S.T.E.A.M. in Early Childhood

Thomas T. Peters, Ed.D.

SC Coalition for Mathematics and Science

Sandra M. Linder, Ph.D.

Eugene T. Moore College of Education, Clemson University

Nichole Myles

Children's Museum of the Lowcountry

Tracy Lamb, Moderator

SC First Steps Board of Trustees

FIRST STEPS
Getting children ready for school.
SOUTH CAROLINA

2017 Chairmen's Summit on Early Childhood:
Equity Begins Here

SOUTH CAROLINA'S COALITION FOR MATHEMATICS & SCIENCE

SCCMS

- ACHIEVEMENT BY DESIGN -

STEM IN EARLY CHILDHOOD

FIVE "SIMPLE" STEPS TO SUCCESS.

Dr. Tom Peters
Executive Director
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864-656-1863

FIRST STEPS SC December 8, 2017

FOUNDING PARTNERS

BMW DUKE ENERGY DUPONT MICHELIN SOUTH CAROLINA DEPARTMENT OF EDUCATION ed.sc.gov

QUIZ Time!!!!!

Part 1 – Name that Acronym!

a. STEM
b. STEAM
c. STREAM
d. THEMAS

Incorrect response

Part 2 – Who Cares?

You may discuss with a neighbor.

STEM + Pipeline = A Pervasive Association

STEM Pipeline - About 1,500,000 results (0.61 seconds)

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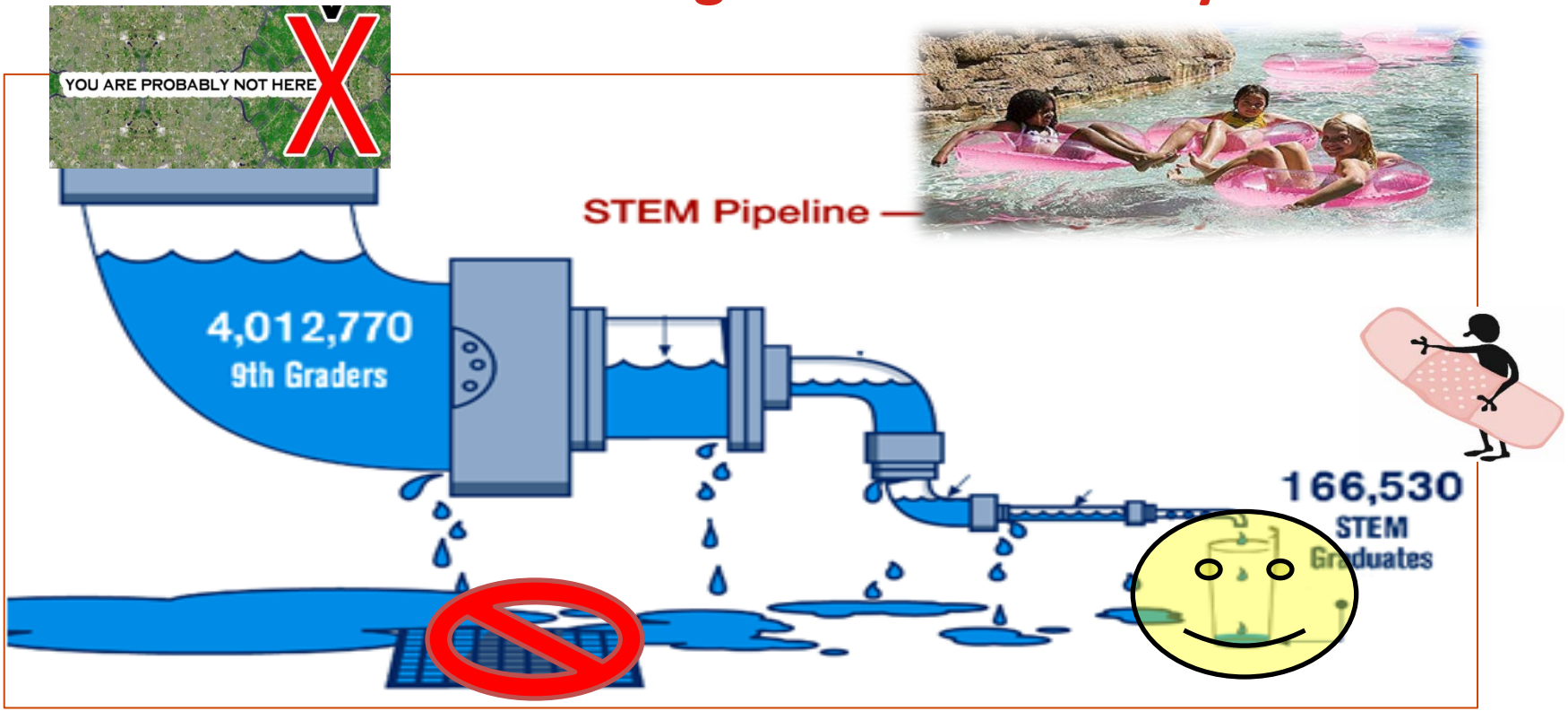

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General knowledge about the world we live in matters for future STEM success.

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SECOND, Engage Parents!

Before college, WHAT got you interested in STEM?
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Interest begins at age 7-8!!!

(Harris Poll 2011)

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smell

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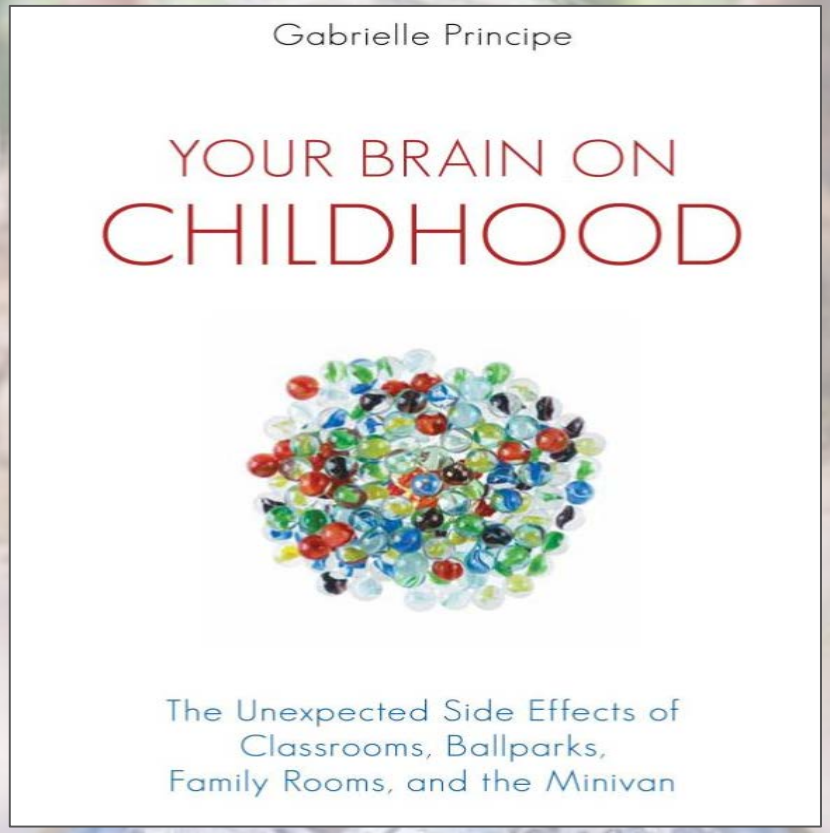

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QUESTIONS?

