Supporting Excellence in Literacy and Math

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Presentation Link: http://www.ilclassroomsinaction.org/learn.html
Session Outcomes:

• Identify the shifts of the Illinois Learning Standards for ELA and Math.

• Share ELA and Math resources to complement your programs.
Grade Specific Standards Books

www.ilclassroomsinaction.org
Engage with Complex Text
Reading and Speaking & Listening

Extract and Employ Evidence
Writing and Language

Build Knowledge
Content Area Standards
Students who are college and career ready in reading writing, speaking, listening and language:

1. Demonstrate independence
2. Build strong content knowledge
3. Respond to the varying demands of audience, task, purpose, and discipline
4. Comprehend as well as critique
5. Value evidence
6. Use technology and digital media strategically and capably
7. Understand other perspectives and cultures
Standards Bookmarks to Clarify the ELA Standards

www.ilclassroomsinaction.org

Resource: www.illinoisliteracyinaction.org
Select Grade Level - Select Standards Bookmarks
Climate and Culture for Learning

ELA:

• All students read and comprehend differently requiring different strategies of support.
• Teachers should model how to navigate difficult or complex text.
• Students should have time to read and write about texts they enjoy.
• We must provide opportunities for students to productively struggle and build stamina.
Text Websites for Supporting PBL

- Newsela
- CommonLit
- Wonderopolis
- Common Sense Media
- ProCon.org
- ReadWorks
- Beyond Penguins and Polar Bears
- Beyond Weather and the Water Cycle
Classroom Example
Unit Built Around Children’s Book
Read Alouds

What questions do you have about this picture?
Classroom Inquiry Example

**IF FIRST GRADERS CAN DO IT...**

**Questions They Developed:**

- Is she nervous to leave school?
- Where are they going?
- Why does she have a book in her hand?
- Did someone throw a tomato at her?
- Is there blood on the wall?
- What is in the solve of his pocket?
- Are they police officers? US Marshal?
- Why do they have medals?
- Why is she by herself?
- Why are the men surrounding her?
- Is she in danger?
- Why are they ignoring her?
- Does she live in a castle?

**Plans for Research:**

- internet
- ask soldiers
- Facebook
- God
- google
- books
- Amazon
- vudu
- Siri
- YouTube
- Netflix
- phone
- teacher
- principal
- look for the girl, ask her
- ask people in town or family
Classroom Inquiry Example

**IF FIRST GRADERS CAN DO IT...**

**RESEARCHING & DEVELOPING MORE QUESTIONS:**

- The Story of Ruby Bridges by Robert Coles, illustrated by George Ford

**TAKing ACTION:**

- Writing Letters to Ruby Bridges
- Group presentations to the other 4 first grade classrooms explaining what they had learned from their inquiry.

[Image of Classroom with students and book cover]
Classroom Inquiry Example

IF FIRST GRADERS CAN DO IT...

Dear Ms. Bridges,

My name is Kiera. I am in 1st grade. We have been learning about you. I think you were brave and nice. You helped the world.

I got to go to school with everyone. Thank you for integrating our school. Did anyone say 'no'?

Do you still talk with Mrs. Haynes? Do you have white friends now?

Yours Truly,

Jan 19, 2017

Dear Ms. Bridges,

My name is Kiera. I am in 1st grade. We have been learning about you. I think you were brave and nice. You helped the world.

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Classroom Inquiry Example

**WHAT DID THEY LEARN?**

- Students actively participated in each step of the inquiry arc.
- This unit also fulfilled a state mandate: African American History

Every public elementary school and high school shall include in its curriculum a unit of instruction studying the events of Black History.

- The inquiry skills were used to teach the history standard:

  SS.H.2.1: Describe individuals and groups who have shaped a significant historical change.

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*Illinois Learning Standards for Social Science-1st Grade*

<table>
<thead>
<tr>
<th>Inquiry Skills</th>
<th>Developing Questions and Planning Involved</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Constructing Essential Questions</strong></td>
<td>Describe actions to help guide inquiry about a topic with guidance from adults and/or peers.</td>
</tr>
<tr>
<td><strong>Determining Big Idea Questions</strong></td>
<td>Students identify a central question or issue that will guide their inquiry.</td>
</tr>
<tr>
<td><strong>Developing Specific and Purposeful Questions</strong></td>
<td>Students develop specific and purposeful questions to guide their inquiry.</td>
</tr>
<tr>
<td><strong>Formulating and Developing Questions</strong></td>
<td>Students ask questions that can be answered by gathering information and that lead to further inquiry.</td>
</tr>
<tr>
<td><strong>Refining and Socializing Questions</strong></td>
<td>Students refine questions by seeking feedback from peers and others.</td>
</tr>
</tbody>
</table>

*Relate Standards*

- **Geographic Representations:** Spatial views of the world
  - **SS.H.2.1:** Describe the locations, the characteristics of places, and the interactions between places.

