Good morning! Welcome!

Please help yourself to some coffee or tea and add your ideas to the charts around the room!

Using Picture Books to Engage Students in Literacy and Mathematics

Surrey School's Summer Institute 2017

Ginny Tambre and Jennifer Barker

Acknowledgement

We recognize that we are here today to learn on the unceded, shared territories of the Coast Salish people on which our schools are located. We recognize the Katzie and Semiahmoo First Nations who have signed the Surrey Schools Aboriginal Education Enhancement Agreement.

Who Are We?

- I am a Numeracy Helping Teacher
- In my 20th year of teaching in classrooms K - 5
- Mom to M&M, aged 14 and 12
- Twitter: @BarkerJbarker
- www.meaningfulmathmoments.com
- Email: barker_jennifer@surreyschools.ca
- Believe Math should be meaningful, engaging and build conceptual understanding

Ginny:

- I am the Early Reading Advocate in Surrey (Changing Results for Young Readers).
- Have 12+ years experience in primary classrooms since 2000
- Mom to Vienna, Maxim & Oscar aged 12, 10 and 7
- Twitter rookie: @GinnyTambre
- Email: tambre_v@surreyschools.ca
- I believe joy and engagement are key to creating lifelong readers and learners.

Learning Intentions

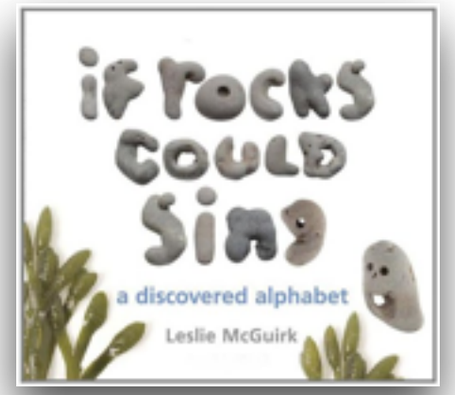
- I understand the characteristics/traits we want to develop in our readers and mathematicians, as well as the similarities between literacy and numeracy.

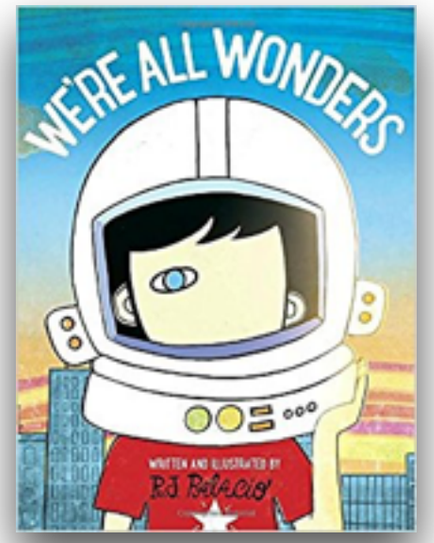
- I see how a picture book can be used over multiple days and across the curriculum.

- I have a couple of ideas to take away and try.

Agenda

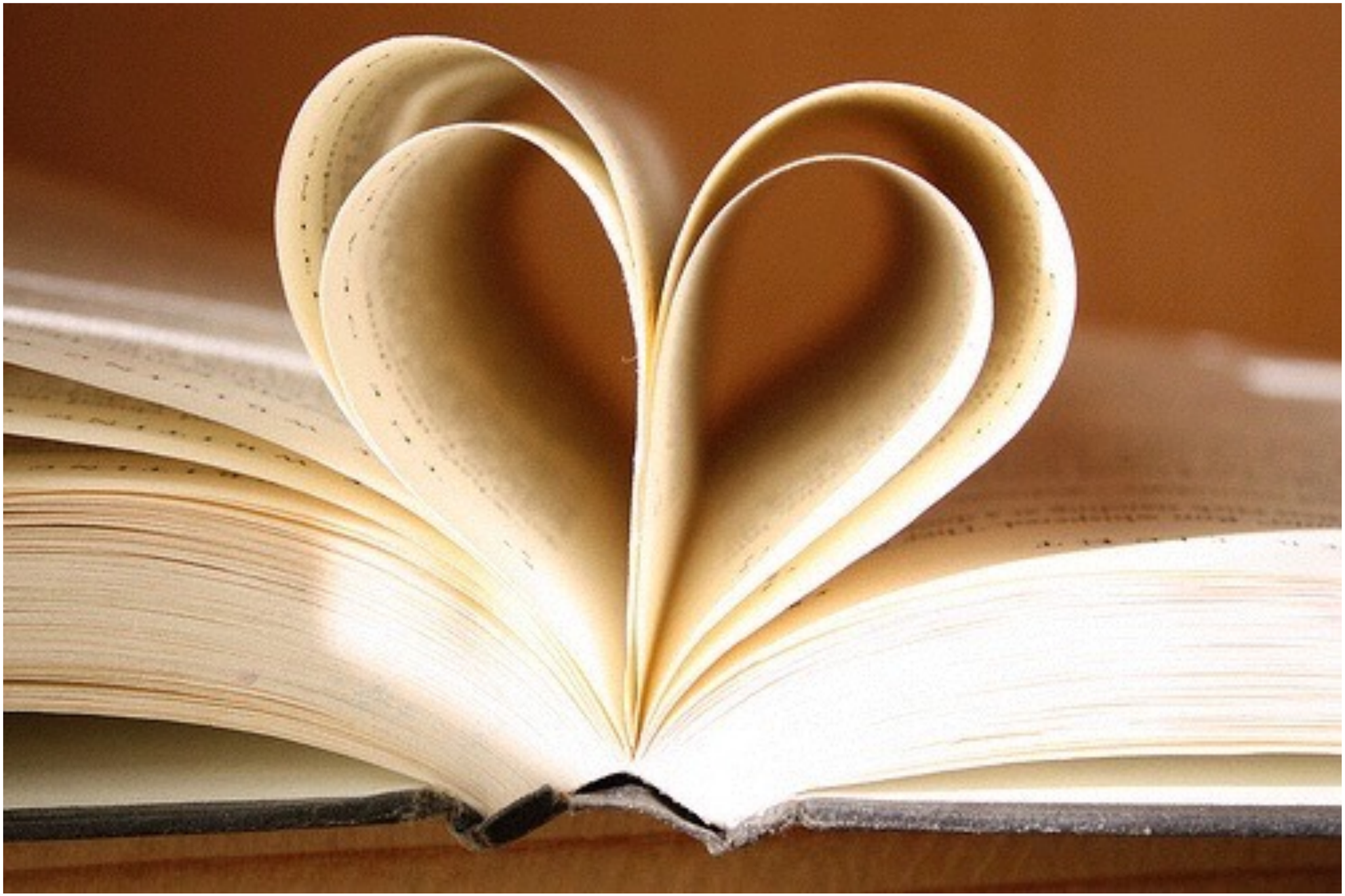
- What is the power of picture books?
- How do we connect great literature and use it as a vehicle for our curriculum?
- *If Rocks Could Sing*
- **BREAK**
- *Please Please The Bees*
- *We're All Wonders*
- **BREAK**
- *The Littlest Family's Big Day*
- *Nanette's Baguette*
- Book Browsing & Collaborative Planning

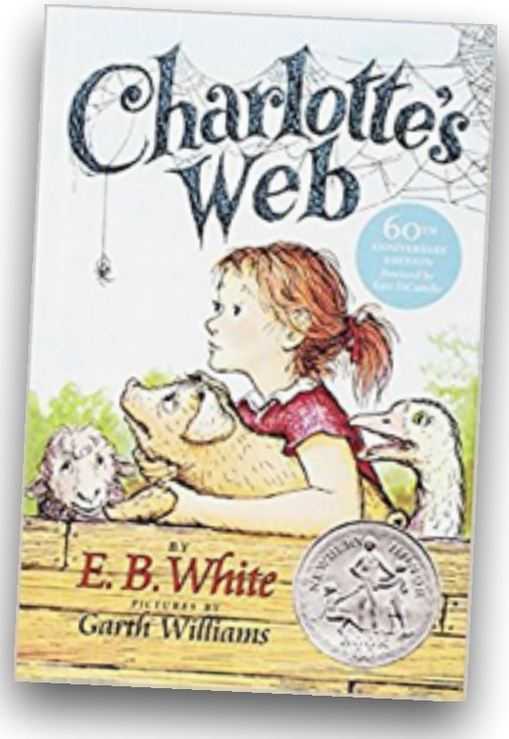




Why do children love to hear the same stories… over and over?

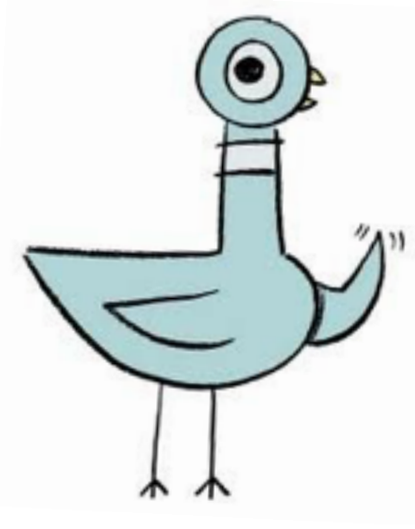
What book(s) have you read more than once?
What was it about these books that made them so special?





“The powerful emotion of read-aloud experiences anchors them in our memories”

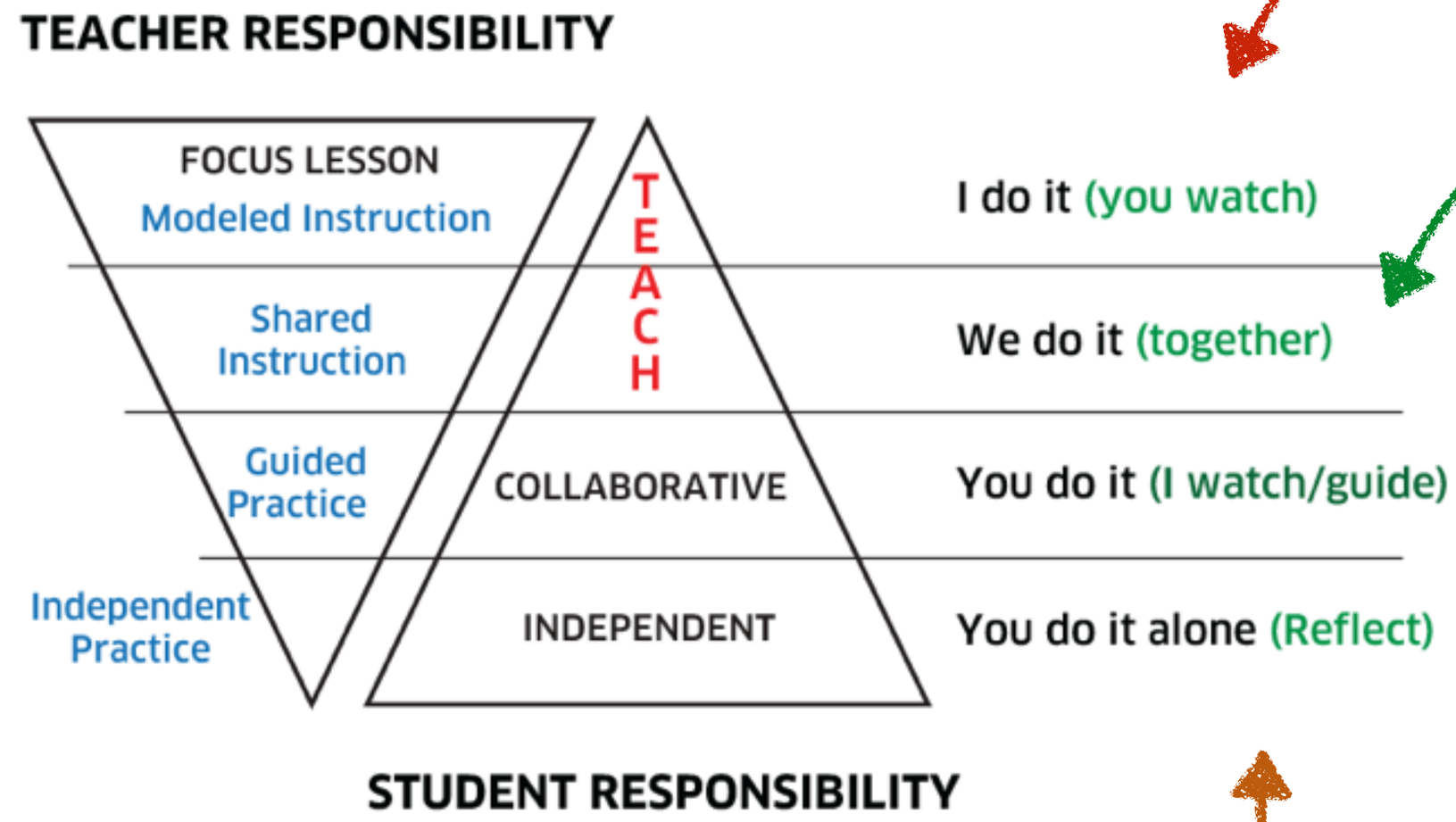
(Jan Burkins & Kim Yaris, 2016)



What learning is going on during read-alouds?

"Read-aloud is a teaching structure that introduces students to the joy of constructing meaning from text."
(Jan Burkis & Kim Yaris, "Who's Doing the Work?", 2016)

The Gradual Release Model



Read-Alouds

Shared Reading

Guided Reading

Independent Reading

Figure 1: The Gradual Release Model

What makes Read-Aloud special?

Students learn:

- concepts related to print and books - left to right, letters and words

- awareness of sounds - rhyme, rhythm, and phonological awareness

- to see themselves as readers as they join in on refrains get to share their thinking in a safe and supportive community which provides formative assessment for the teacher

- are able to ask questions, construct ideas, and negotiate ideas

What makes Read-Aloud special?

Read Alouds are <u>inclusive of all learners,</u> because the "*barrier of text is eliminated*"

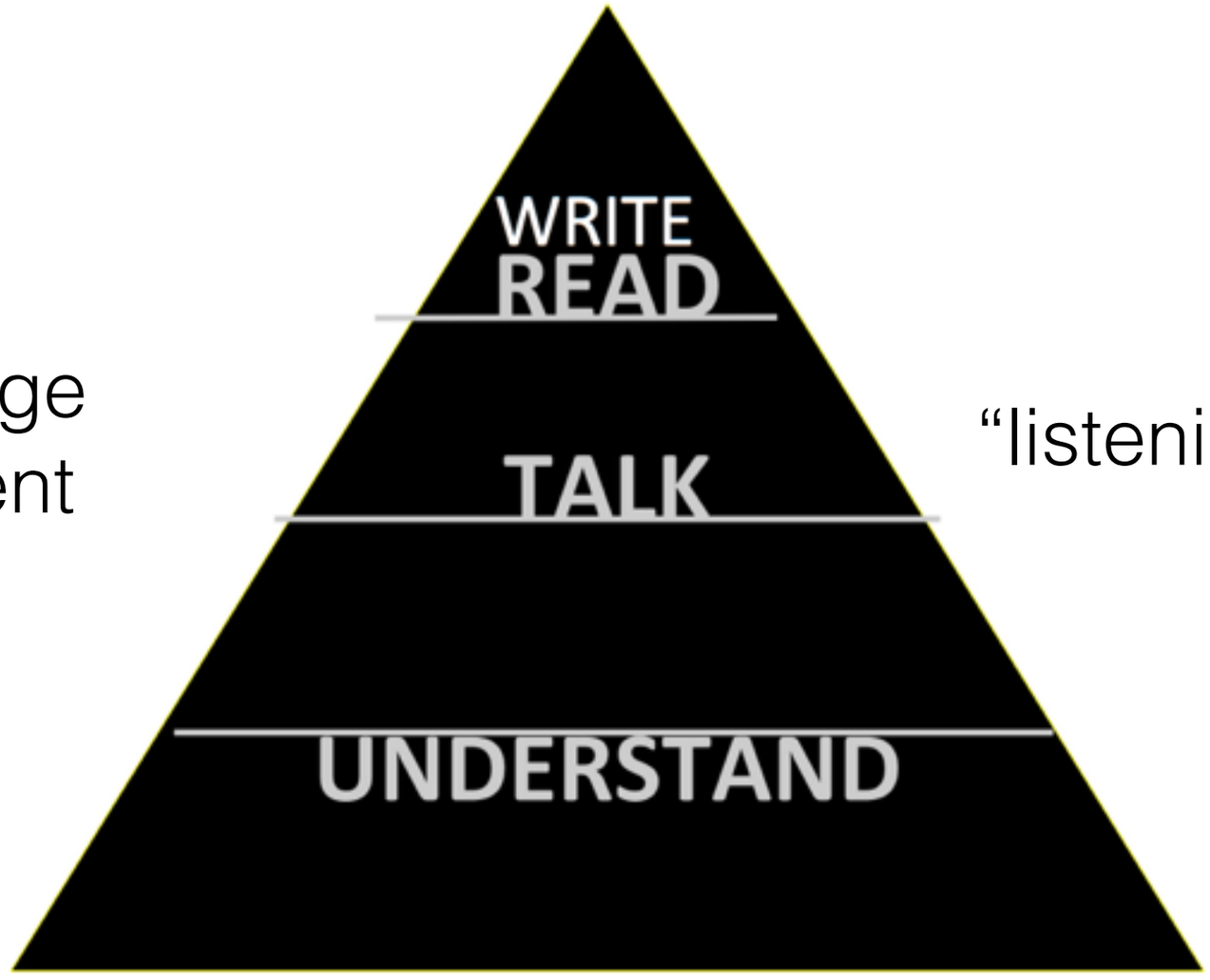
- Frees students from decoding and allows them to focus solely on the making-meaning & thinking part of reading.