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S²TEM Centers SC
Solutions in Science, Technology, Engineering & Mathematics Education

Understanding STEM practices to better support 21st century learners

Sandra M. Linder
Associate Professor: Early Childhood Mathematics
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sandram@clemson.edu

Why STEM?

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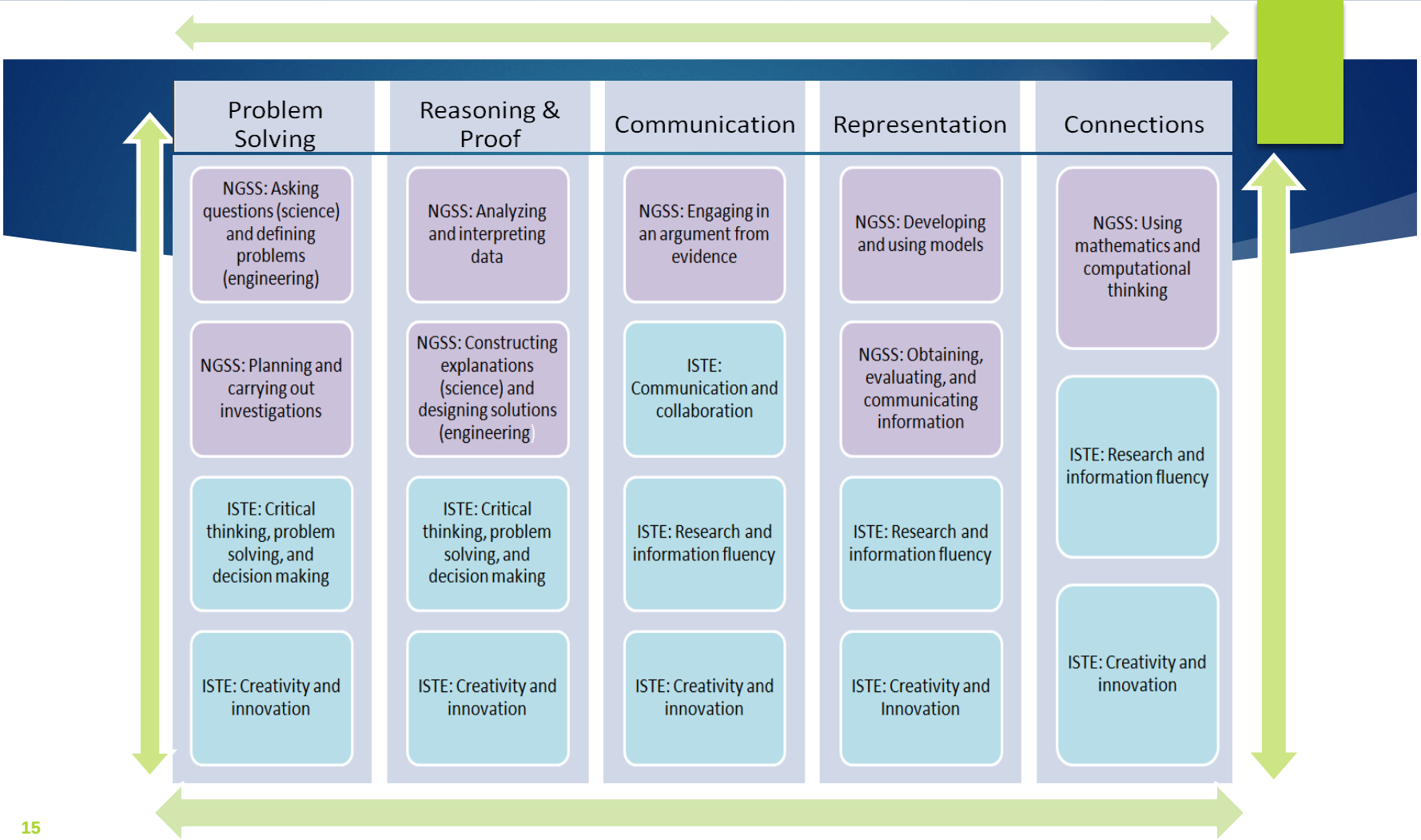
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What do EC Teachers think of STEM/STEAM?

- Examination of teacher beliefs related to STEAM education following a one-day conference for early childhood educators (Jamil, Linder, & Stegelin, 2017).
  - 41 participants
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Follow Up Interviews

- Focus on Products
- Priorities for Instruction
- View of Children
- Management

Moving Forward

- Sustained PD experiences focusing on STEM/STEAM processes
- Support for teachers when implementing STEM/STEAM practices
- Further research on teacher beliefs and motivation towards STEM/STEAM

full STEAM ahead:

STEM & STEAM learning in the informal space

Nichole Myles, Executive Director
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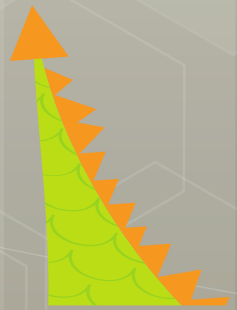
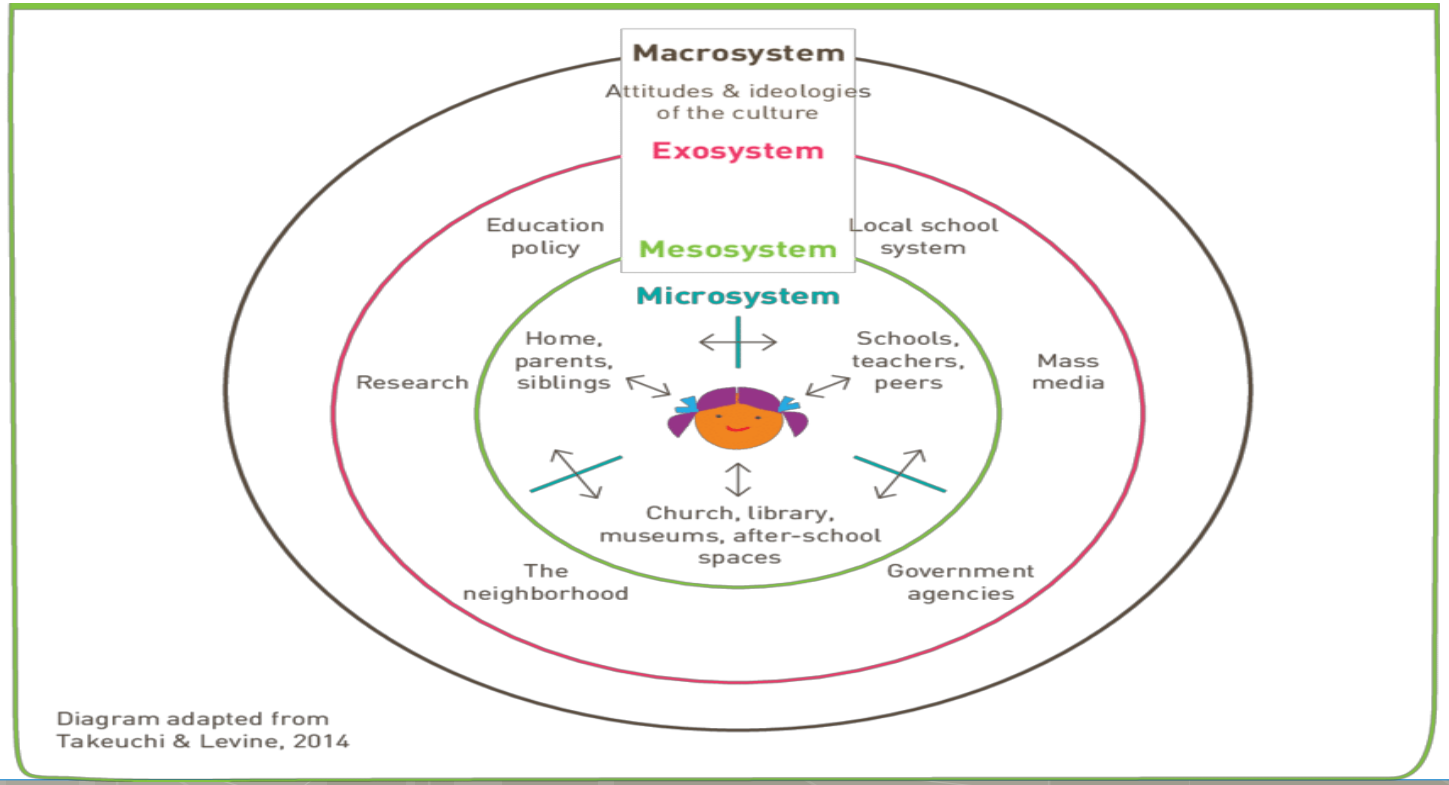
children's MUSEUM of the lowcountry



