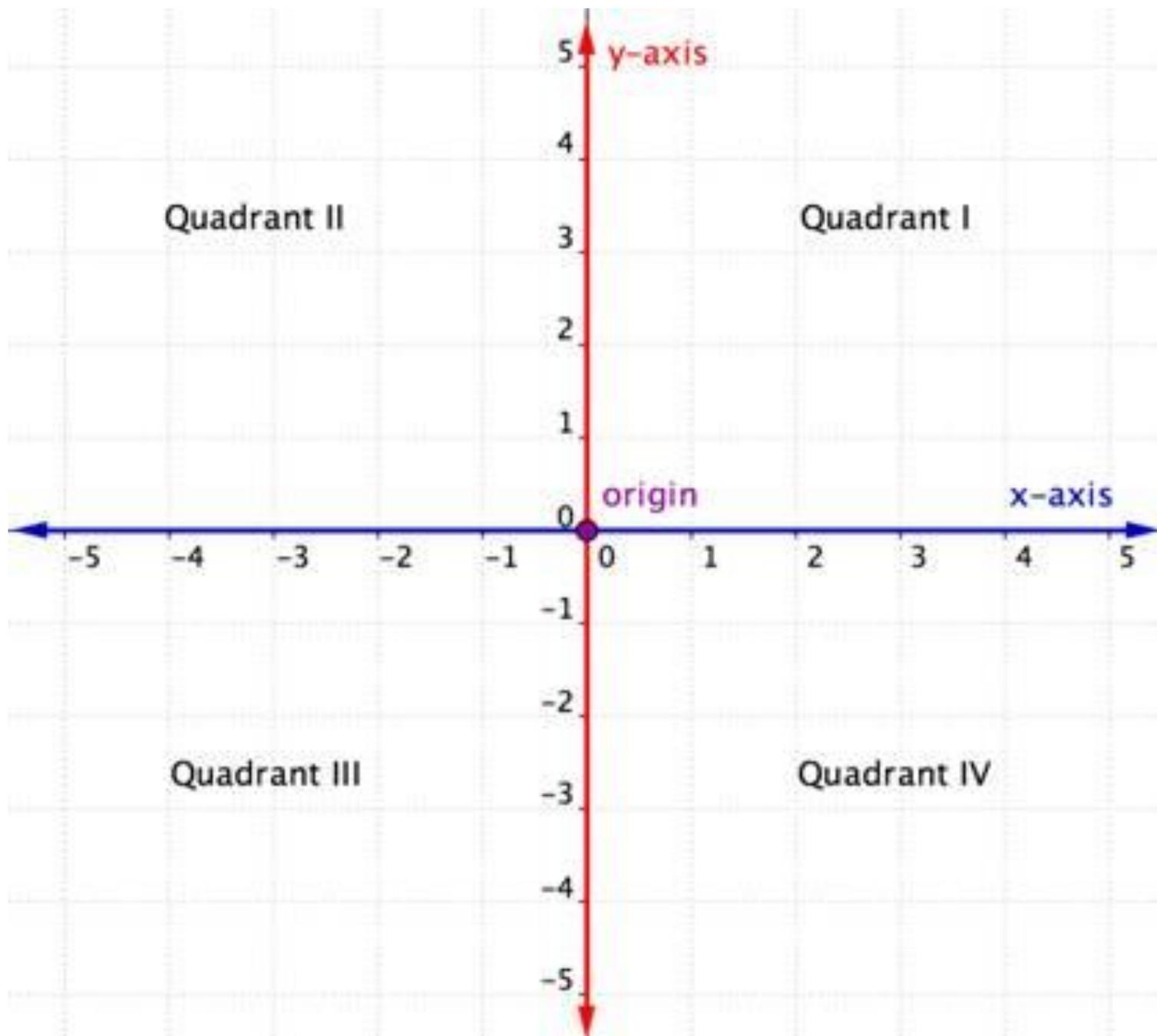
In Anticipation of Learning.....

Optimal State of Readiness for Learning

- Relaxed alertness
- High challenge/ low threat

Dance Anxiety + Math Anxiety = High Threat

Solution: Activity (Doing Things) Before
Comprehension



Activity before and during comprehension.....



A Teaching Framework/Anchor Literacy and Creativity

DESIGN



not only function

STORY



not only argument

SYMPHONY



not only focus

EMPATHY



not only logic

PLAY



not only seriousness

MEANING



not only accumulation



ARTS INTEGRATION

ARTS ENHANCEMENT

STEAM

Arts
Curriculum

Arts Enhancement

- The arts are used as a way to generate enthusiasm and engagement among students.
- Subject area standards alone are used to build assessments.

Arts Integration

- The arts are integrated with the other subject areas.
- Arts standards and subject area standards are assessed equally.
- Collaboration with the arts teacher and/or teaching artist is essential.