"Give those who have difficulty with print a chance to engage with their peers around texts that would otherwise be inaccessible"
(Burkins & Yaris, 2016)

What makes Read-Aloud special?

- Exposure to vocabulary & ideas significantly beyond what students could currently read independently.

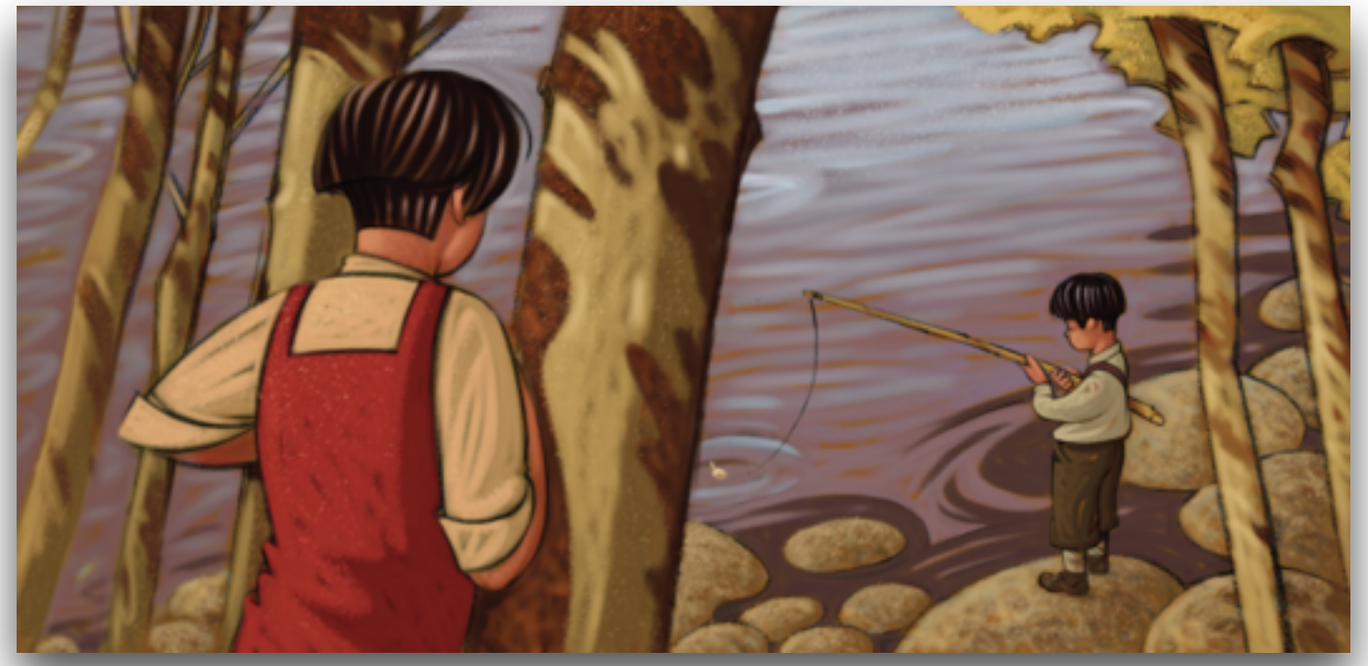
Assist in oral language development



Develop "listening vocabulary"

What makes Read-Aloud special?

- Helps students understand the world through the experiences of others (cultures, places, social skills, history, inspiration)
- A safe place to discuss complicated topics and big ideas



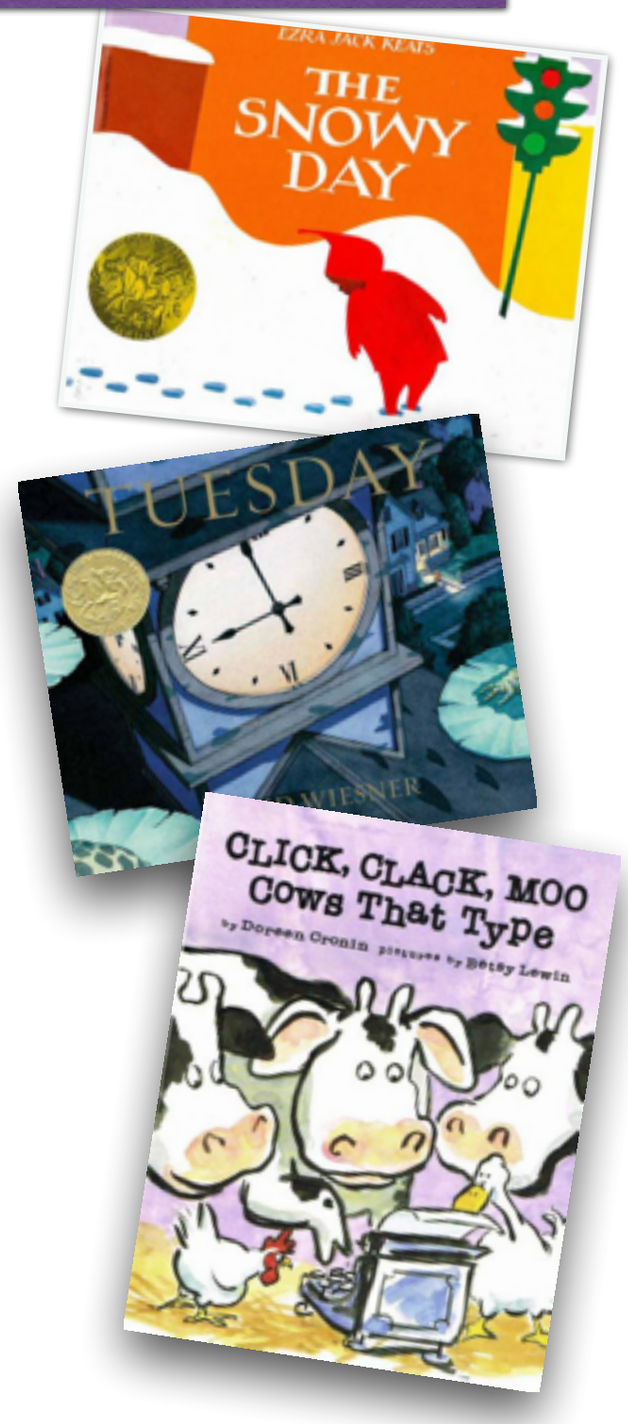
"Vicariously participate in experiences"

What makes Read-Aloud special?

- Inspire students to read and write. Reading books aloud "sells" the value of reading and a joyful love of storytelling.

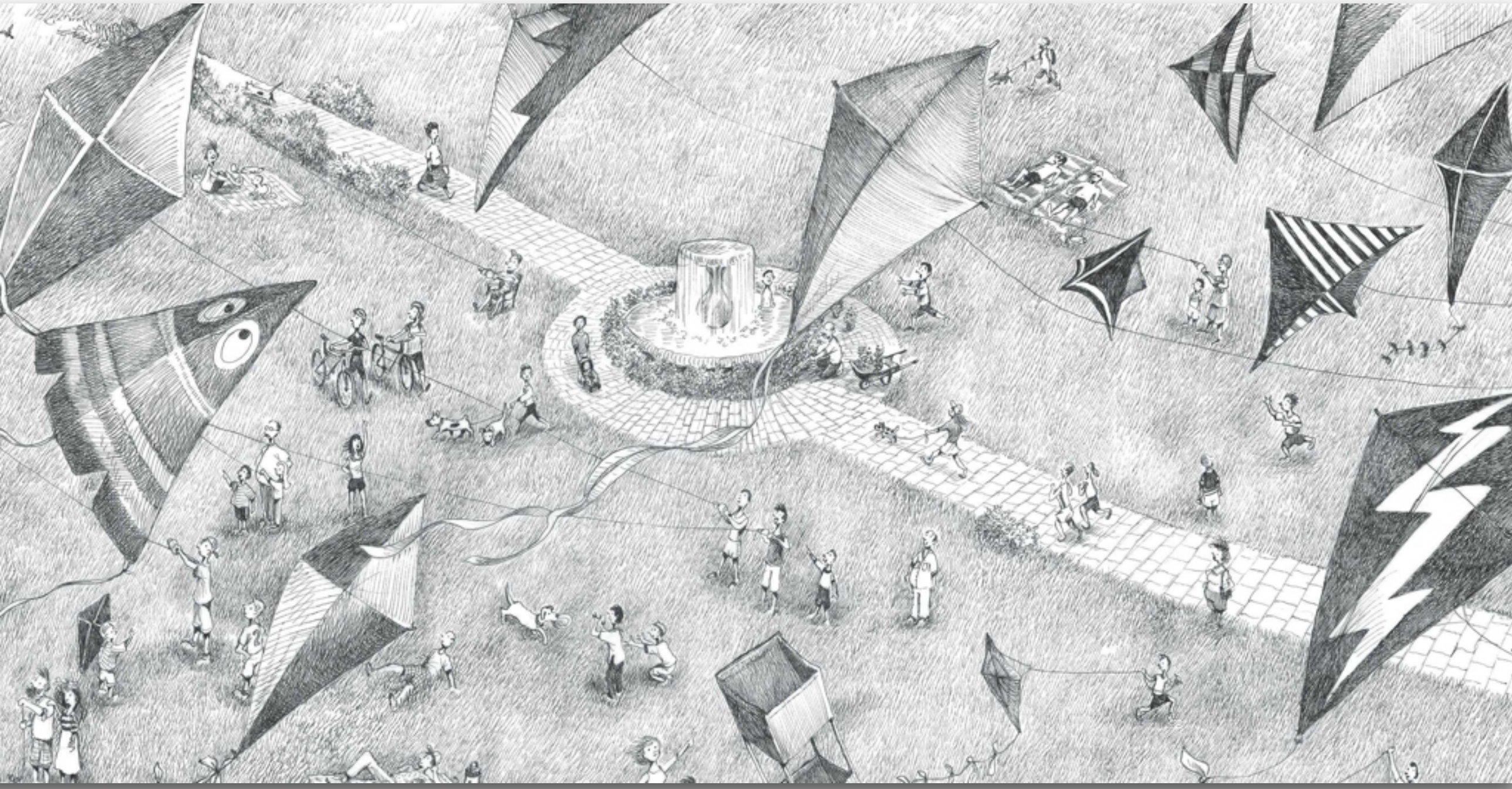
- Build students' background knowledge.

- Offers children the opportunity to hear a fluent reader.



What makes Read-Aloud special?

- **Artwork**: “Picture books offer children access to some of the world’s most talented artists who have devoted themselves to expressing themselves through book illustration. For many children, it is their first introduction to art.”
(Linda Ravin Lodding, 2013)



“Spot the Cat” by Henry Cole

“The Polar Express” by Chris Van Allsburg

“Egg: Nature’s Perfect Package” by Steve Jenkins

What makes Read-Aloud special?

- Help build classroom community! When we share a picture book, the whole class shares the same experience and develops shared vocabulary.

Talk is the key to making meaning during read-alouds! (Less us, more them)

In a **Typical read-aloud** the teacher models for the children what the language of books *sounds like*, what loving a book *looks like*, and what being lost in a story *feels like*.

- Also known as the “untaught story”

- Less talk, yet still engaging students in conversations about the text’s meaning and enjoyable parts.

An **Interactive Read Aloud** accomplishes everything the traditional read aloud does and more! Using a book for an instructional purpose.

How does an “Interactive” Read Aloud differ from a “Typical” Read Aloud?

The teacher:

- has a clear, intentional, instructional purpose for reading the book.

- engages their students **before**, **during** and **after** the read aloud to model comprehension strategies, such as making connections, activating prior knowledge, questioning, etc.

- models his/her thinking aloud

An interactive read aloud…

BEFORE:

- Introduce the title, and look at the cover.

"What do you think this book might be about?"

"Where do you think this story takes place?"

"Can you think of any words we might hear in this book?"

- Share learning intentions.
- Assess and build background knowledge. Share prior experiences.

An interactive read aloud…

DURING:

- Stop at pre-planned key parts of the book, give opportunities for the children to <u>turn & talk</u>.

"What are you wondering?"

"What do you like about this book so far?"

"Does this story remind you of anything?"

"What do you already know about ____?"

- Think - connect - predict - visualize - and wonder
- Raise literacy and numeracy connections to the book.

An interactive read aloud…

AFTER:

- As students are able to think beyond the literal meaning of the text, dig deeper with questions like:

"What message or big idea is the author trying to tell us?"

"Why might this character have acted that way?"

"How else could the problem have been solved?"

"What questions are you left with? What are you still wondering?"

"What would you have changed?"

<u>Meaningful talk allows our youngest readers to experience what all readers do as they read independently.</u> (Pat Johnson & Katie Keire, 2010)

"**Talk** serves a variety of purposes.
It's a time for the students to negotiate the meaning of the text together; to share their thoughts, opinions, and connections; or to make predictions of what's to come. They support each other as they dig deeper to construct that meaning."

(Pat Johnson & Katie Keier, "Catching Readers Before They Fall", 2010)

How is this connected to the curriculum?

Readers and Mathematicians need to:

- Have a positive attitude; they need to believe they are capable, see themselves as readers and as mathematicians, be willing to wonder and ask questions, and persevere.

- Be flexible in their thinking, using reasoning, and employ various strategies.

- Be problem solvers who engage, make predictions/ estimations, and visualize, and focus on sense making.

- Communicate in different ways, and explain and justify their ideas.