Where young children learn



STEAM

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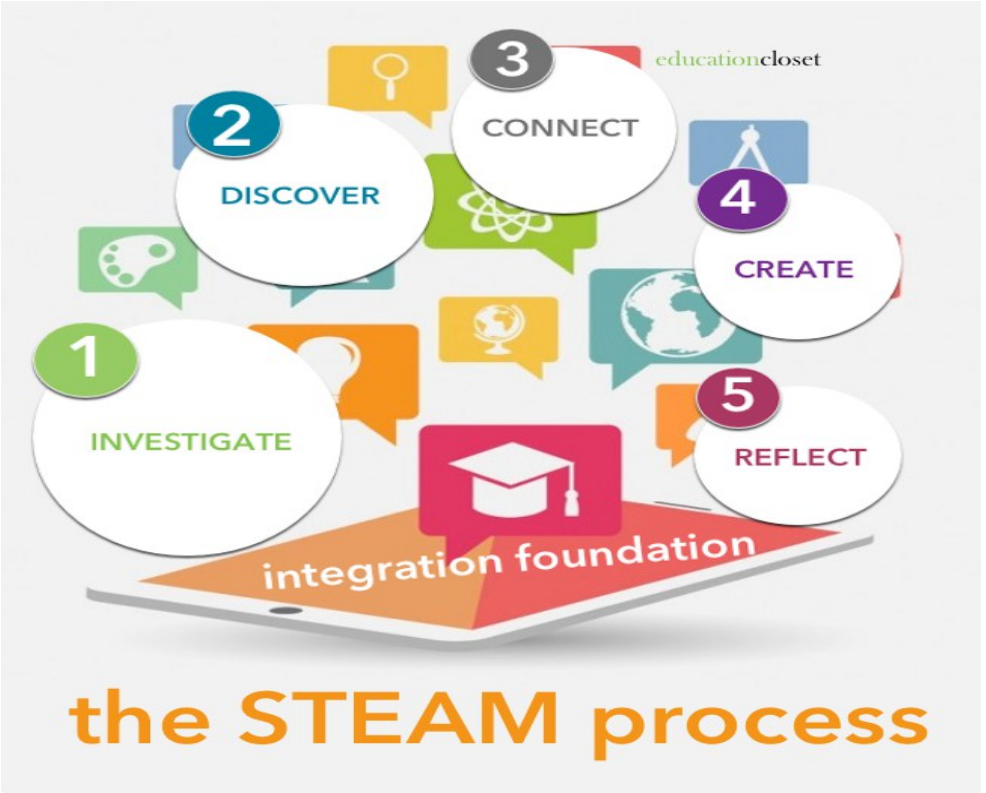
- technology
- engineering
- arts



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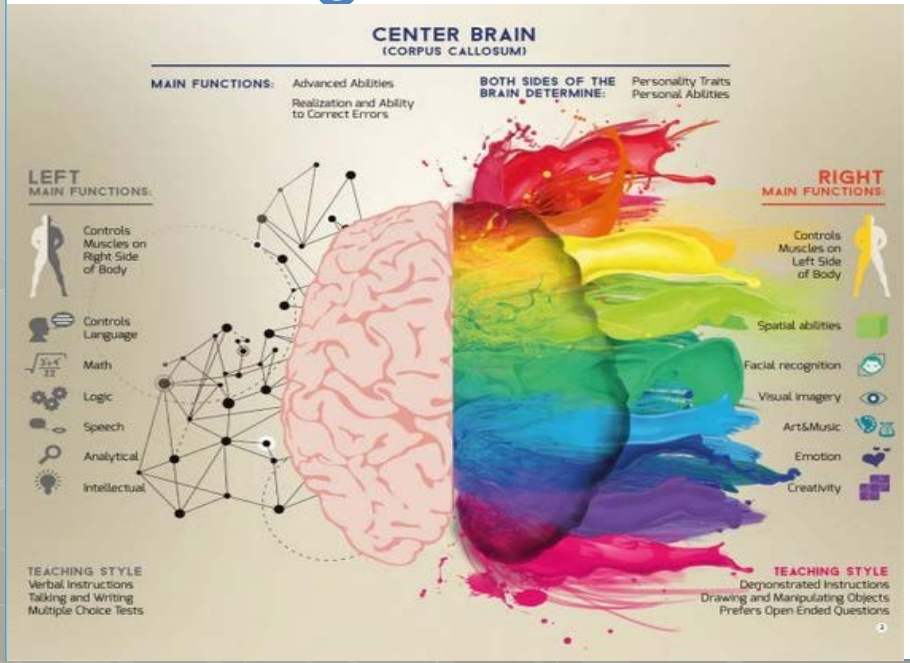