STEAM

- STEAM is an educational approach to learning that uses Science, Technology, Engineering, the Arts and Mathematics as access points for guiding student inquiry, dialogue, and critical thinking.
- The end results are students who take thoughtful risks, engage in experiential learning, persist in problem-solving, embrace collaboration, and work through the creative process

Student Engagement Meet Your Students Where They Are

Stage	Manifestation	Age of Development
One	Attention	Birth to 2 months
Two	Engaging the World	Between 2 and 5 months
Three	Interaction and Communication	4 to 10 months
Four	Shared Social Problem Solving	10-18 months
Five	Meaningful Use of Ideas	18 months to 3 years
Six	Logical Thinking	3 to 4.5 years
Seven	Multiclausal Thinking	4 to 6 years
Eight	Comparative and Gray Area Thinking	6 to 10 years
Nine	Reflecting Thinking	After 9 years and throughout life





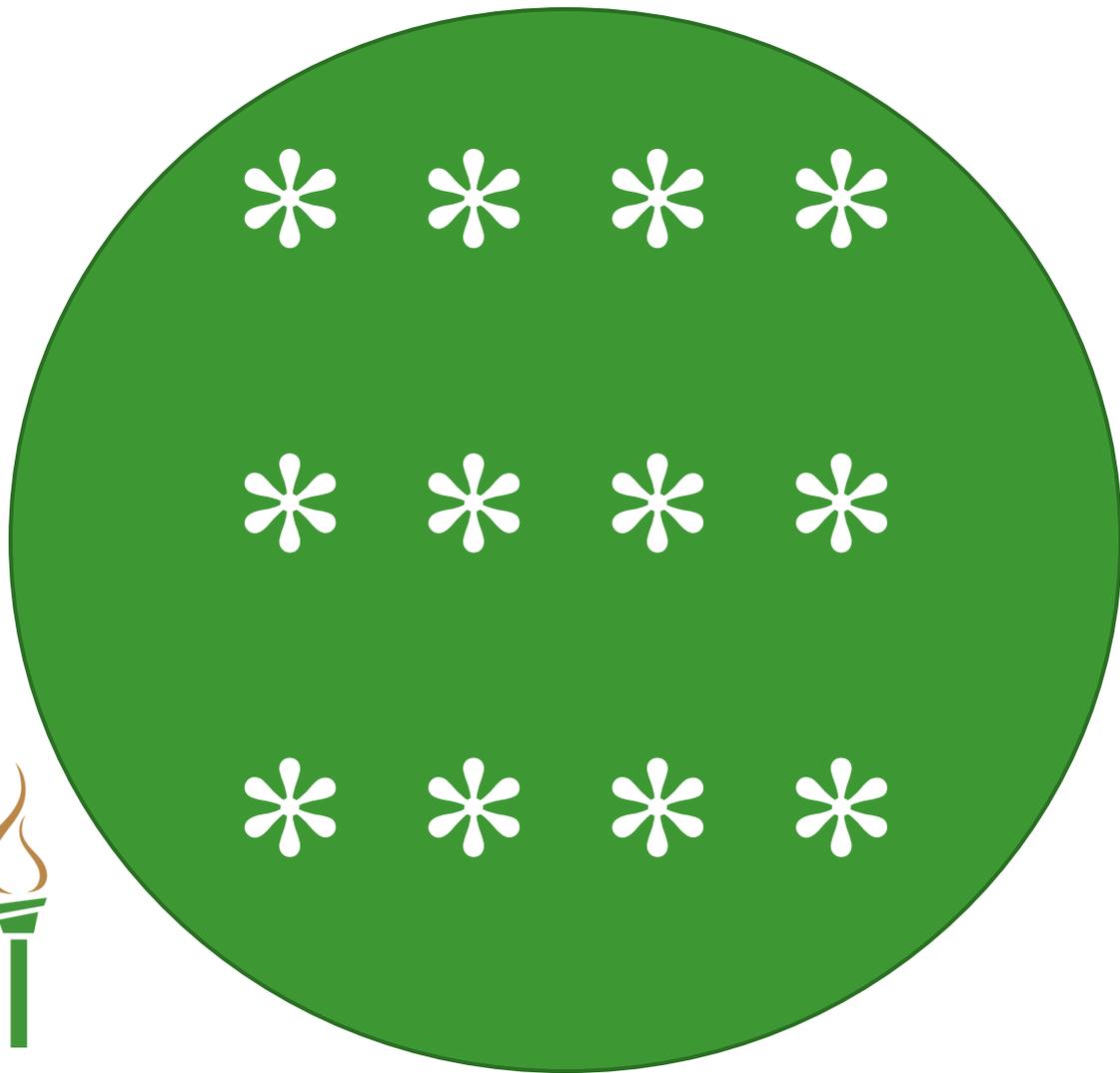
Before we move forward.....