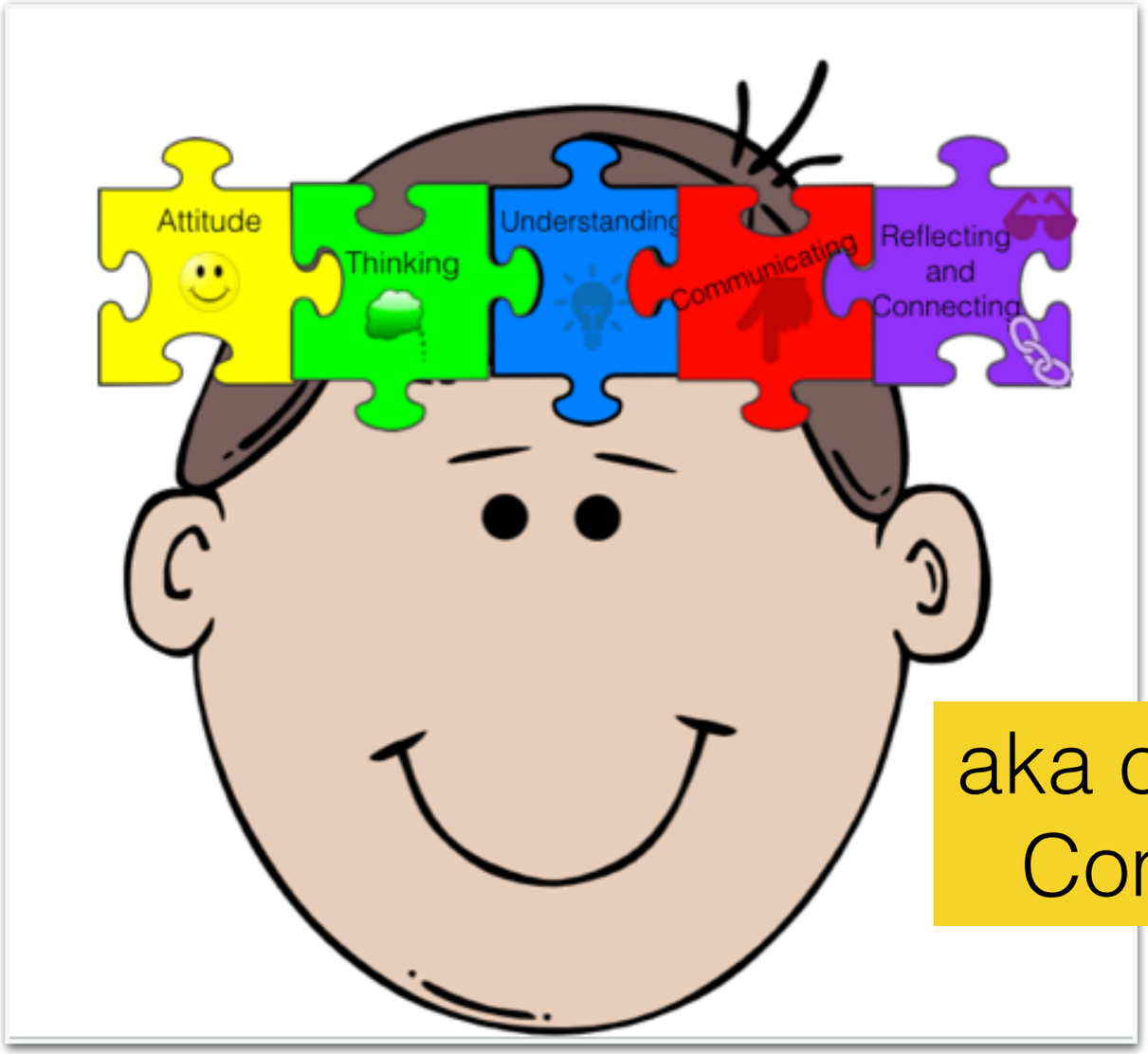
- Connect and reflect; They need to listen and learn from others, be metacognitive and be able to make and share connections.

Similarities Between Readers and Mathematicians

Characteristics of Readers	Characteristics of Mathematicians
They call upon their prior knowledge to make meaning from text.	They call upon prior knowledge to understand concepts and solve problems.
They predict and monitor understanding as they read.	They estimate and continually check, asking “Does this make sense?”
They have a mental image of what they are reading.	They create multiple representations mathematics concepts and problems.
They use flexible strategies to help them make sense of unknown words.	They use flexible strategies to help them problem solve.
They can clearly explain their interpretation of the text to others.	They can clearly explain their mathematical thinking to others.

Adapted from Laney Sammons (2011) *Building Mathematical Comprehension*

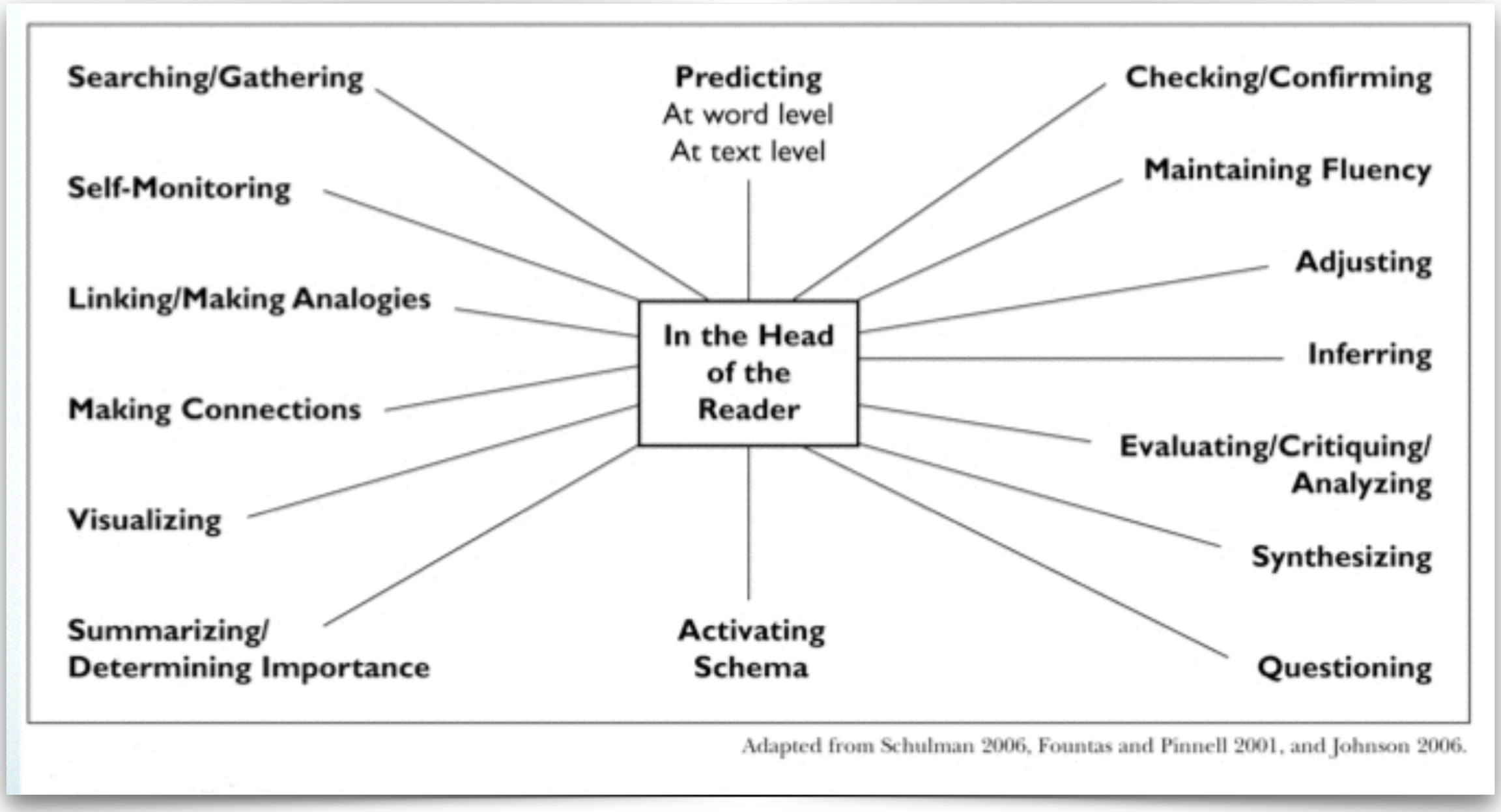
Habits of Mind: NUMERACY



aka our “Curricular Competencies”

Reasoning and Analyzing
Understanding and Solving
Communicating and Representing
Connecting and Reflecting

Habits of Mind: LITERACY



Adapted from Schulman 2006, Fountas and Pinnell 2001, and Johnson 2006.

Alphabet Recognition	Letter/Sound Knowledge	Sight Words	Oral Language	Phonemic/ Phonological Awareness

Comprehend and Connect

Create and Communicate

CORE COMPETENCIES

C — Communication

1. Connect and engage with others
2. Acquire, interpret, and present information
3. Collaborate to plan, carry out, and review constructions and activities
4. Explain/recount and reflect on experiences and accomplishments

T — Creative Thinking

1. Novelty and value
2. Generating ideas
3. Developing ideas

T — Critical Thinking

1. Analyze and critique
2. Question and investigate
3. Develop and design

PS — Positive Personal & Cultural Identity

1. Relationship and cultural contexts
2. Personal values and choice
3. Personal strengths and abilities

PS — Personal Awareness & Responsibility

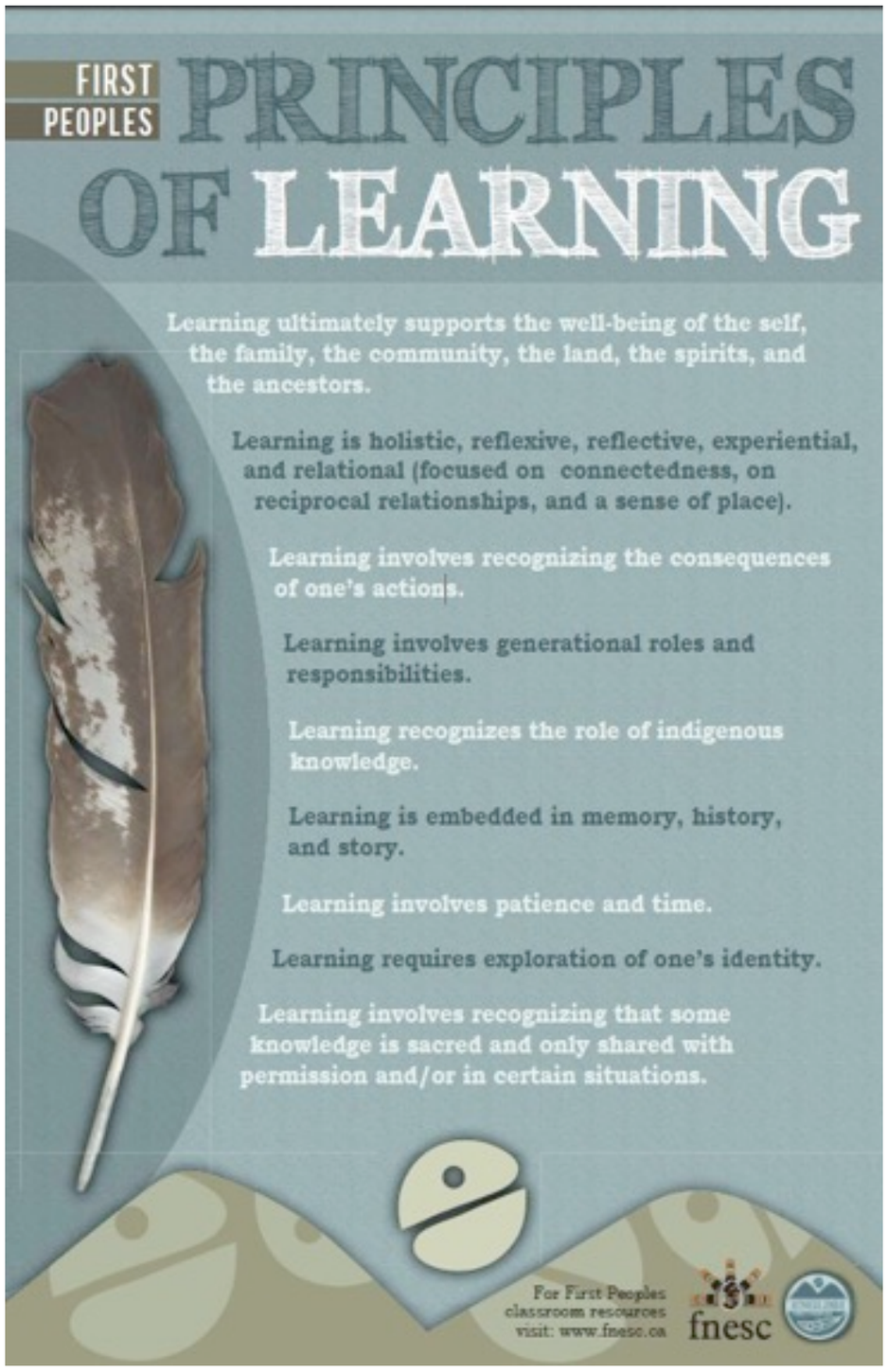
1. Self-determination
2. Self-regulation
3. Well-being

PS — Social Responsibility

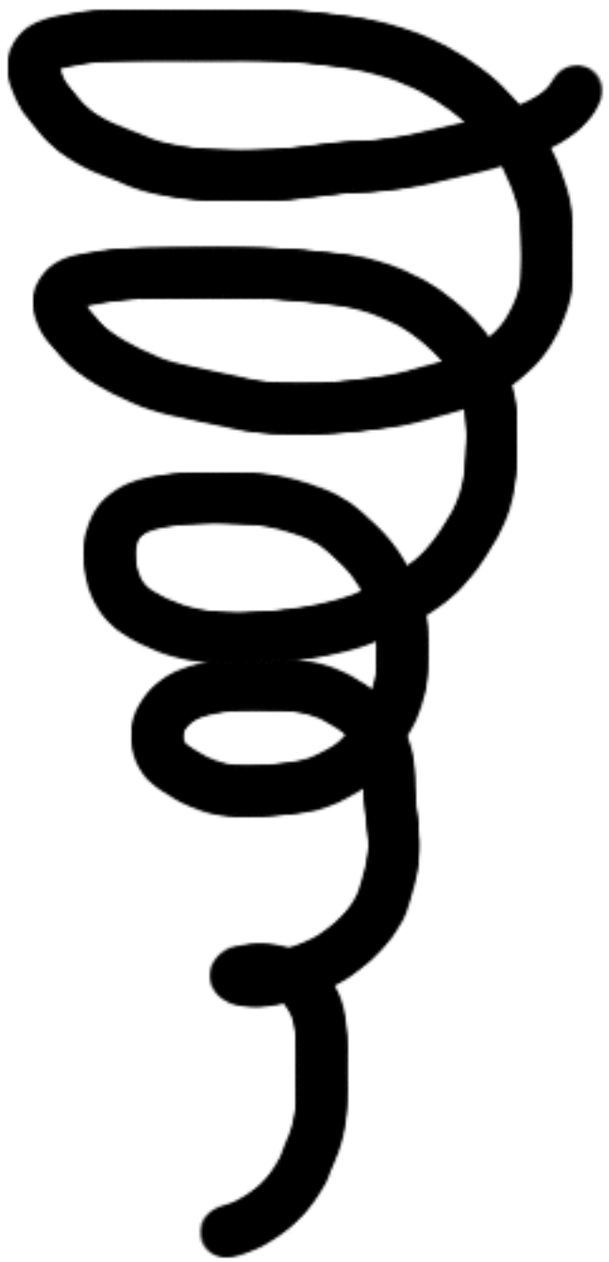
1. Contributing to community and caring for the environment
2. Solving problems in peaceful ways
3. Valuing diversity
4. Building Relationships

The **DOING** is as important as the **KNOW**ing and **UNDERSTANDING**!

What do we know about effective learning?



Learning is recursive.



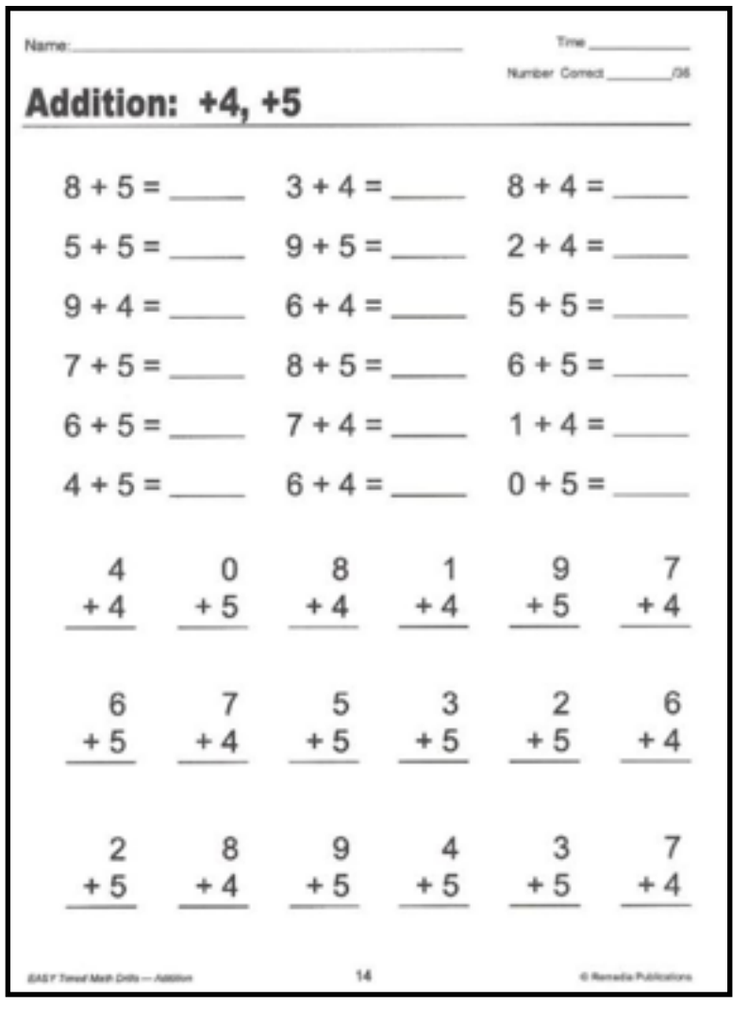
Concepts and competencies need to be re-visited throughout the year.