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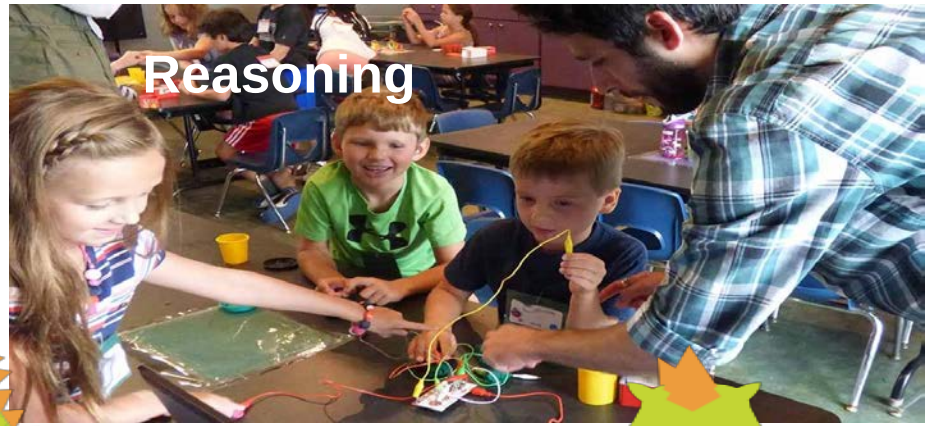
- Wide variety of experiences
  - opportunity gap
  - family/school culture


Observing


Planning


Testing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- follow up
- context and messaging
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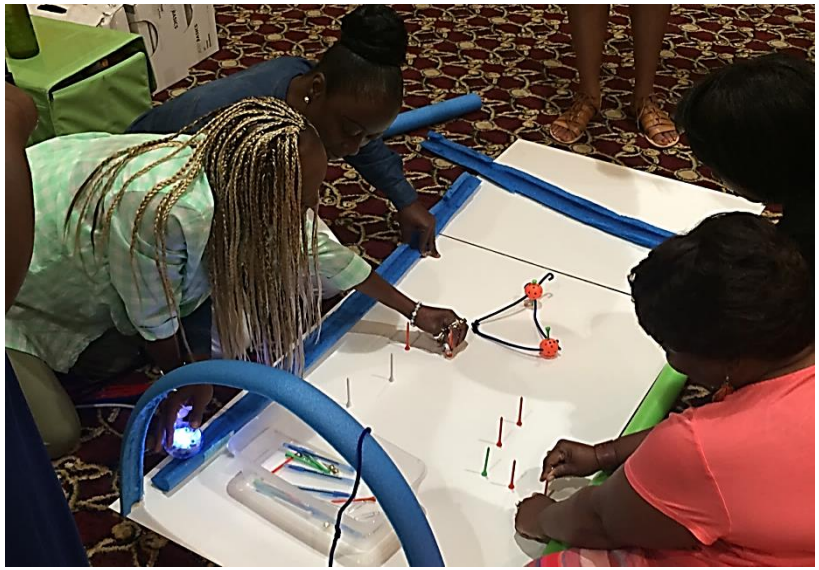

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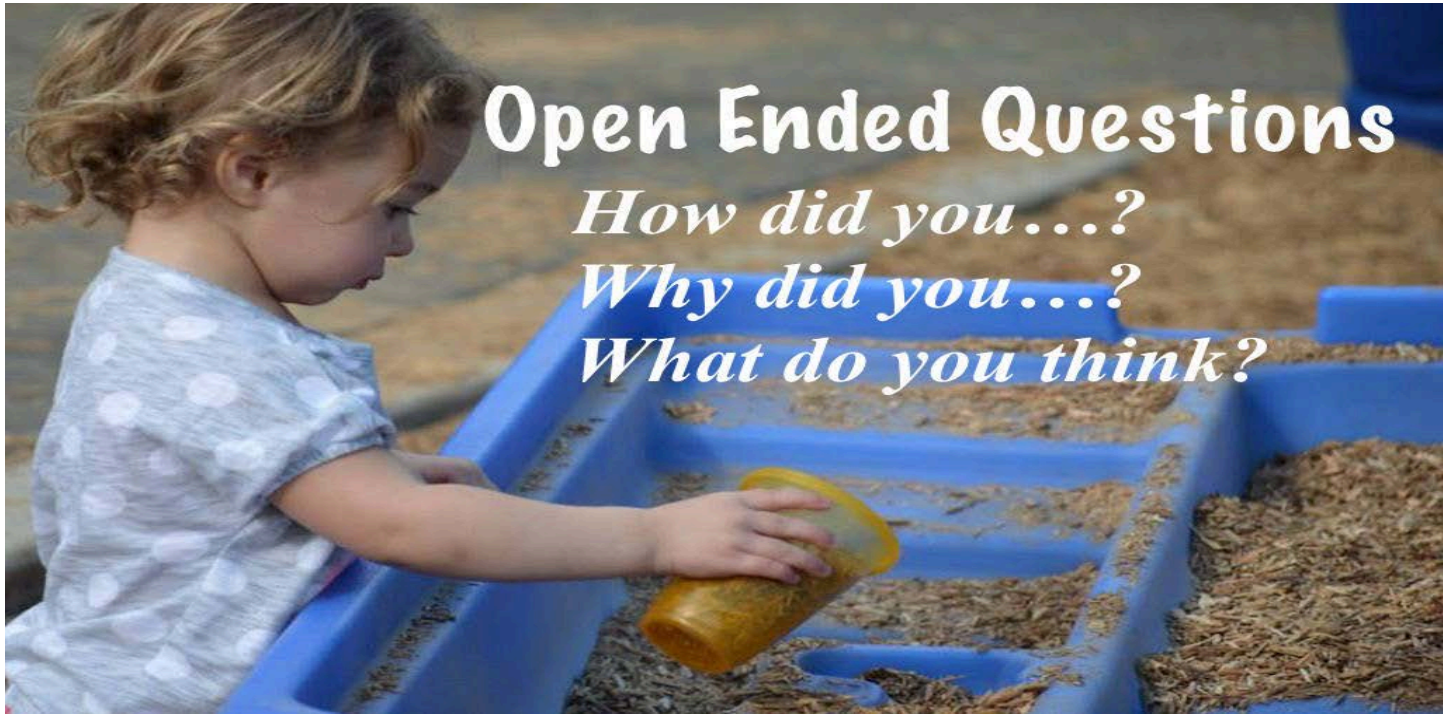
STEAM language



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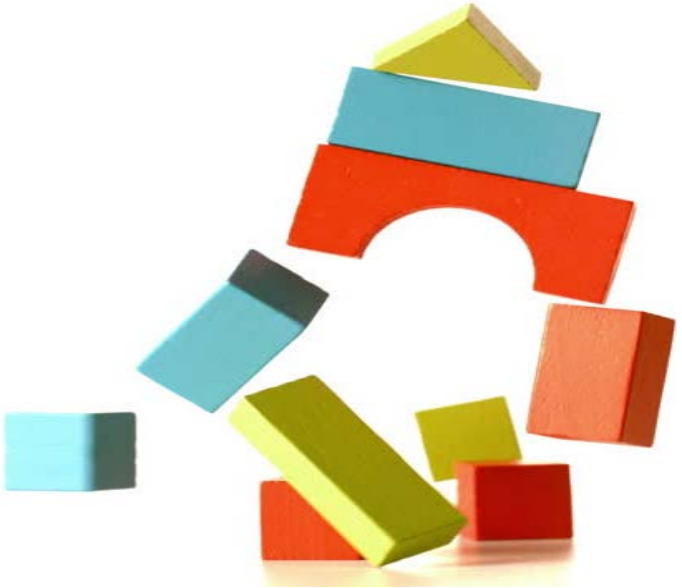