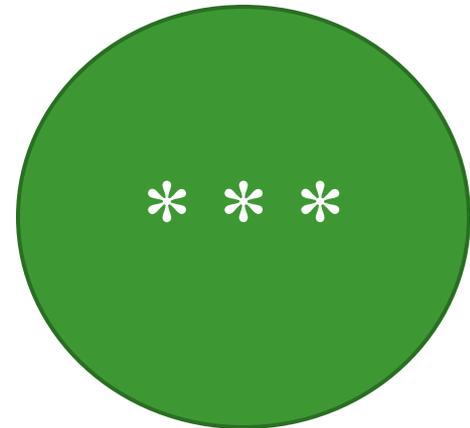
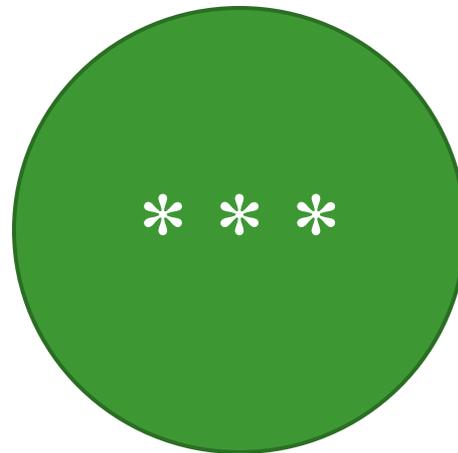
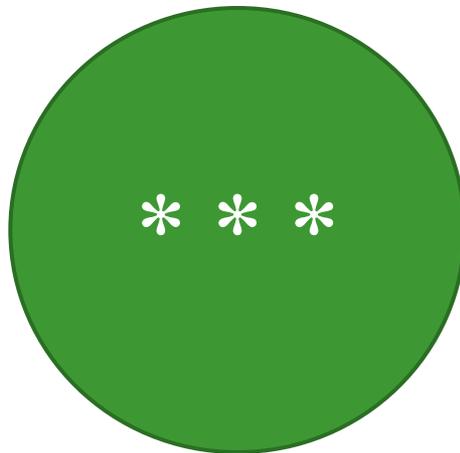
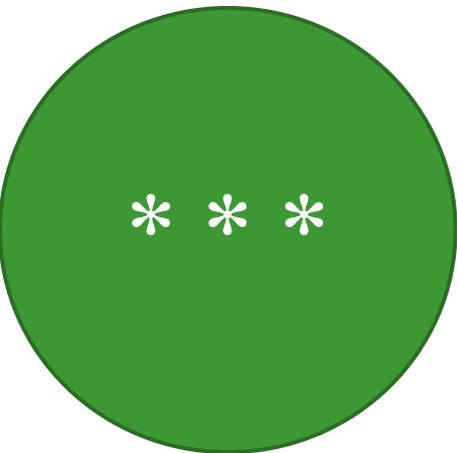
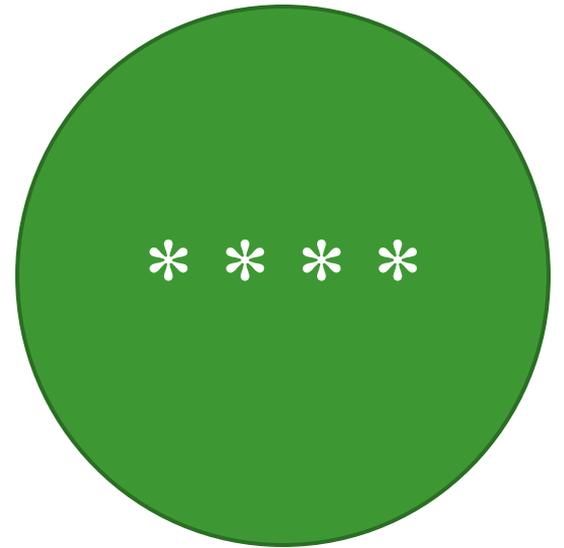
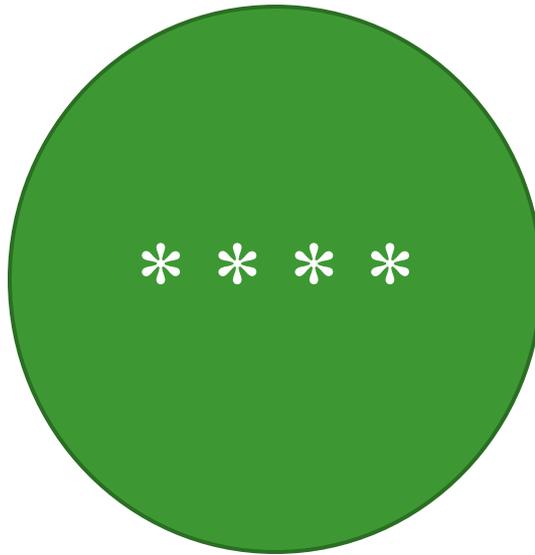
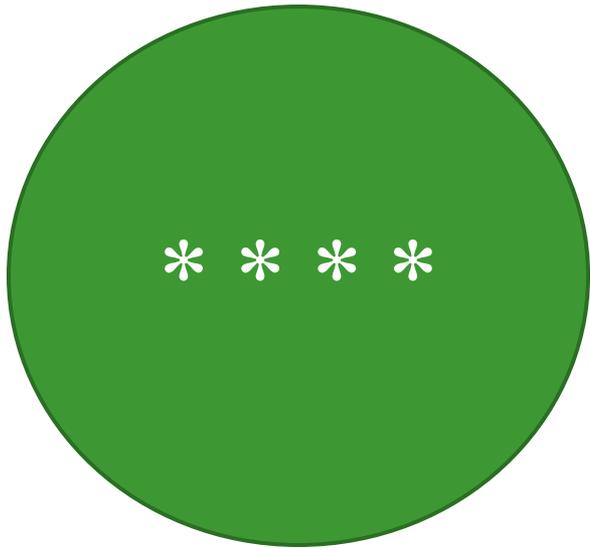
Integrating *Music/Science and Math.*
Activity before comprehension.