Just like when we reread a favourite book, we often find we learn something new with each read. The same holds true for revisiting math concepts. We make stronger connections!

No more doing just Patterning in September and then never again! Patterning should go on throughout the year!

Learning is wholistic

Can multiple competencies and concepts be explored? Can we make connections to ourselves as learners, connections within the disciplines and across them, as well as connections to our world?



Name:_____ Time _____

Number Correct _____/36

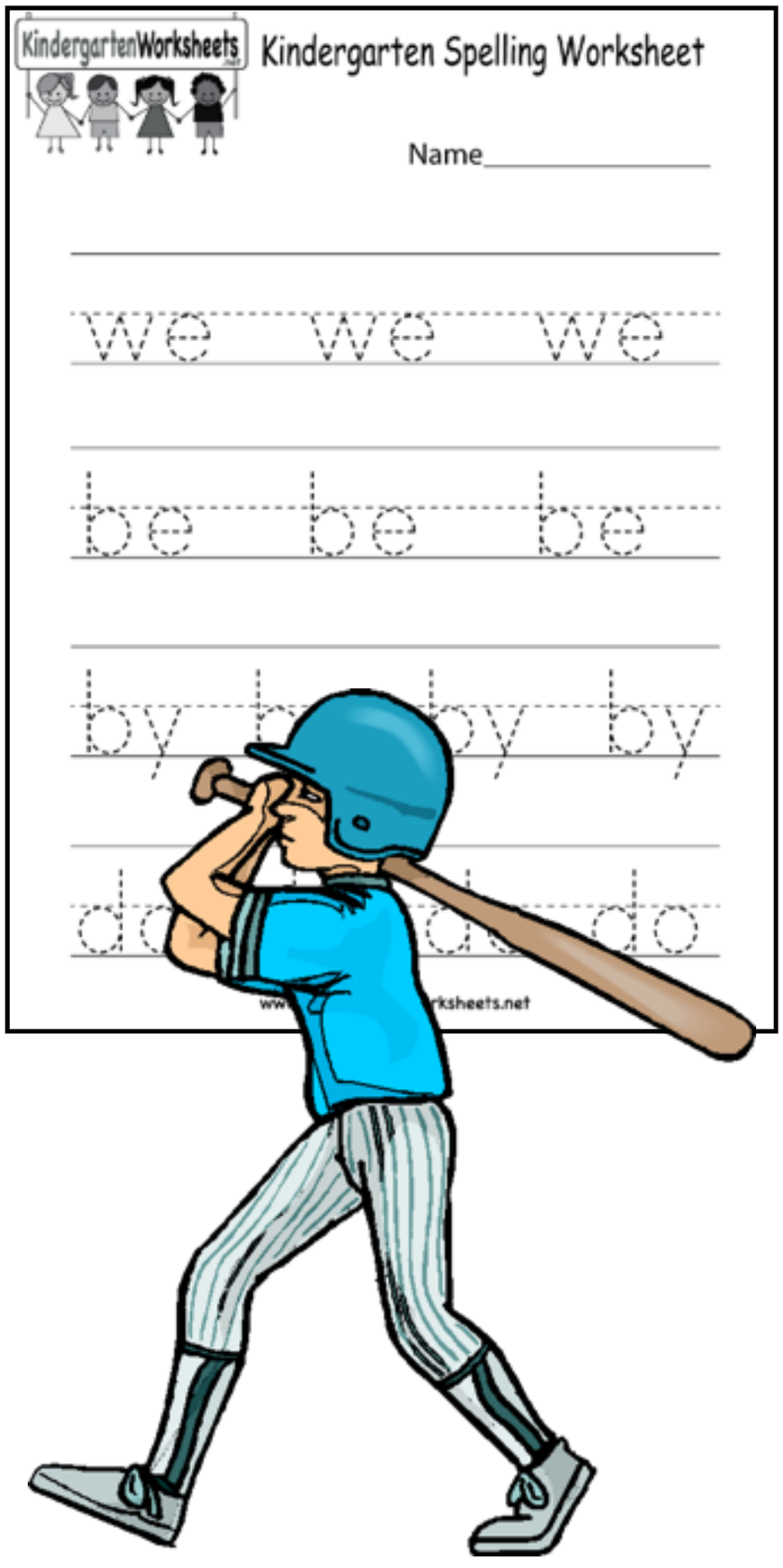
Addition: +4, +5

8 + 5 = ____	3 + 4 = ____	8 + 4 = ____
5 + 5 = ____	9 + 5 = ____	2 + 4 = ____
9 + 4 = ____	6 + 4 = ____	5 + 5 = ____
7 + 5 = ____	8 + 5 = ____	6 + 5 = ____
6 + 5 = ____	7 + 4 = ____	1 + 4 = ____
4 + 5 = ____	6 + 4 = ____	0 + 5 = ____

4 + 4	0 + 5	8 + 4	1 + 4	9 + 5	7 + 4
6 + 5	7 + 4	5 + 5	3 + 5	2 + 5	6 + 4
2 + 5	8 + 4	9 + 5	4 + 5	3 + 5	7 + 4

EASY Timed Math Drills — Addition 14 © Remedia Publications

Research evidence suggests that application of a concept, in varying contexts or in ways that offer sense-making opportunities, is more effective in building true fluency than doing repeated, nearly identical manipulations of numbers. (NCTM, 2014)



"A good analogy is baseball. For a person learning to play baseball, batting practice is an important part of learning how to play the game. However, imagine a person who has never [played] a baseball game. Making that person do nothing but batting practise may lead to the misconception that baseball is about standing at the plate and repeatedly swinging at the ball. That person would miss the purpose of baseball and would think it a boring way to spend an afternoon." (Stahl, 1992).

Getting Started:
Designing Learning Opportunities

1. What is my **PURPOSE**? What is/are my learning intention(s)?

What content does the book address?

How will we engage our students as readers/writers/ mathematicians - in the "**DOING**" of literacy and numeracy?

What do we want them to **KNOW** and ultimately **UNDERSTAND**?

Formative Assessment

We as teachers, must know our learning intentions.

We share these with our students.

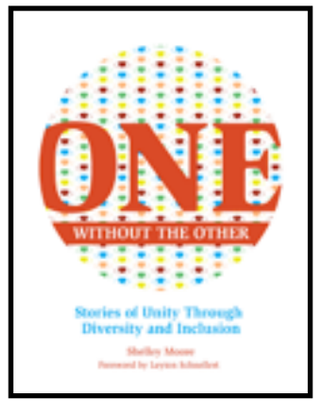
We circulate and observe. Based on what we see, we ask questions to clarify our understanding and nudge learning forward.

We document the learning we see using anecdotal notes, photos, videos, and student work samples.

2. Is the learning **INCLUSIVE**? Are there entry points for ALL students?

Shelley Moore (author and Richmond School District Teacher Consultant)

https://blogsomemoore.com/



Lessons that provided an entry point for all and allow each student to work to their potential

Learning Intentions for:

ALL

SOME

FEW

Think about that child in your class that seems to struggle the most.

How would he/she participate in *this* activity?

Can everyone “get in” at their developmental stage?

3. Is the learning opportunity **PLAYFUL** and **ENGAGING**?

Exciting literature
Inviting Materials
Connected to students' interests
Multi-modal - hands on, kinesthetic, visual, auditory
Opportunities for Collaboration
Organized

"Almost all creativity involves purposeful play."

- Abraham Maslow

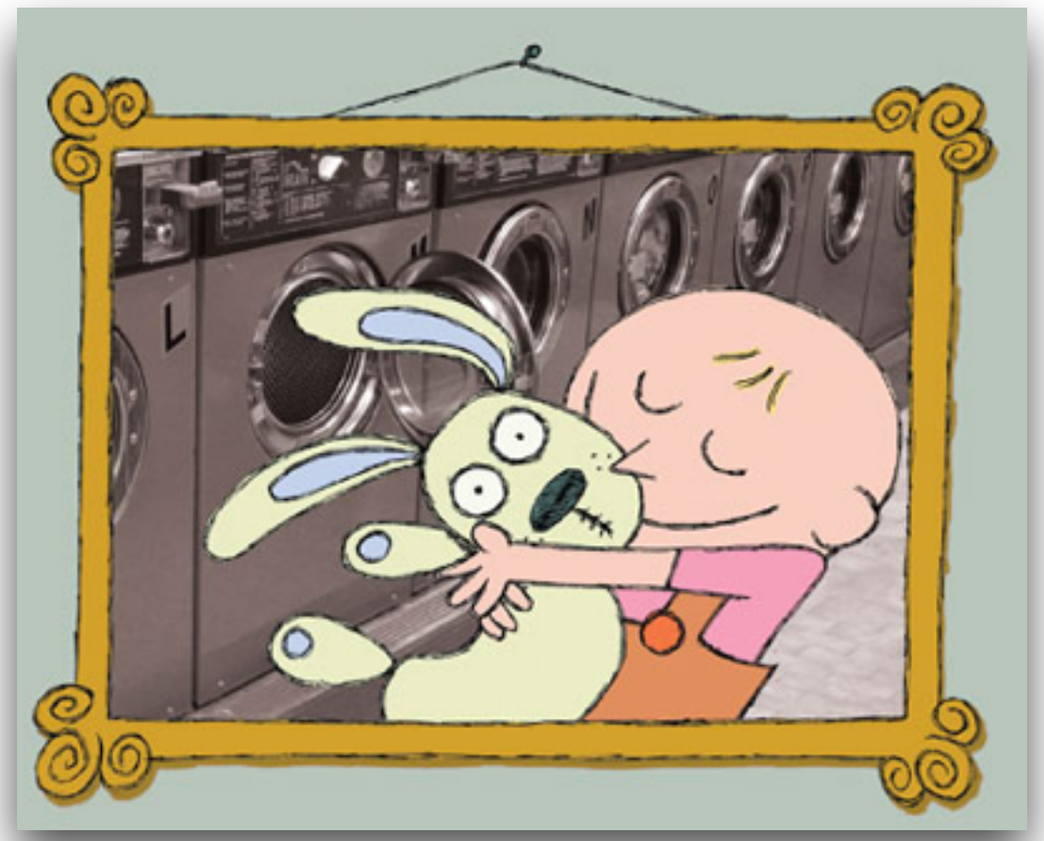
What do you consider when designing learning opportunities &
why do you believe they are important?

How do you select
a great book to teach with?

Selecting books for interactive read-alouds:

1. The **interests** of your students
   (What would they find engaging? What would give enough "meat" for discussion and exploration?)

"Great texts have the inherent power to teach in spite of us, but if the texts aren't engaging, teaching opportunities will be limited."
(Burkins & Yaris, 2016)



Selecting books for interactive read-alouds:

2. Look for **excellent**, **high quality** books:
   - offer insight into the lives of children their age, but who live very different lives
   - introduce fascinating topics or information
   - offer new perspectives on familiar topics
   - topics they want to know more about
   - by familiar authors

Caldecott Medal - USA Picture book artist

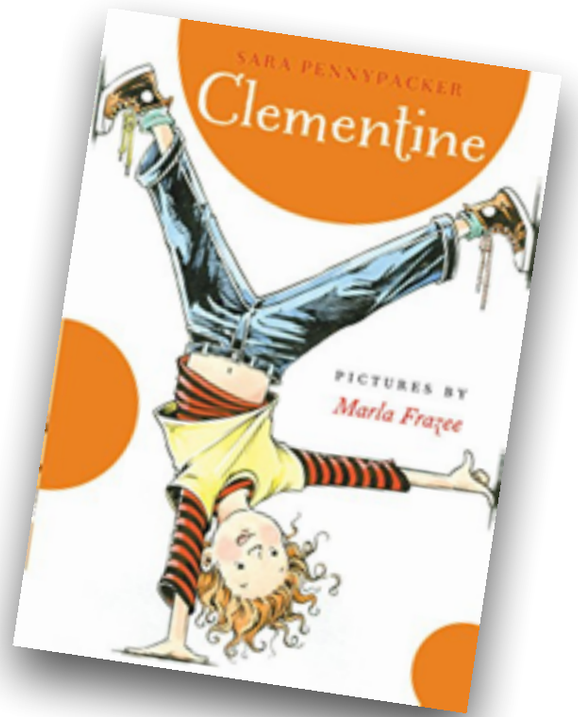
U of Calgary site

Orbis Pictus - non-fiction

Selecting books for interactive read-alouds:

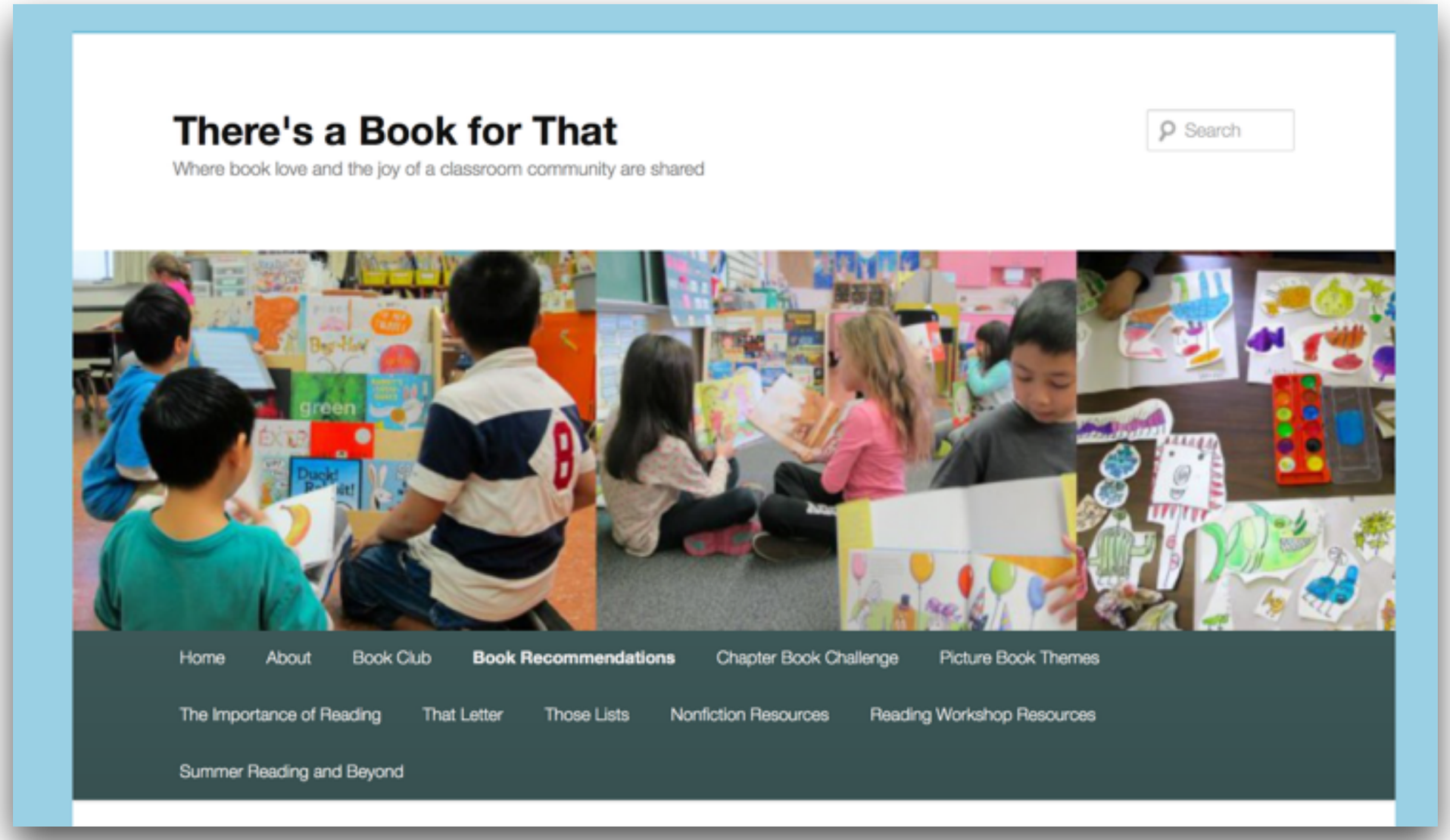
3. Consider the average **reading ability** of your students
    - select something most of the students could not read independently
    - find the “sweet spot”! If you have to explain/ elaborate every few sentences, it is too hard to understand.