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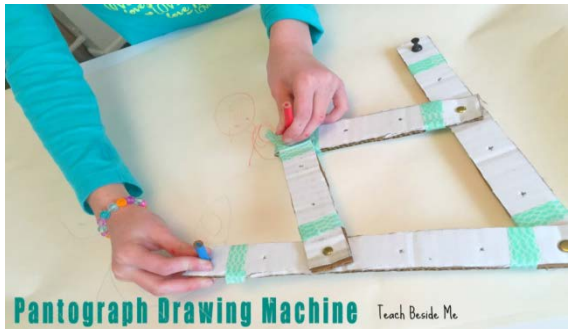

A word about the arts in STEAM

- not just visual arts; dramatic arts, dance & music
- process vs. product
- open-ended
- let students choose and explore the media
- retelling stories in other formats (songs, dance)



STEAM to support Standards

- South Carolina Early Learning Standards
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Is it a STEAM experience? …what's the intention?

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- STEM to STEAM stemtosteam.org
- STEAM Art Lessons www.smore.com/tgc steam-art-lessons
- TinkerLab tinkerlab.com
- The Show Me Librarian showmelibrarian.blogspot.com/p/all-things-steam.html
- Education Closet educationcloset.com/ste

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- STEM/STEAM Lessons, Activities, and Ideas by We Are Teachers on Pinterest www.pinterest.com/weareteachers/stemsteam-lessons-activities-and-ideas/
- Babble Dabble Do babbledabbledo.com/25-steam-projects-for-kids/
- How to Smile howtosmile.org
- Library Makers librarymakers.blogspot.com
- PreKinders prekinders.com/science-page

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- 17 New ways to build www.modernparentsmessykids.com/play-idea-17-unique-materials-building-creating/
- Teach Preschool teachpreschool.org/category/science-and-nature/
- Math Science Music mathsciencemusic.org/#/
- Sphero Education www.sphero.com/education
- NAEYC Teaching Young Children naeyc.org

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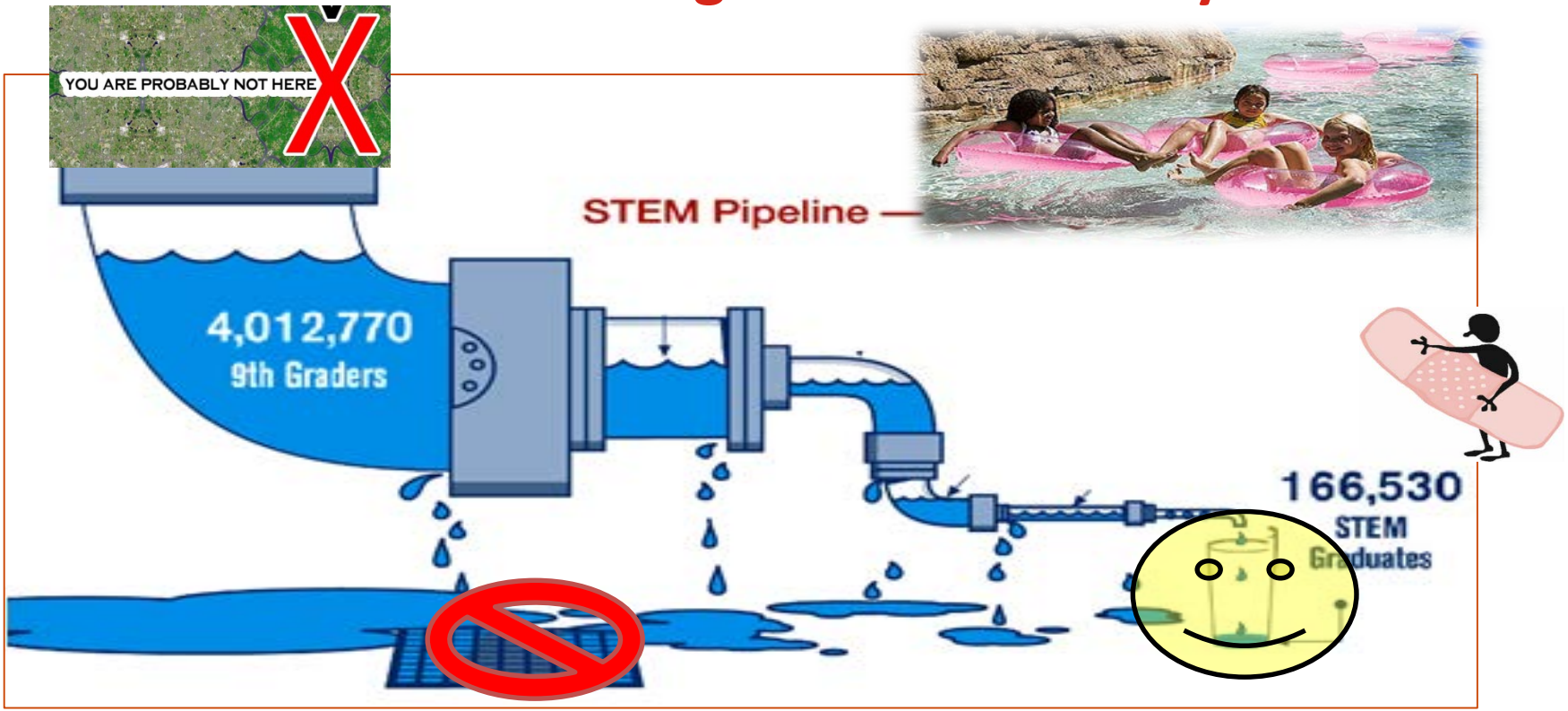

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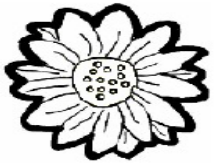
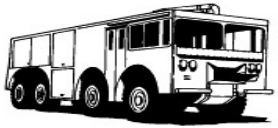