Math and Science Standards meet Arts Standards

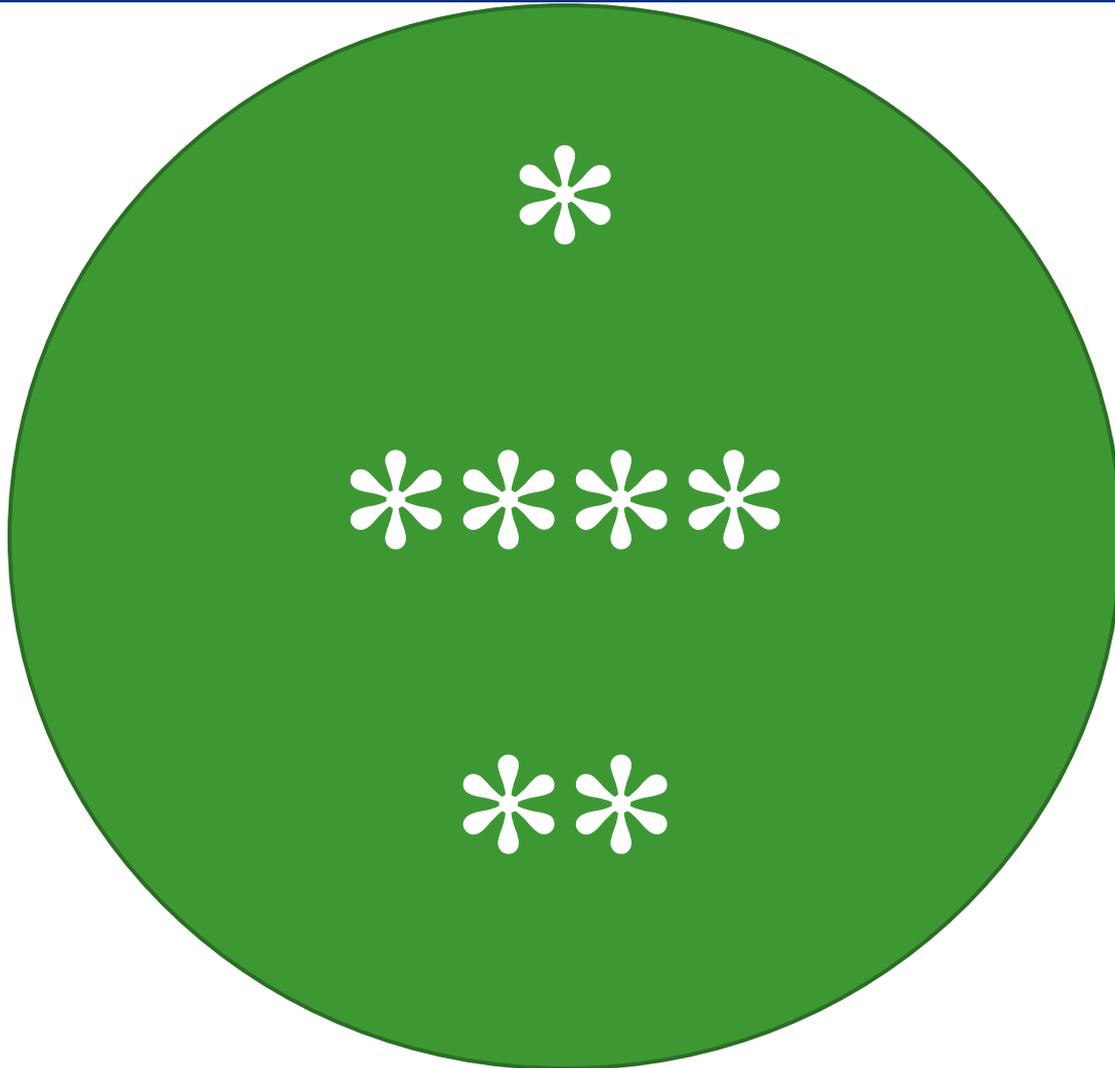
- Music: Improvise rhythmic and melodic patterns and musical ideas for a specific purpose.
- Math: *Understand addition and subtraction of fractions as joining/composing and separating/decomposing parts referring to the same whole.*
- Science: *Represent data in graphical displays to reveal patterns .*