4. **Variety**
    - genres (we tend to read more fiction than non-fiction)
    - represent genders, cultures, socio-economic and age diversity



Bloggers make great suggestions and offer reviews.

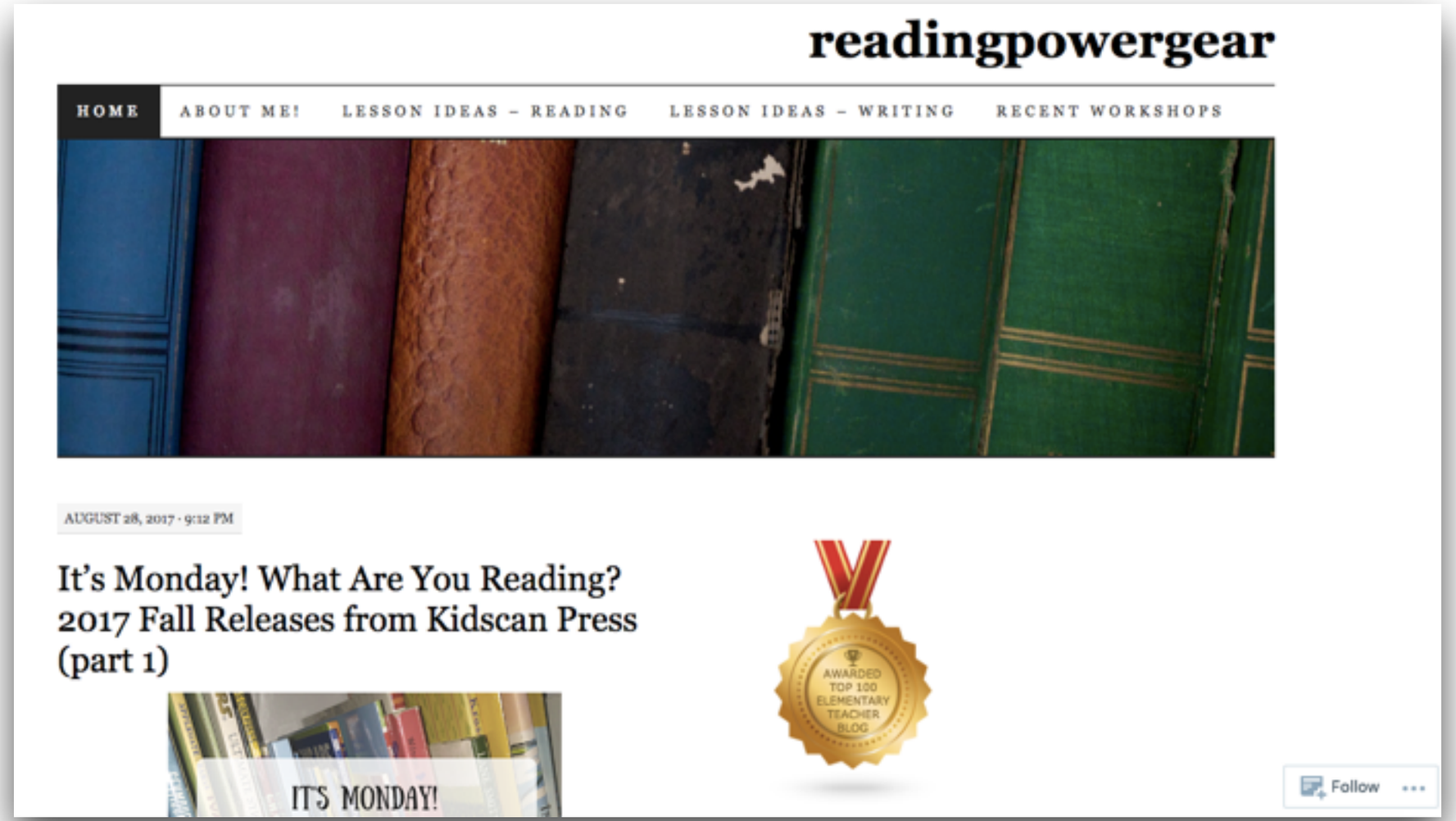
Carrie Gelson: https://thereisabookforthat.com
Twitter: @CarrieGelson



How do you find great read-alouds?

Bloggers make great suggestions and offer reviews.

Adrienne Gear: www.readingpowergear.wordpress.com
Twitter: @AdrienneGear



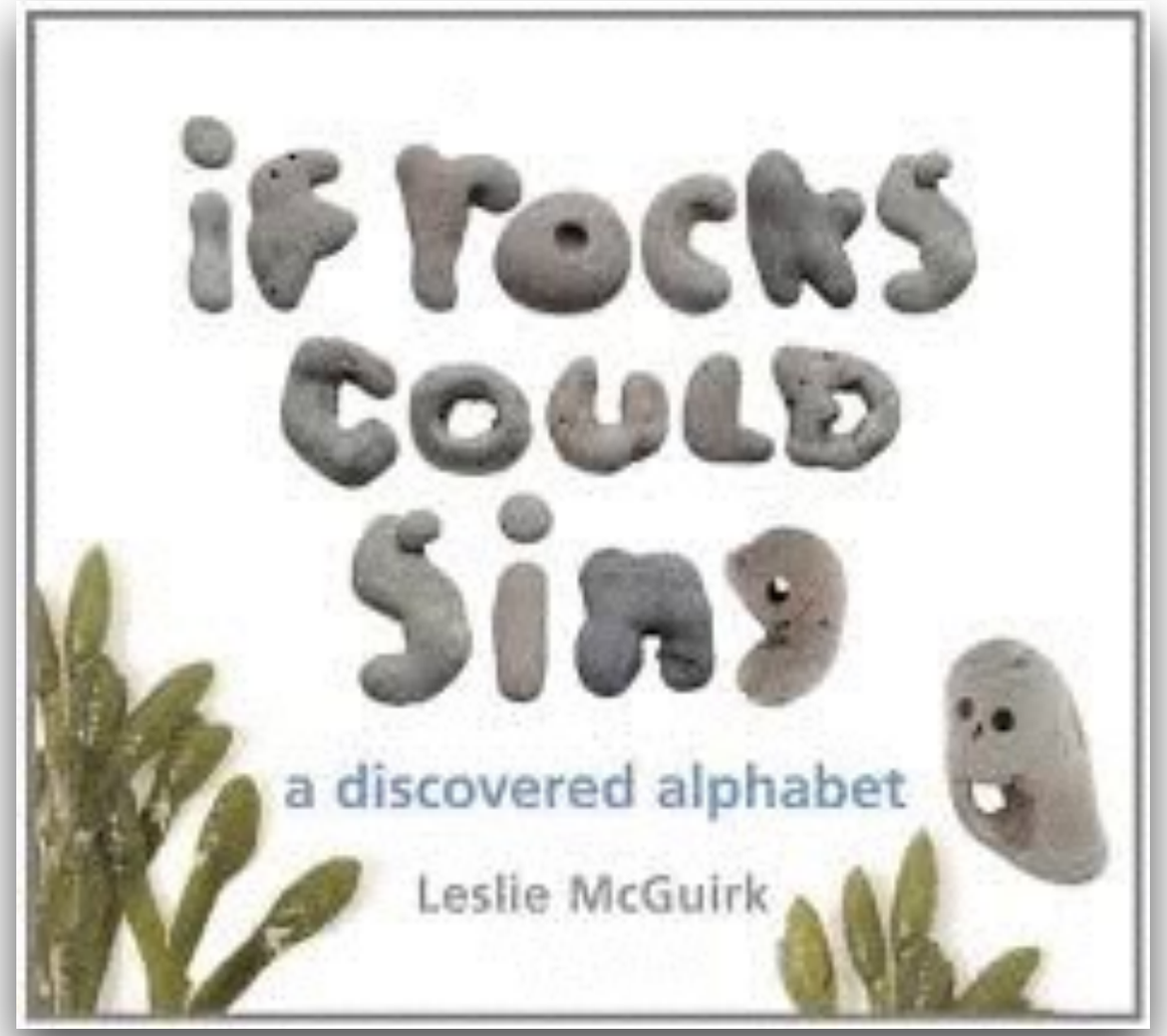
Subscribe and hear about new books!

If Rocks Could Sing

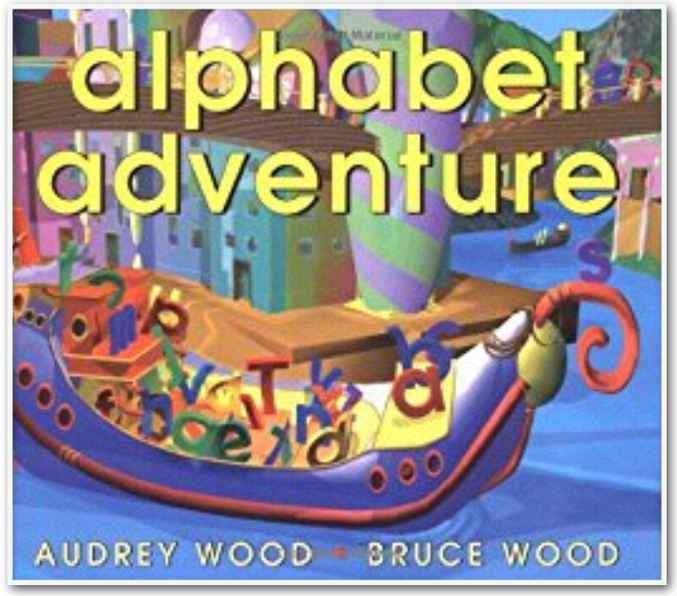
by Leslie McGuirk

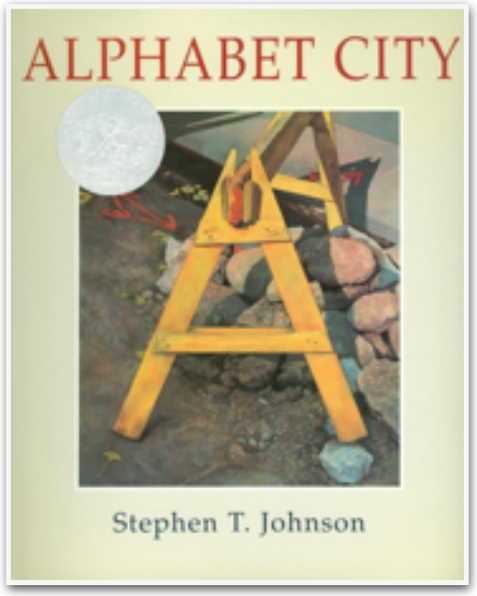
Author Leslie Mcguirk spent 10 years collecting rocks along a Florida seashore that resembled the letters of the alphabet. Additionally, she collected rocks that resembled items that begin with each letter.

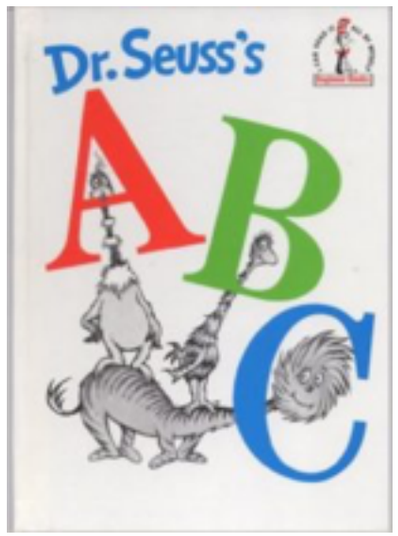
The result is this extraordinary alphabet book.