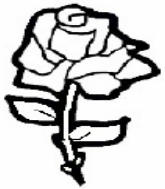

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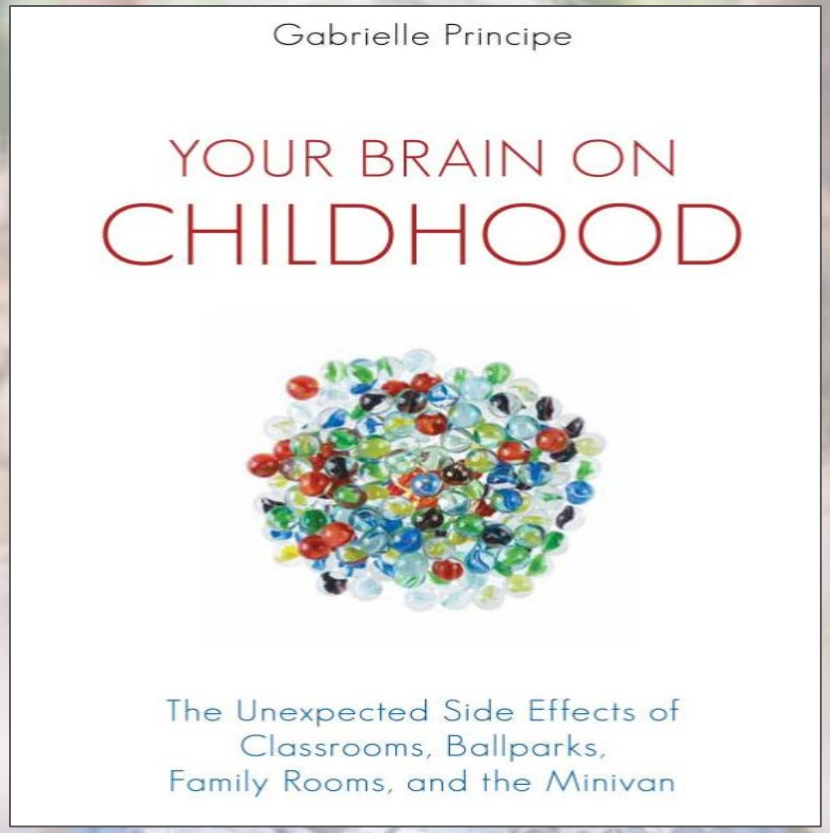

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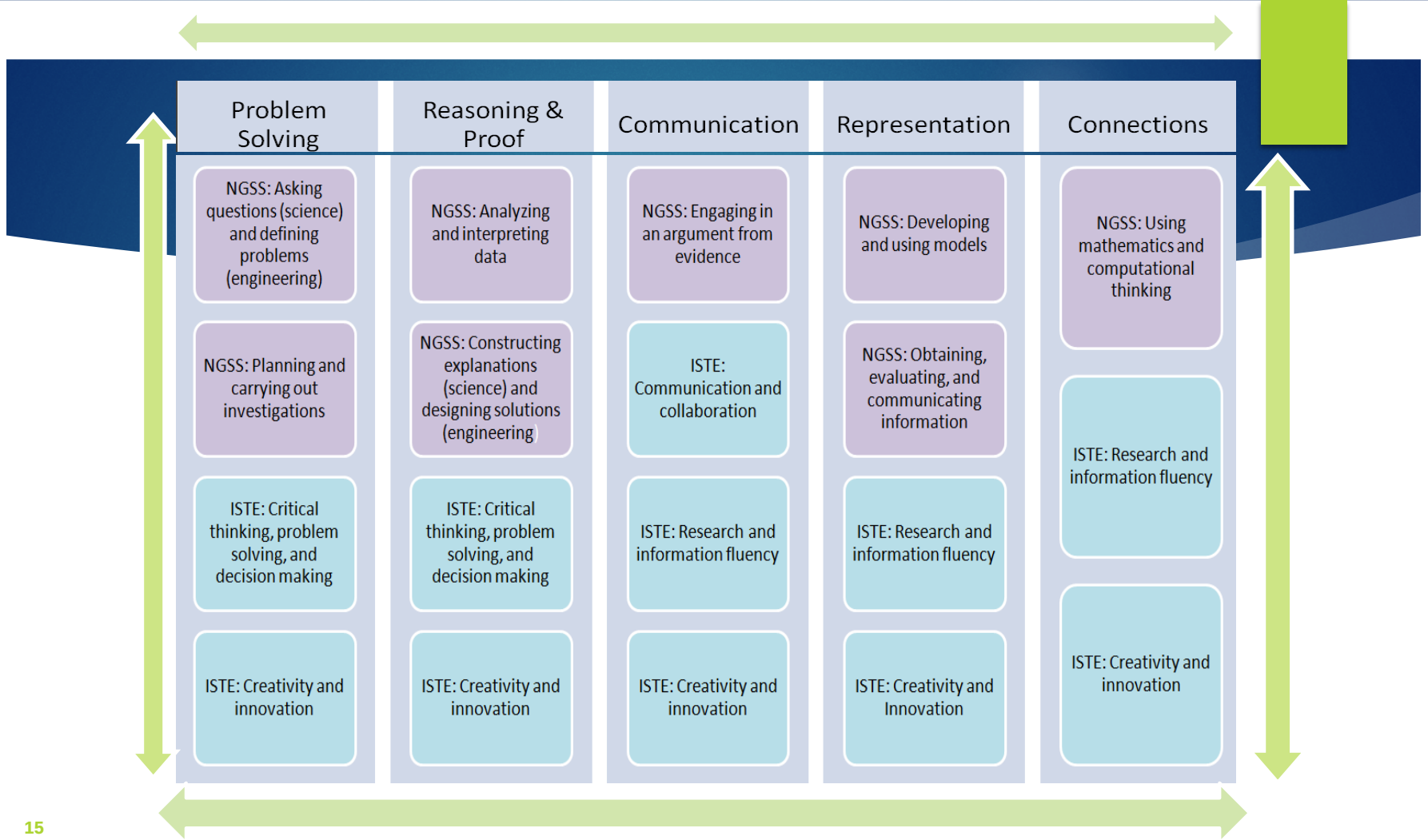
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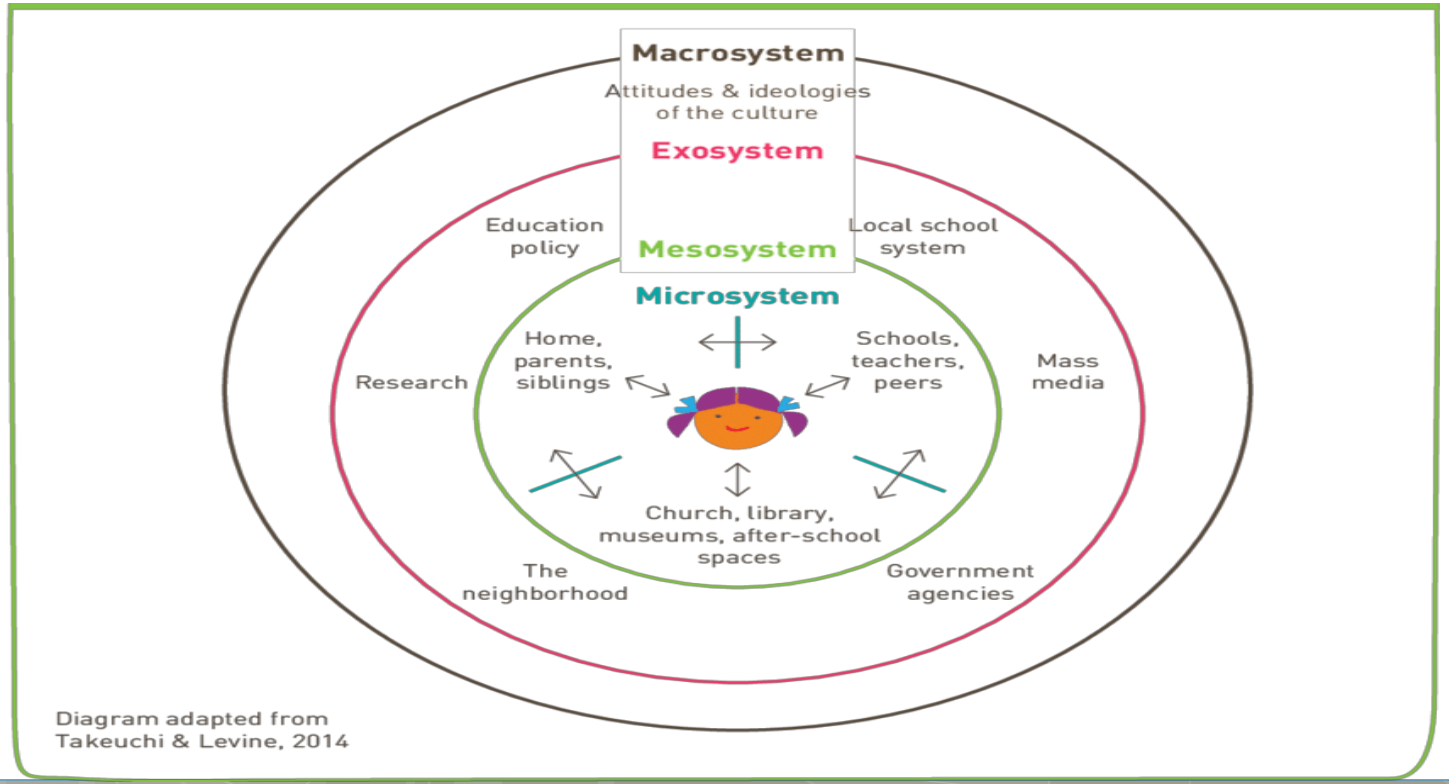