Combining Math and Music to Understand Fractions





$$1/3 + 1/4 = 7/12$$



Lee Expressive Arts School

Columbia Missouri Principal: Ed Elsea



Arts Curriculum
Teachers

Classroom Teachers

Teaching Artists

Administrator

Lee School for Expressive Arts

Administrator Teacher Buy-in

- **Progressive educational philosophy:**
This considers the whole child. We meet the child at the developmental stage they are in.
- **Constructivist:** Each student constructs his or her own reality in the learning process and that students may learn best when they construct their own knowledge.

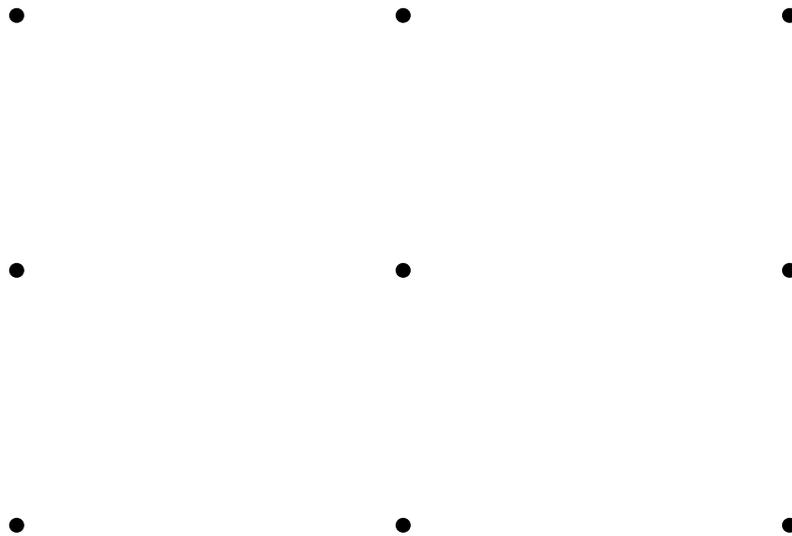
BEN MARTIN
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ESSA, Arts Integration and STEAM

The Current World of Arts Centered Education

ACE

- First, Think about this challenge. Connect all 9 dots with 4 strokes of your pen. You cannot lift the pen off the paper nor can you retrace any line. I'll check back with you at the end.



ACES All Around

- Connecticut: Arts Integration *Higher Order Thinking Schools* (HOT) 44 Schools
- North Carolina: 48 A+ *Arts Integration School Network* 33 of these are Title I schools.
- Oklahoma: 70 A+ *Arts Integration School Network*
- Arkansas: 17 A+ *Arts Integration School Network* 1 of these is a high school
- Kansas: 2 A+ *Arts Integration School Pilot Program*
- Mississippi: 17 *Whole Schools Network*
- Illinois: Chicago Public Schools

MAAE Arts Integration Committee

–Your ACES in Missouri

- Who is currently involved
- Collaborative Effort of MAAE, Missouri Arts Council and DESE
- A network of schools dedicated to arts centered education in whatever form you want to label it. Arts Enhancement, Arts Integration and/or STEAM
- Opportunities for Growth

How to Draw Those ACES to Your Hand

Empowering Teachers to Use ACE in their work.

**ESSA provides all kinds of provisions for using
“evidence-based instructional strategies.”**

**Professional Development in arts education
is expanding**

**New DESE Mentoring/Induction Guidelines provide the
perfect structure.**

Title I--The 4 Goals



Student Learning and Mastery

School Climate and Culture

Parent Involvement

Student Engagement

**For more information and research support for the
Arts role in Title I go to--**

www.title1arts.org

Now is the time.....ESSA is changing the rules for how we play the game.

- ESSA: Evidence Based Practice: Turn Around Arts and A+ Schools STEAM authorization
- MAAE Research on The Relationship Between Arts Programs, Student Achievement and Attendance
- Recent Legislation on CTE and Arts and Design Integration—Where the jobs are?

Play 'em where they lay!