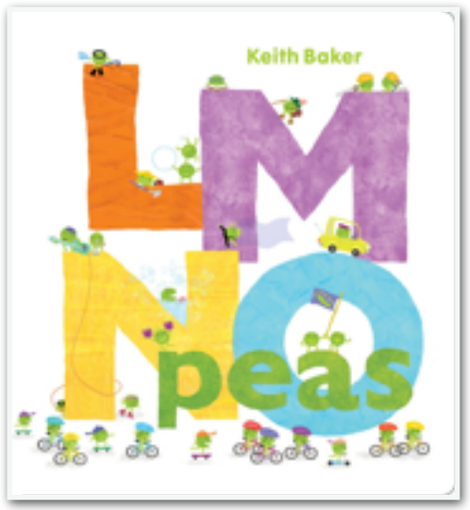


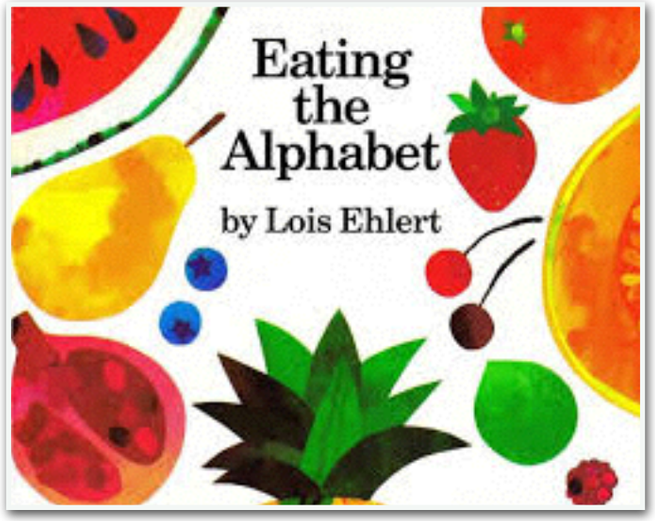
Alphabet Books

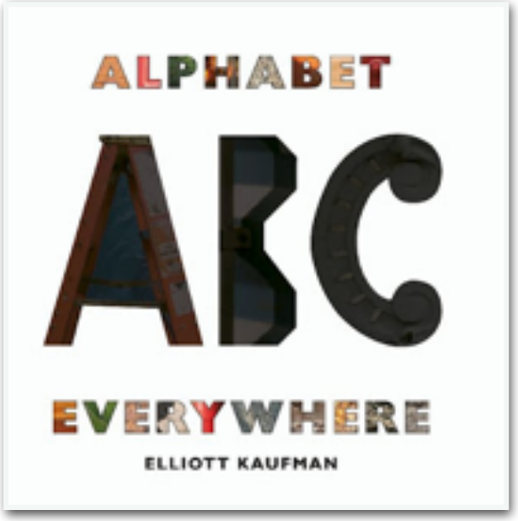






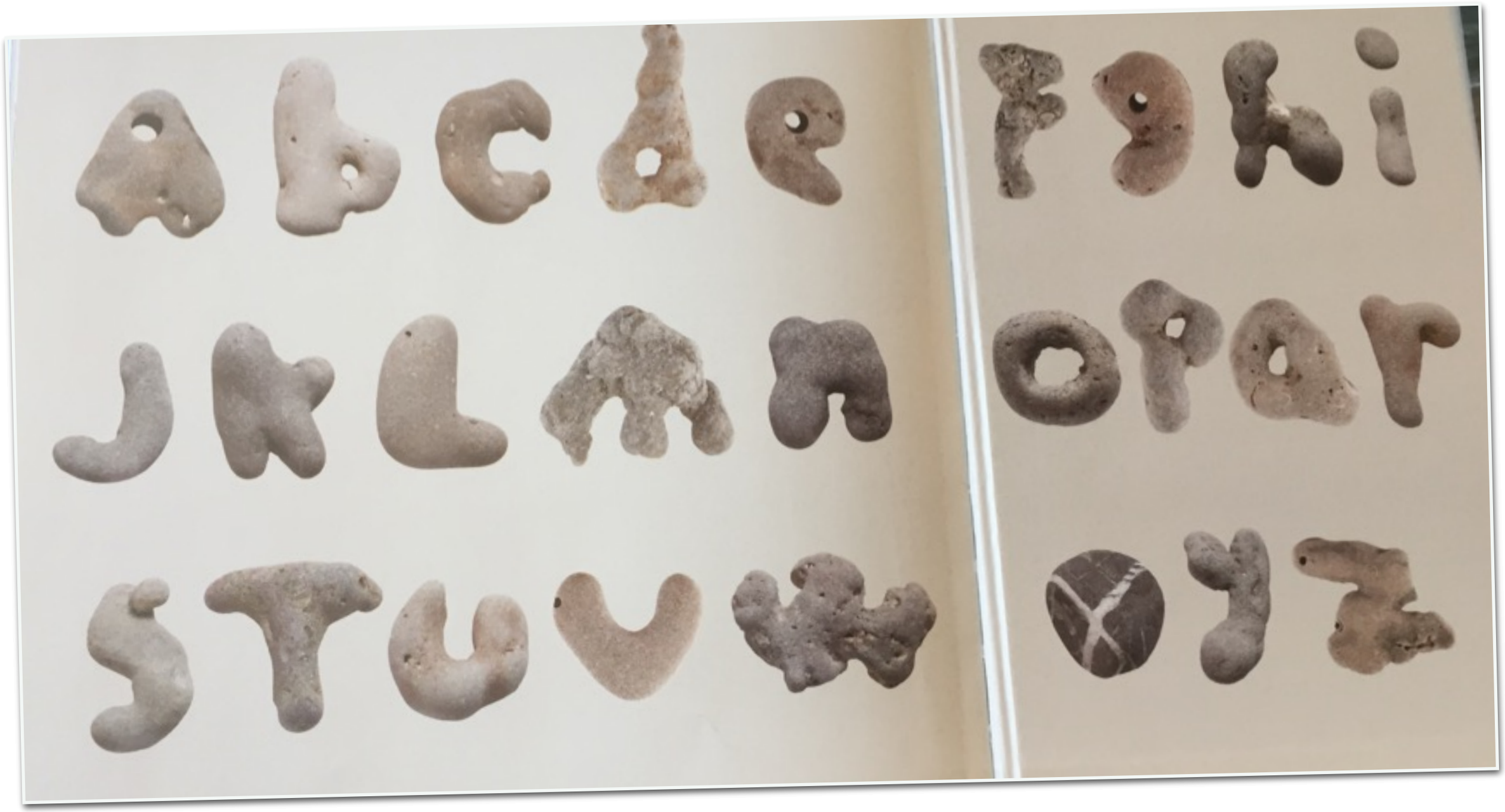






"Reading alphabet books provides a medium in which print is discussed significantly more frequently when compared to storybook reading" (Smolkin, Yaden, Brown, & Hofius, 1992).

Which letter do you think was the most difficult for her to find?

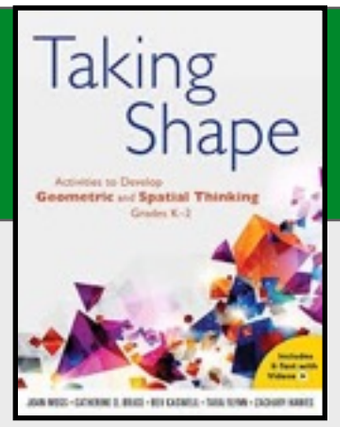


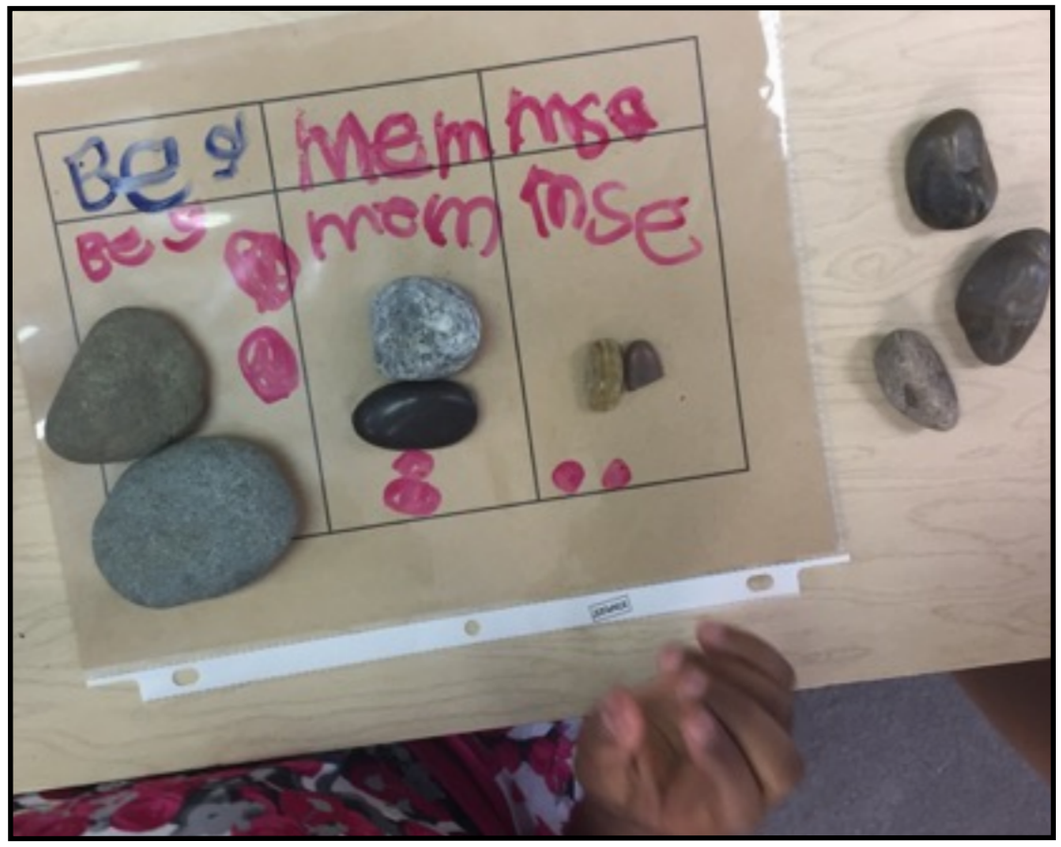
"Spatial sense is about being able to visualize, or picture things in the mind, as well as manipulate (move, rotate, bend) objects and shapes in space "

(Taking Shape: K-2, 2016)

Thank you to Brenda Hycran and her K class at Harold Bishop!

Numeracy Learning Intentions
I can create different shapes.
I can identify the shapes I created using mathematical language (e.g., square, triangle, circle).
I can compare the attributes of the different shapes I created.





Numeracy Learning Intentions
I can identify and describe attributes of rocks.
I can sort and classify rocks by a single attribute.
I can compare multiple attributes of rocks.

What patterns can you create?

- Patterns can be circular!
- What do you notice about the mandalas?

What is a Mandala?

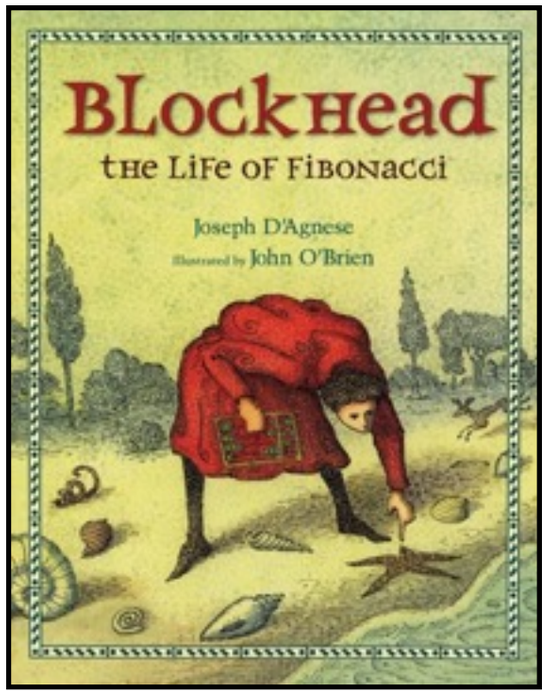
A mandala is a geometric design meant to symbolize the universe and our connection to it. It represents both the visible world around us (the circle is the whole world) and the invisible one inside our minds and bodies (the centre is the healing circle). It is an art form that is found in many cultures around the world.

“How does your Mandala represent you?

Where do you see circular patterns in the world?
What do you notice? What do you wonder?

Noticing Patterns is one of the key elements in reasoning!

Noticing patterns, wondering about them, and investigating them is doing math! (Zager, 2017)



Growing Patterns

Though they don't repeat, they are still predictable. Students need to learn to pay attention to the *patterns in the relationships among the quantities* - patterns are built into the structure of growing patterns.

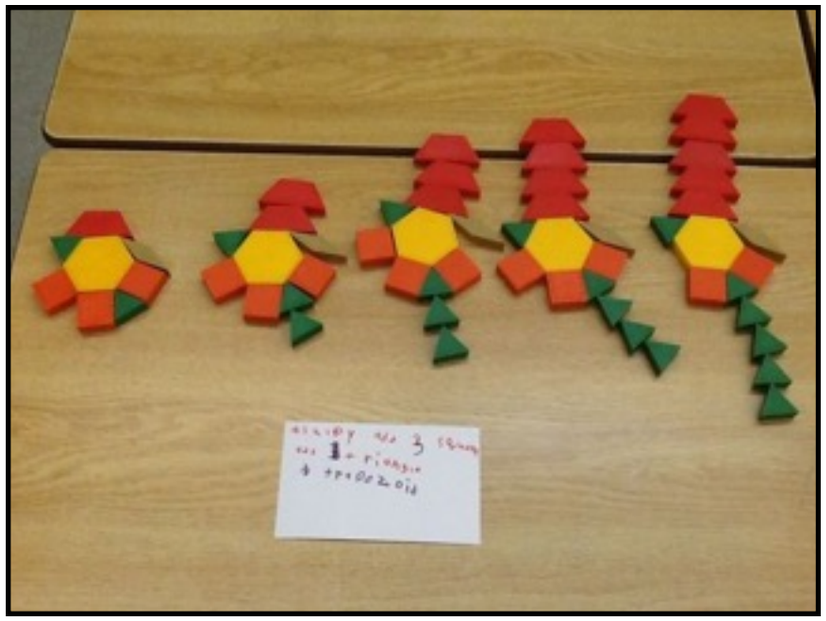
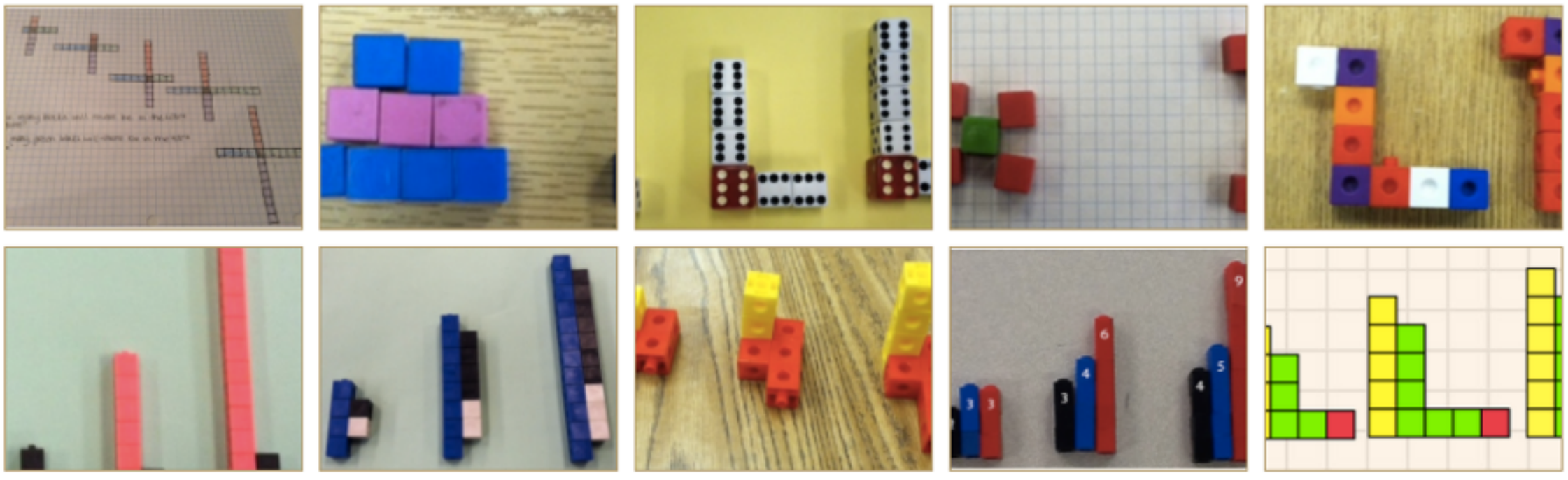


Image from Leanne Howse

Image from Landoflittlelearners blogspot

Visual Patterns

Patterns created by students



www.visualpatterns.org

Important considerations

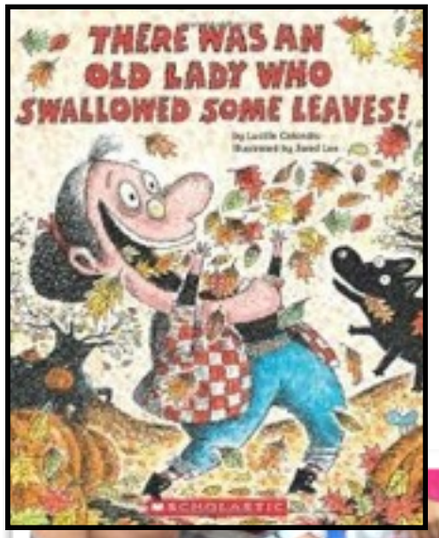
- Students need the opportunities to physically grow the patterns. They need to play and build!

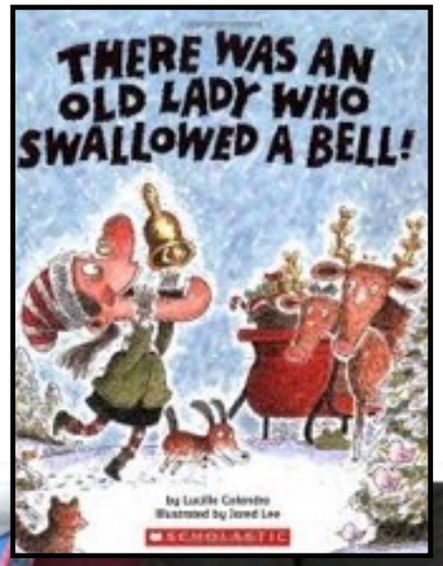
- Don't just ask "What comes next?" Instead ask "What will the fifth term/case look like?" "What stays the same? What changes?" and "How do you see this pattern growing?"

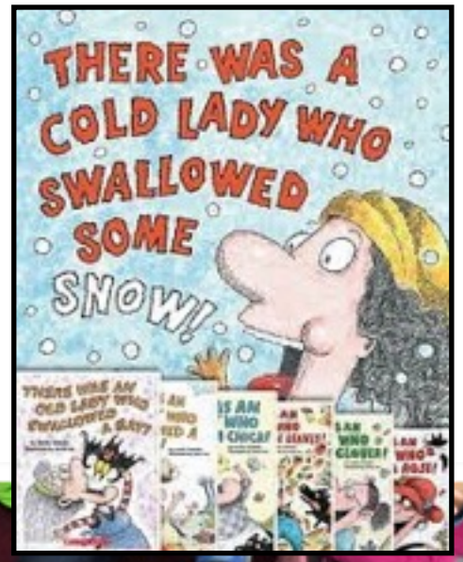
- Play games such as "Guess my Rule"

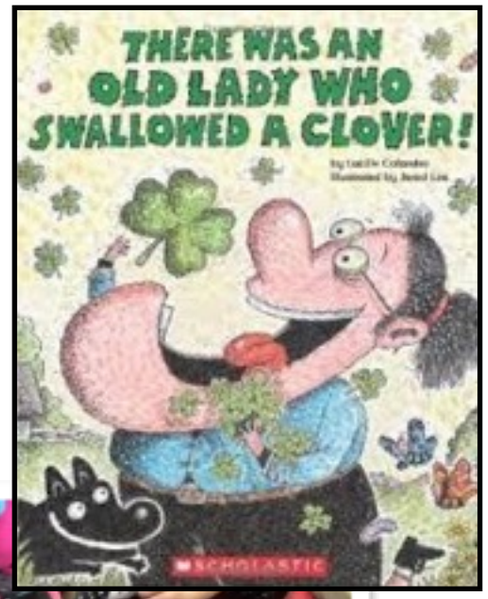
- Provide writing materials for students to represent and communicate how they visualize the growing pattern.