STEAM

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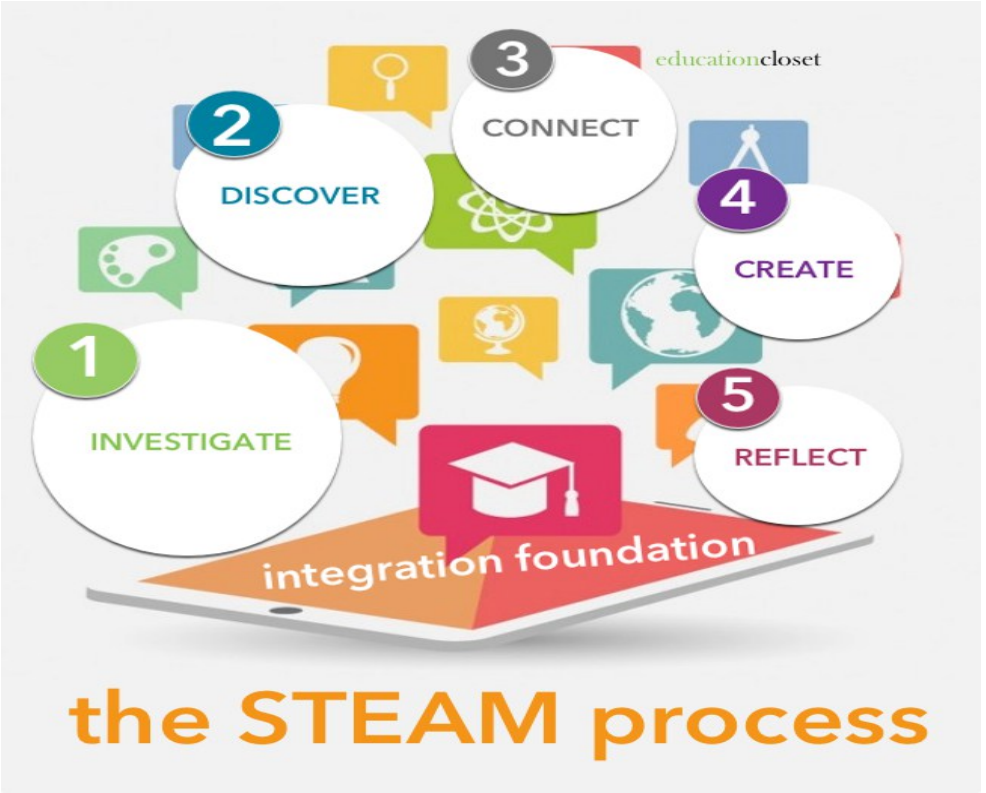
- arts



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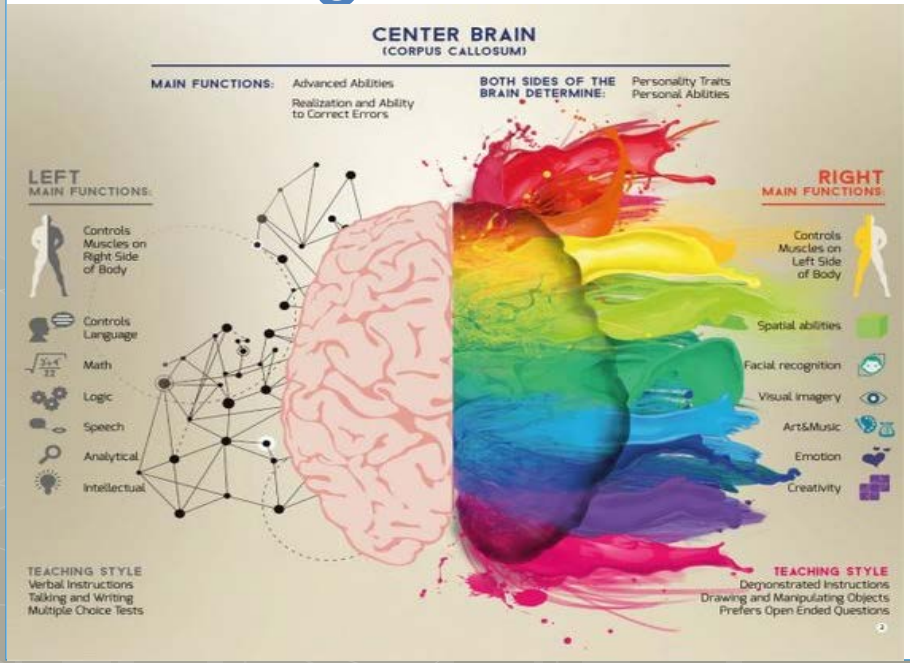

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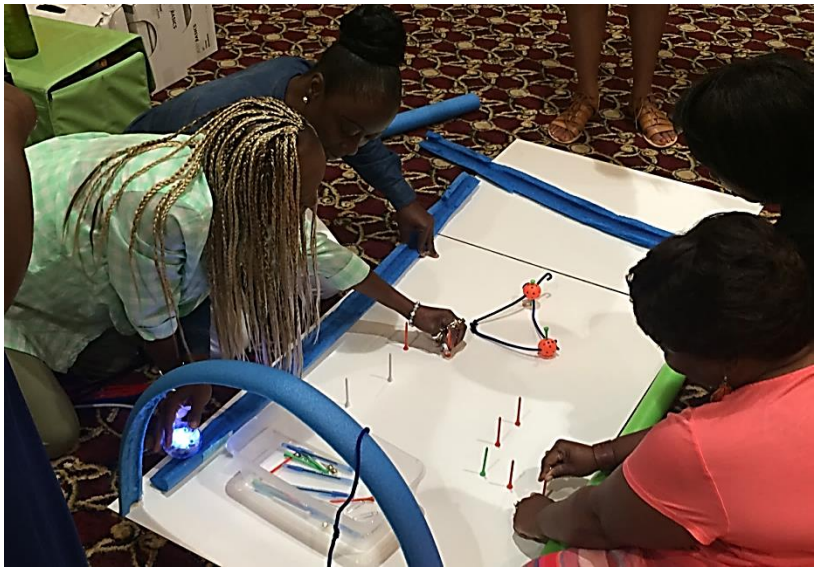