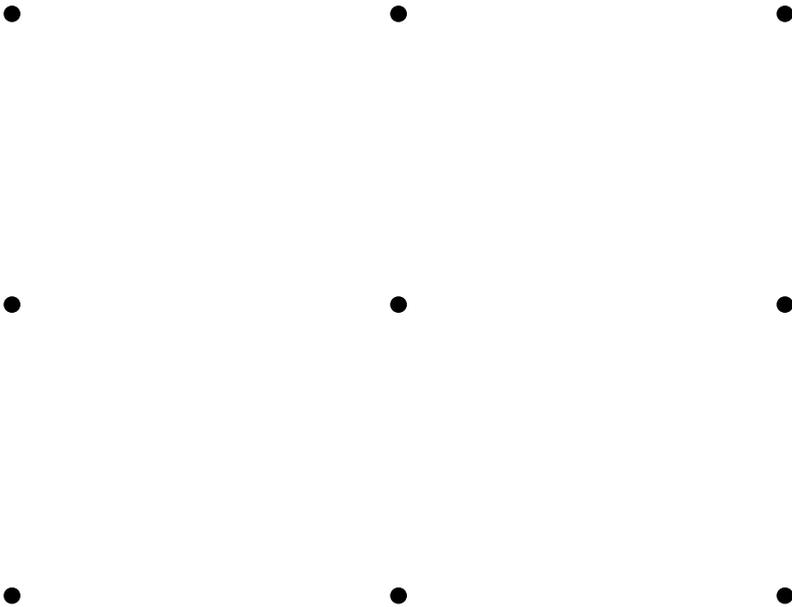
The Movement has already begun

- Raytown,
- Liberty
- Boeing and COCA
- KC STEM Alliance,
- O-STEAM

Programs are breaking out of the box and creating exciting new possibilities for students.

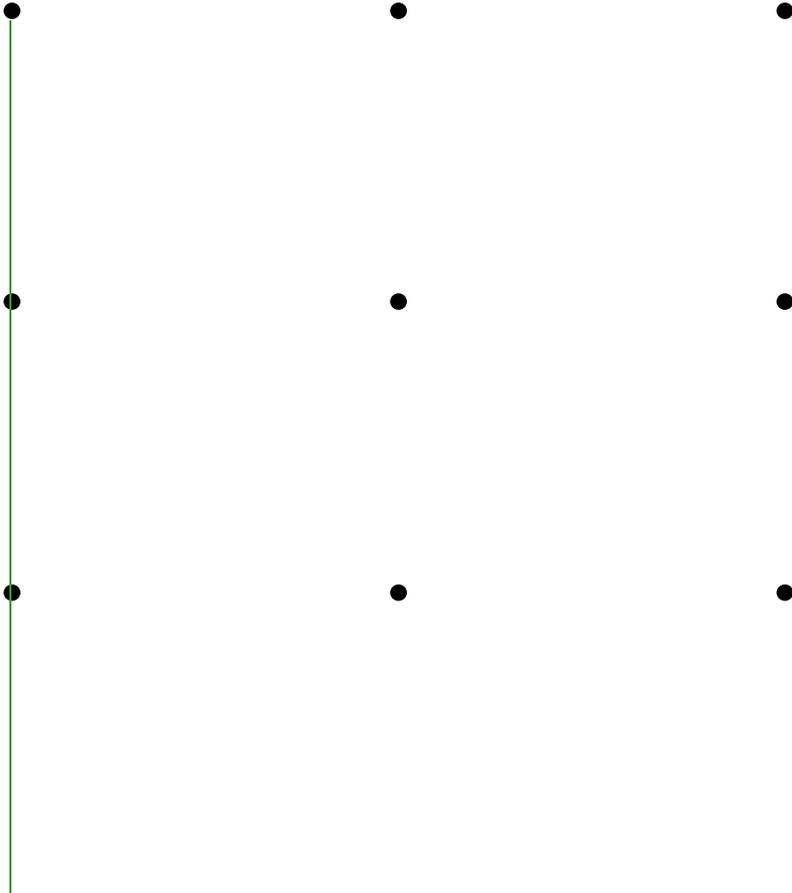
And speaking of the Box . . .