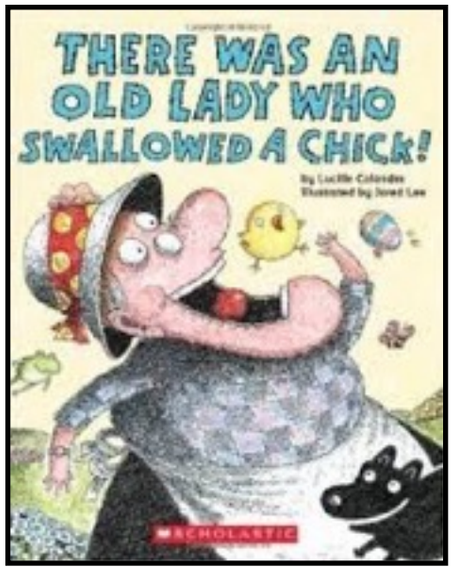
(Ideas from Zager, 2017)

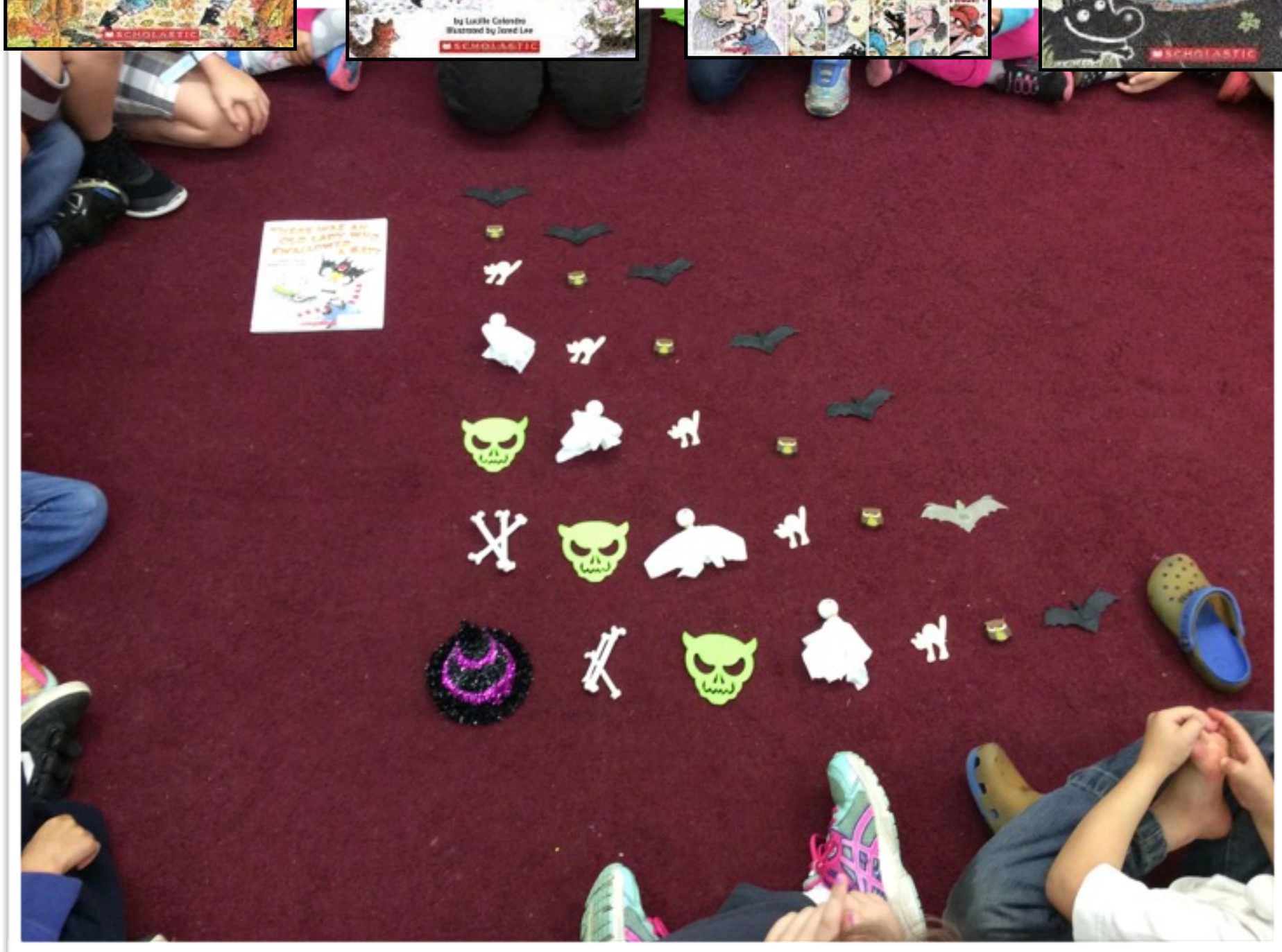






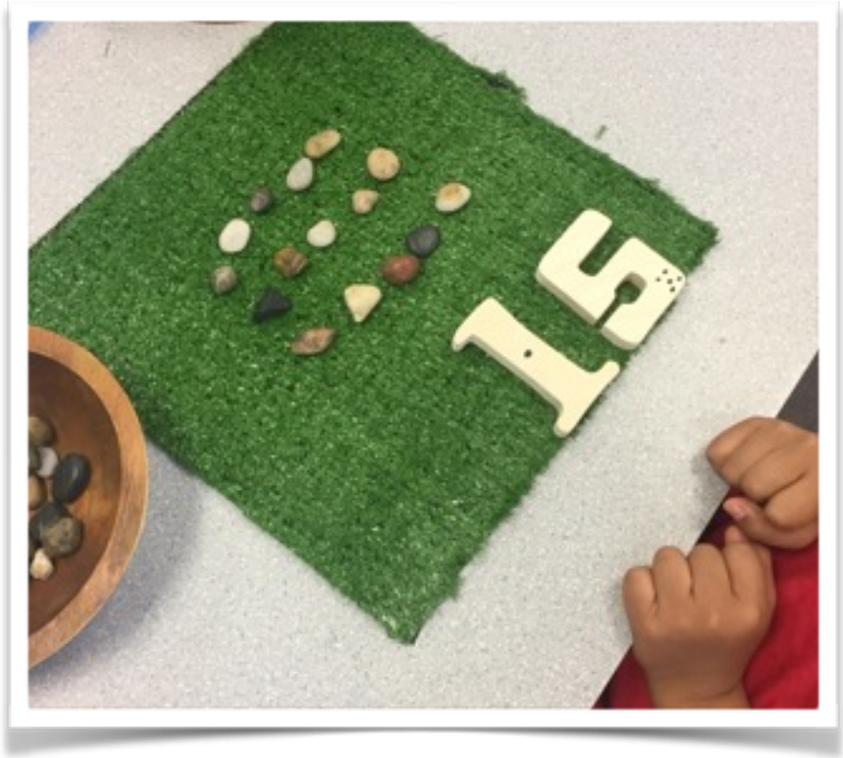






Kristen Pennington,
Grade One
Hjorth Road

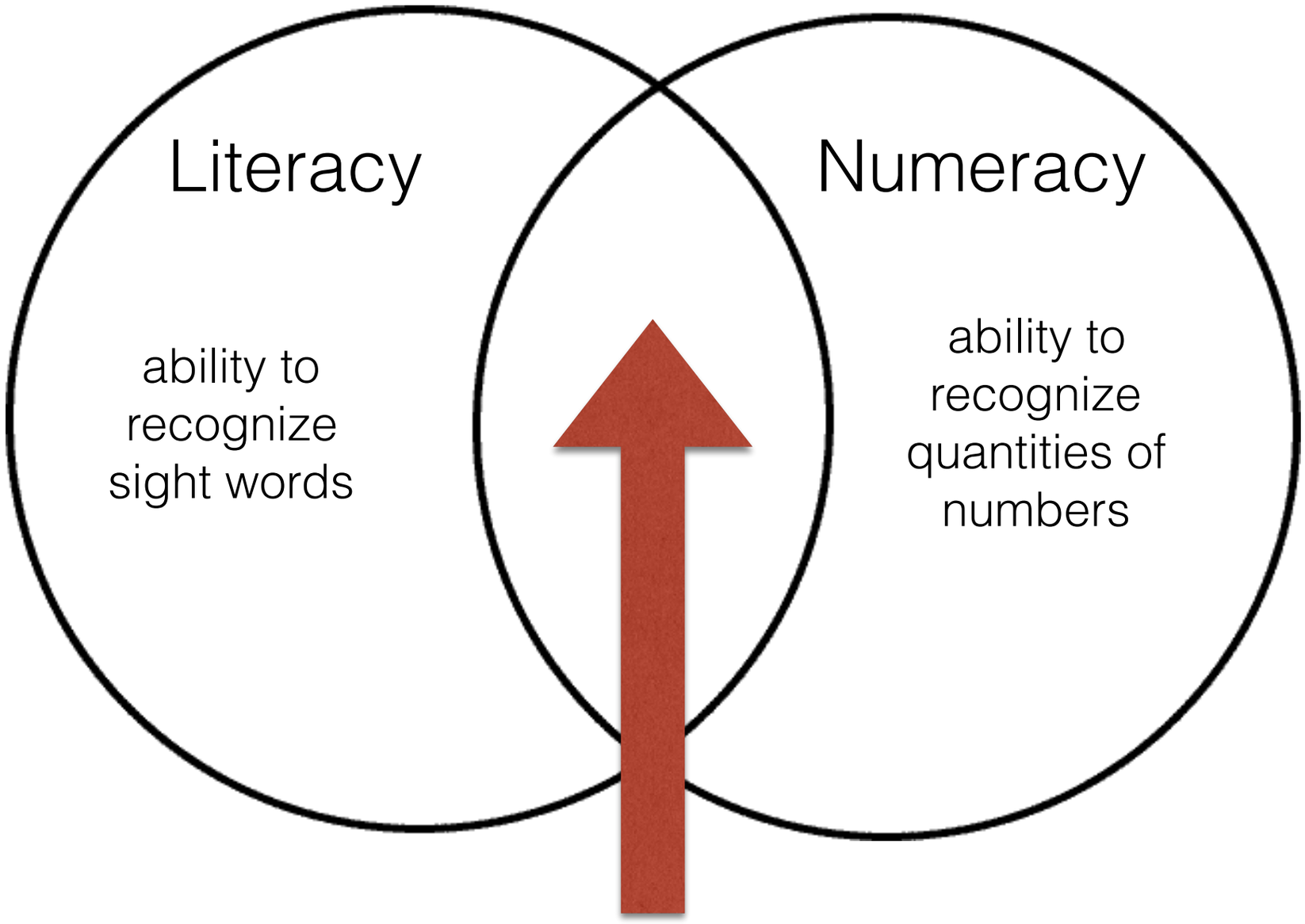
“What numbers can you make?
“How many do you see?”
“How do you see them?”
“Can you make the same number a different way?”



Subitizing: The ability to instantly recognize a quantity without counting.

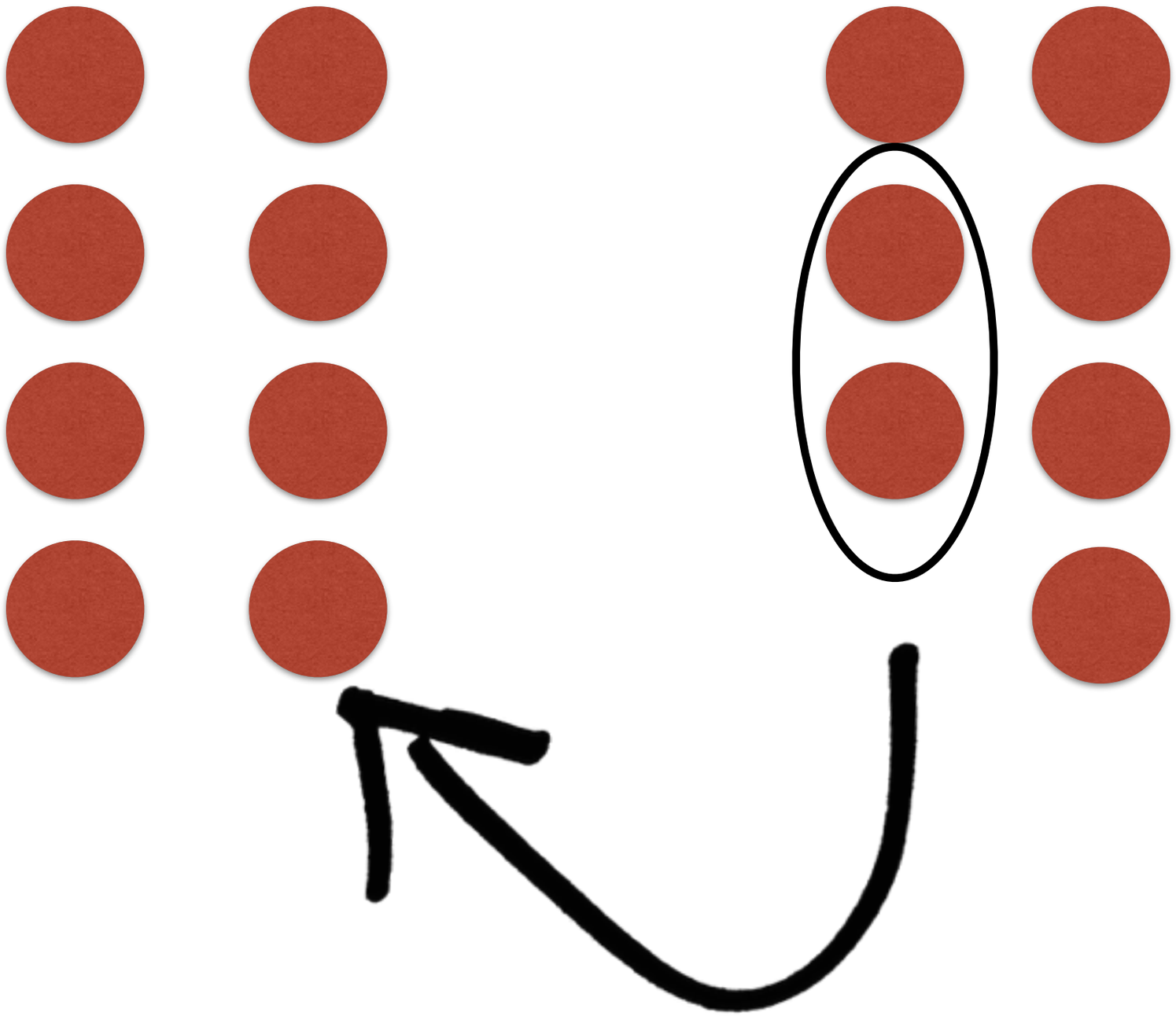
Grade One Class, Hjorth Road

Why is Subitizing important?