*Social Studies Standards*

- **Economics:**
  - **SS.H.2.1:** Explain how economic systems around the world can differ in terms of how they operate.}

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**Whole Child  |  Whole School  |  Whole Community**
THAT’S NOT ALL...

- RI.1.1 Ask and answer questions about key details in a text.
- RI.1.3 Describe the connection between two individuals, events, ideas, or pieces of information in a text.
- RI.1.4 Ask and answer questions to help determine or clarify the meaning of words and phrases in a text. (“segregate”/ “integrate”)
- W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.
- W.1.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.
- W.1.7 Participate in shared research and writing projects.
- SL 1.2 Ask and answer questions about key details in a text read aloud or information presented orally or through other media.
- SL.1.3 Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.

What’s Next? Let Them Decide!
Significant Shifts of the Illinois Learning Standards for Math:

• Focus
  • Focusing deeply on major work for the grade

• Coherence
  • Linking topics and thinking across grades

• Rigor
  • Pursue conceptual understanding, procedural skills and fluency, and application with equal intensity

http://www.corestandards.org/other-resources/key-shifts-in-mathematics/
Standards for Mathematical Practice:

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.
Math:
1. Celebrate mathematics as a useful tool in making sense of the world.
2. Facilitate productive struggle.
3. Recognize there are many different ways to arrive at the solution.
4. Create a space where it is safe to make mistakes.
Today’s Challenge:

Can we as a team find every number between 1 and 20 using only four 4’s and any operation?

https://www.youcubed.org/tasks/the-four-4s/
Building Relationships for Students and Teachers

Every interaction with a student is a chance to build environments where trust is the norm.

Be present whenever you are with students.

Make mistakes and allow students to offer corrects.
PBL in Math:
The Six A’s (Markham, Larmer, and Ravitz 2003, p.34) can be used as a guide for designing a math PBL unit:
1. Authenticity - real world and relevance
2. Academic Rigor - connected to the content and practice standards
3. Applied Learning - collaboration, communication, organization, analysis
4. Active Exploration - gathering data via interviews, measurements, use of tools
5. Adult Connections - mentorship opportunities, modeling perseverance
6. Assessments - formal and informal assessment of understanding throughout project culminating in an exhibition or presentation

Math Games, Challenges, and Puzzles:

- Support fact practice
- Encourage mathematical thinking
- Build mathematics confidence
- Encourage flexibility and perseverance
Math Resources Aligned to the Standards
www.ilclassroomsinaction.org

Welcome to Illinois Math Teachers in Action
www.mathteachersinaction.org

https://www.youcubed.org/tasks/the-four-4s/

Illinois State Board of Education
Technology Resources Aligned to the Standards

www.ilclassroomsinaction.org

www.ilclassroomtech.weebly.com
Resources:

YouCubed (https://www.youcubed.org/): A website from Jo Boaler, a Stanford University Math Specialist, with links for Teachers, Students, Parents and Administrators. This website contains research, videos, tasks/lessons, and lots more material. Check out Polymachines for Grades 1-12.

Crazy 8s Club (http://bedtimemath.org/crazy-8s-for-educators/): Crazy 8s is an after-school math club designed to get kids fired up about math. Every week Crazy 8ers build stuff, run and jump, make music, make a mess... all while bonding with new friends over math.


Greg Tang’s Website (https://gregtangmath.com/games): This website has great games, puzzles, and suggestions to support mathematical thinking. Start with Kakooma and 10-Pin Limbo.


Mathwire (http://www.mathwire.com/games/games.html): Online games arranged by topic, such as number sense and geometry
Resources:


Name That Number (http://everydaymath.uchicago.edu/about/understanding-em/games/name-that-number.html)

Scholastic Card Games (https://www.scholastic.com/teachers/blog-posts/nancy-jang/2017/3-Quick-Math-Games-With-Playing-Cards/)


How to modify a deck of cards to have larger numbers: http://www.emwisconsin.com/EM%20Resources/Tips%20and%20Tricks/How%20to%20Turn%20a%20Regular%20Deck%20of%20Cards%20into%20an%20EM%20Deck.pdf

Other great games to have on hand:
SET, Cribbage, Quirkle, Sudoku, Kenken, Witzle, Rat-a-Tat Cat, Knockout and Muggins, Yahtzee, Chess, Othello, Dominoes, Tri-Ominos
Illinois State Board of Education

Whole Child  l  Whole School  l  Whole Community

Tools and Resources for

ELA
MATH
Science
Social Science
Social Emotional Learning
Technology
Fine Arts

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