The Solution to the opening problem—



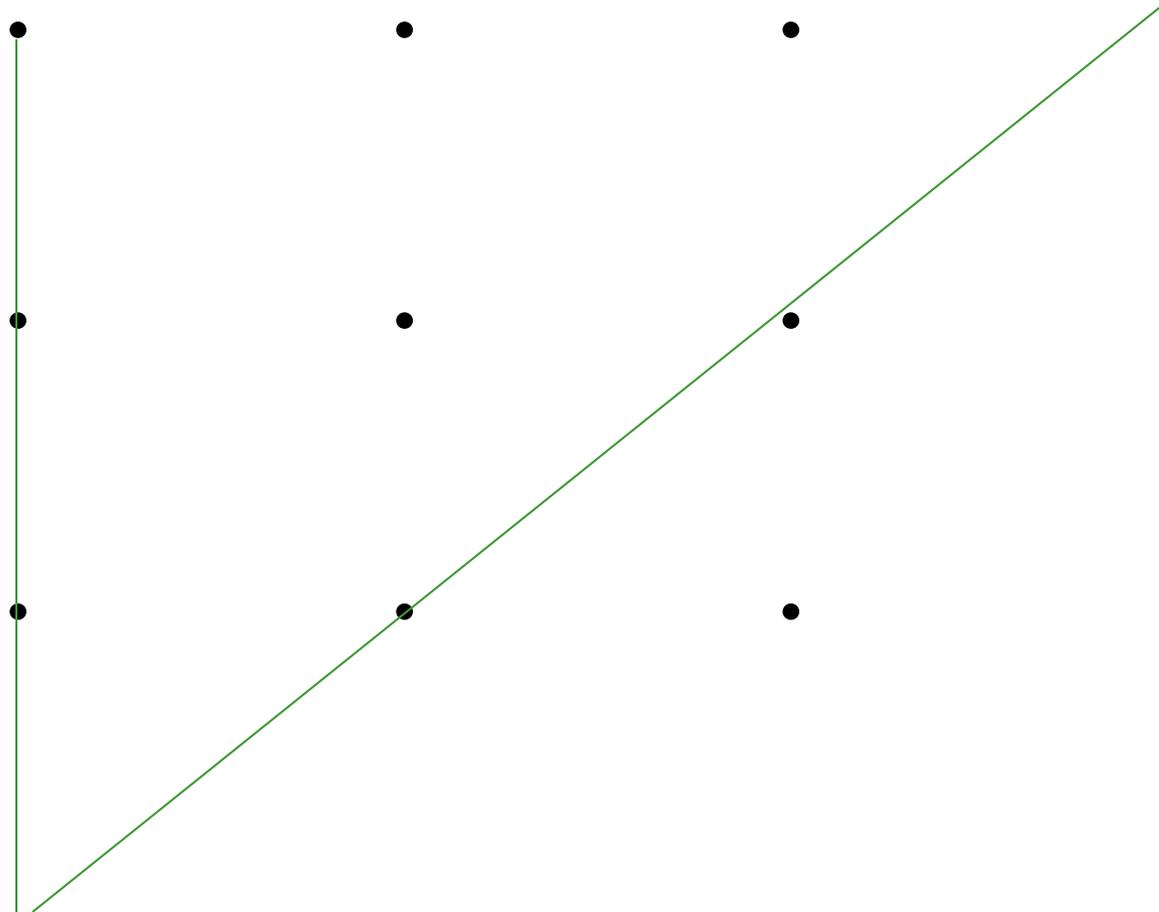
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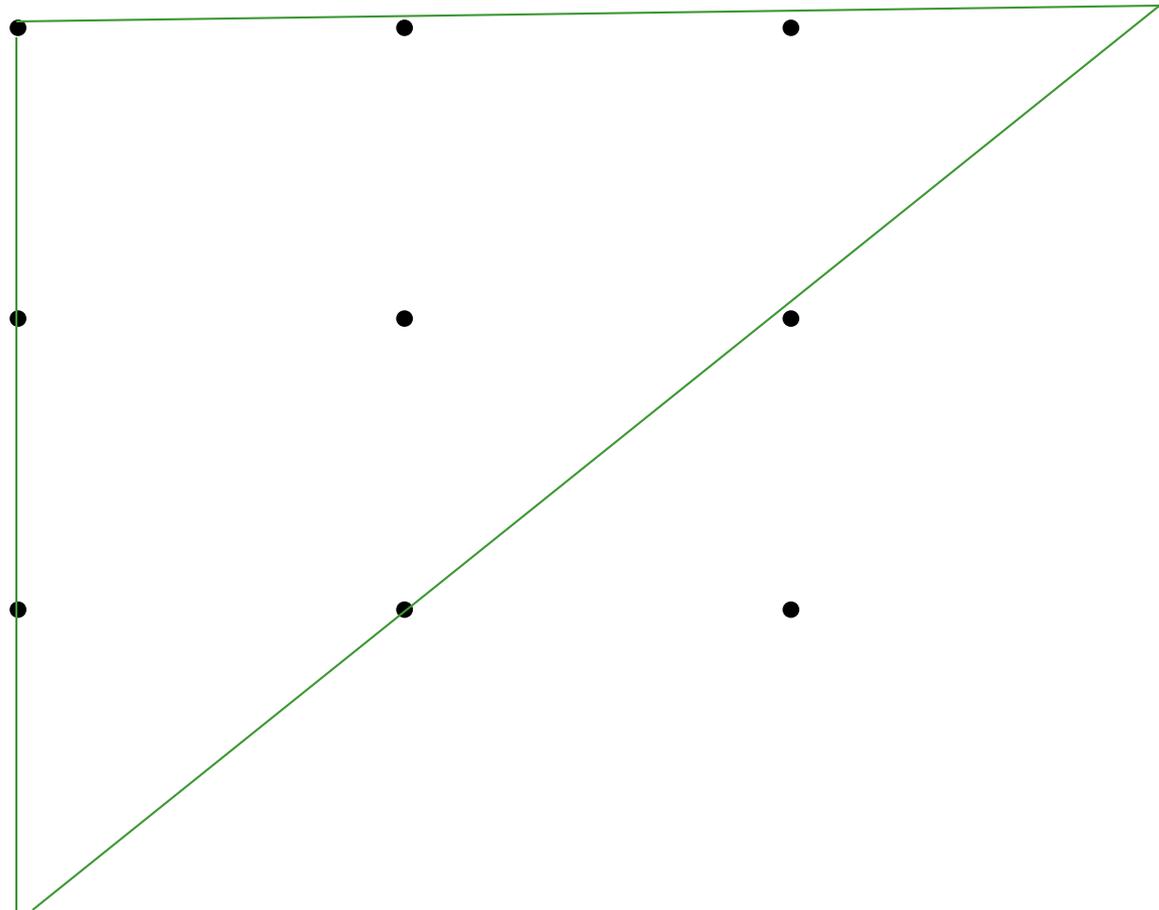
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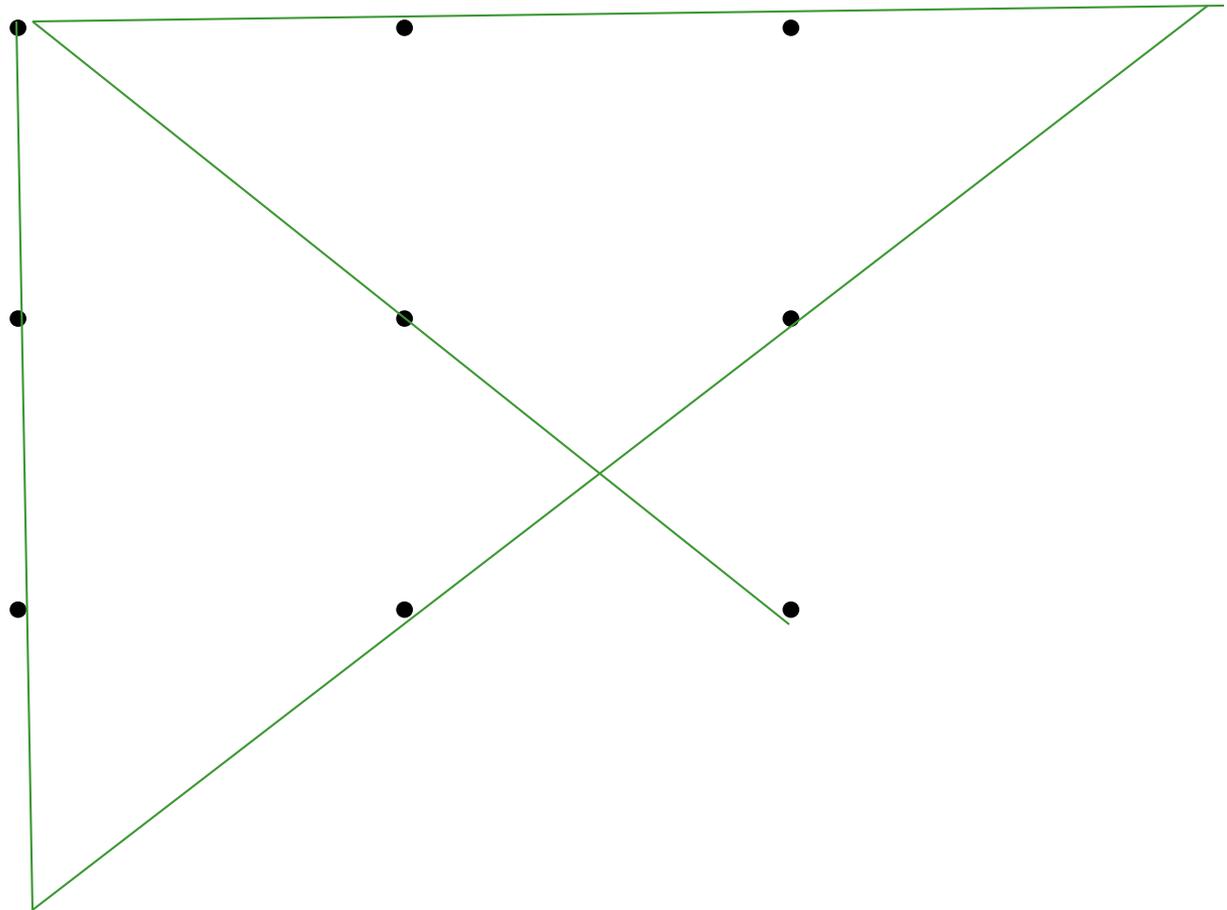
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And speaking of the Box . . .

The Solution to the opening problem—



Our ACE in the Hole



Training in the Arts lets us see the world in a different way.

When combined with other subjects and methods we can create truly educated, innovative citizens in a changing world.

Table Talk is OK in this game!



Questions?

Discussion.