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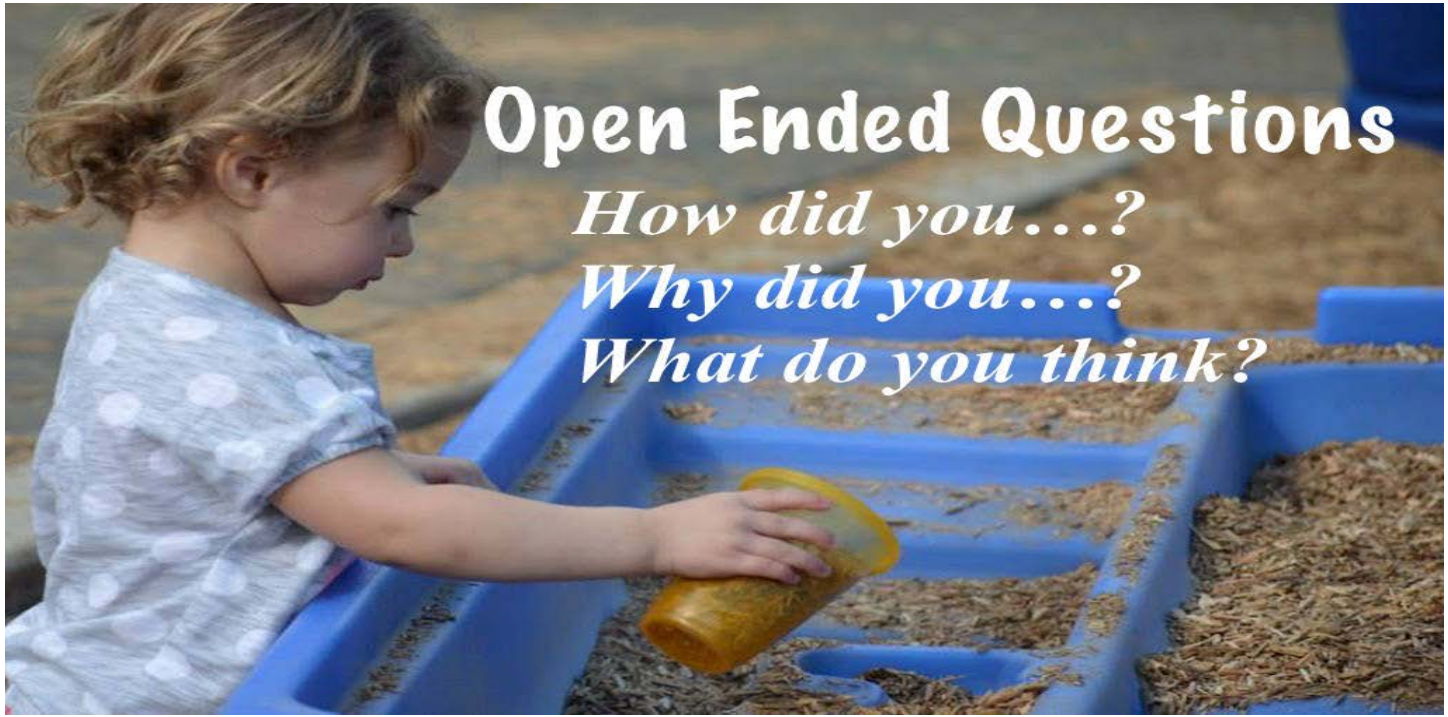

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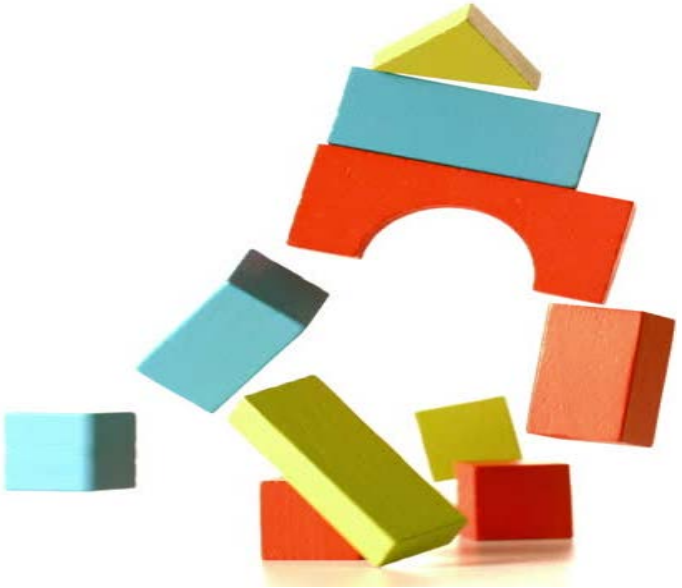

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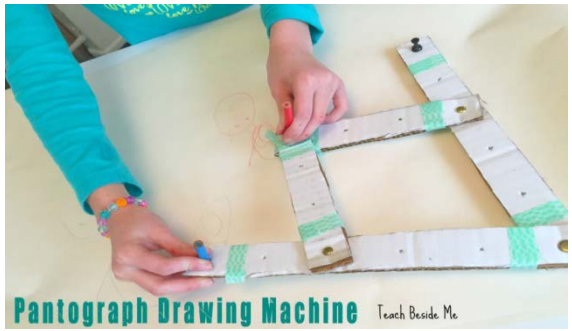

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- CML STEM Google Drive
  - starr@explorecml.org
- STEM to STEAM stemtosteam.org
- STEAM Art Lessons www.smore.com/tgc steam-art-lessons
- TinkerLab tinkerlab.com
- The Show Me Librarian showmelibrarian.blogspot.com/p/all-things-steam.html
- Education Closet educationcloset.com/ste

STEAM Resources

- STEM/STEAM Lessons, Activities, and Ideas by We Are Teachers on Pinterest www.pinterest.com/weareteachers/stemsteam-lessons-activities-and-ideas/
- Babble Dabble Do babbledabbledo.com/25-steam-projects-for-kids/
- How to Smile howtosmile.org
- Library Makers librarymakers.blogspot.com
- PreKinders prekinders.com/science-page

STEAM Resources

- 17 New ways to build www.modernparentsmessykids.com/play-idea-17-unique-materials-building-creating/
- Teach Preschool teachpreschool.org/category/science-and-nature/
- Math Science Music mathsciencemusic.org/#/
- Sphero Education www.sphero.com/education
- NAEYC Teaching Young Children naeyc.org