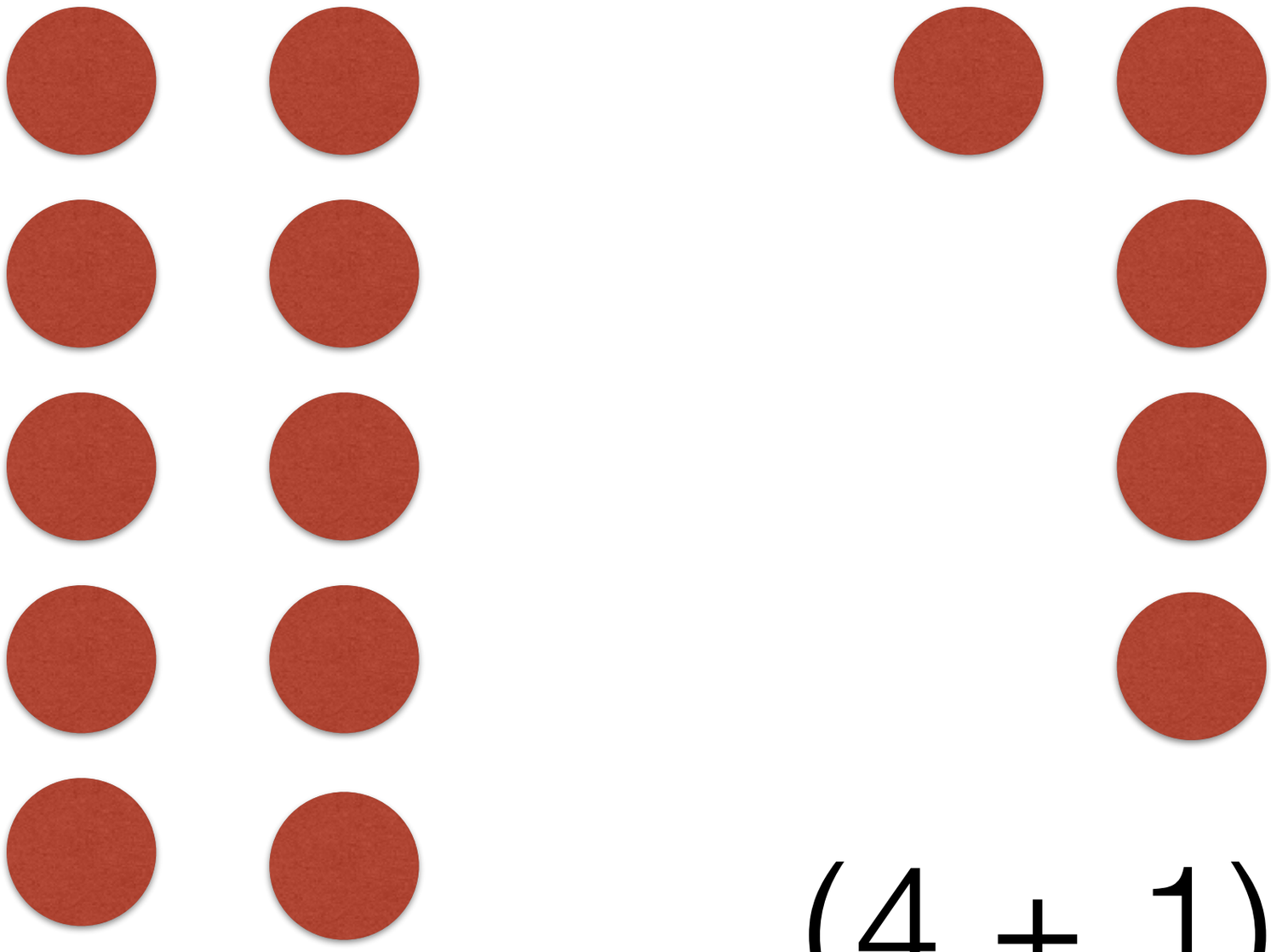


These abilities increase students' fluency and ultimately their ability to either make sense of the text or the problem.

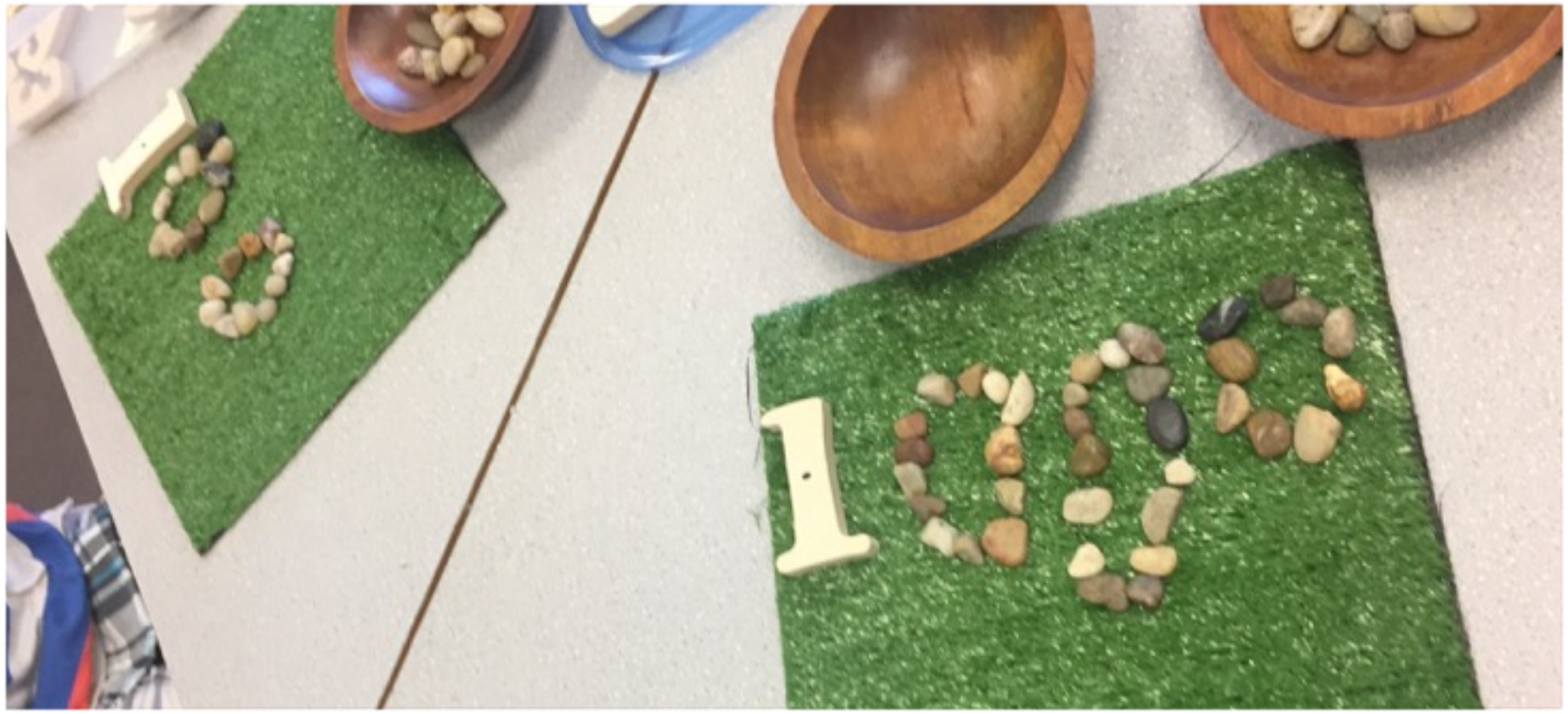
8 + 7 =



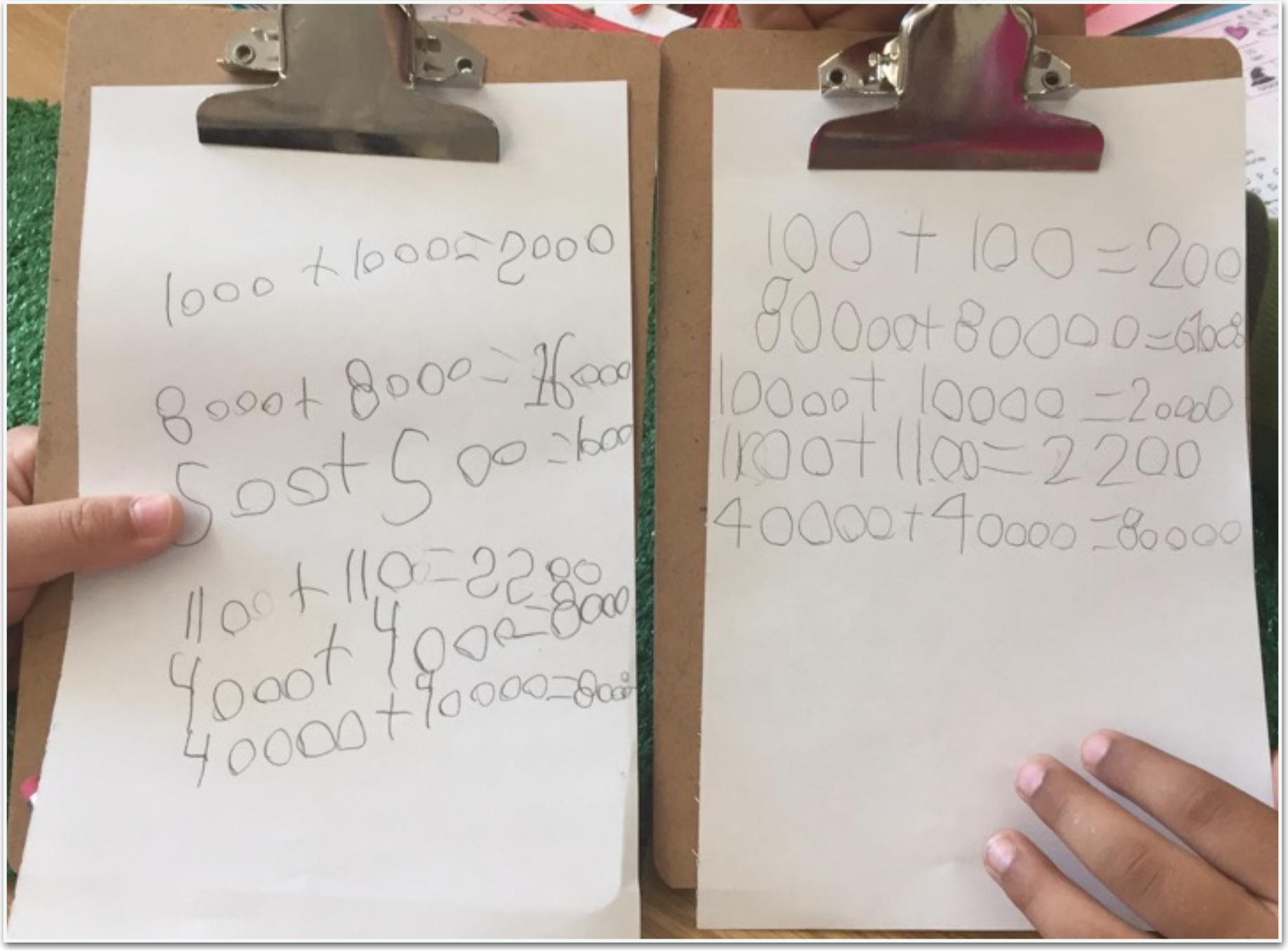
$$8 + 7 = 10 + 5$$



$$(4 + 1) = 5$$



“What numbers can you create” became “What happens when we add another zero? Or change the first digit?”



Oh the possibilities…

Low floor - High Ceiling

Children have real understanding only of that which they invent themselves, and each time that we try to teach them too quickly we keep them from reinventing it themselves.

- Piaget

“Can you stack 5 rocks? Or more?”

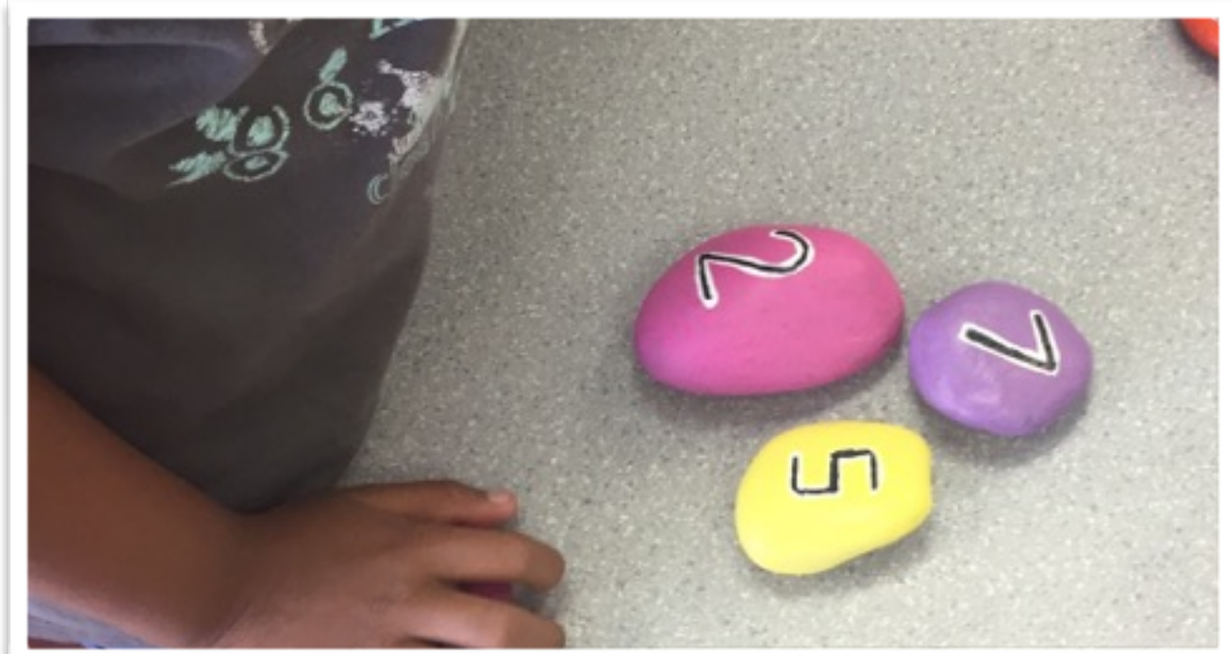
Where’s the math?

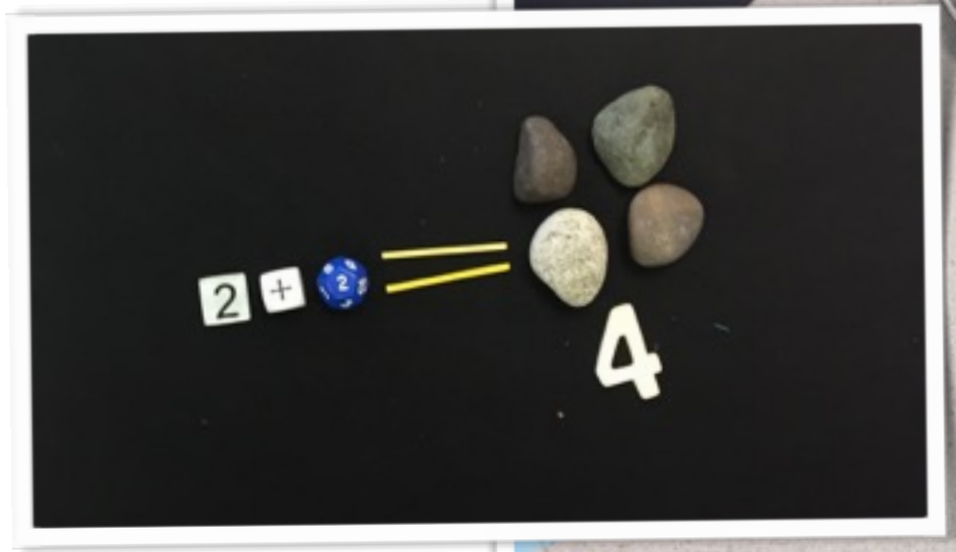
One-to-one correspondence
Spatial Reasoning
Stable Order Count

"How are your rocks connected?"


10
9
8
7
6
5
4
3
2


2
6


2
5



“How can you use these materials to tell joining and separating stories?”

Learning Intentions for ALL, SOME, and a FEW

Everyone must have an entry point!

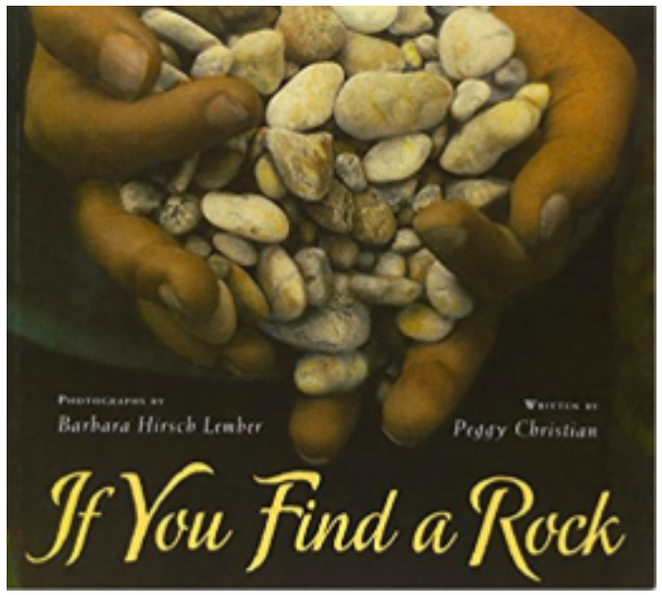
SHRINK AND GROW!

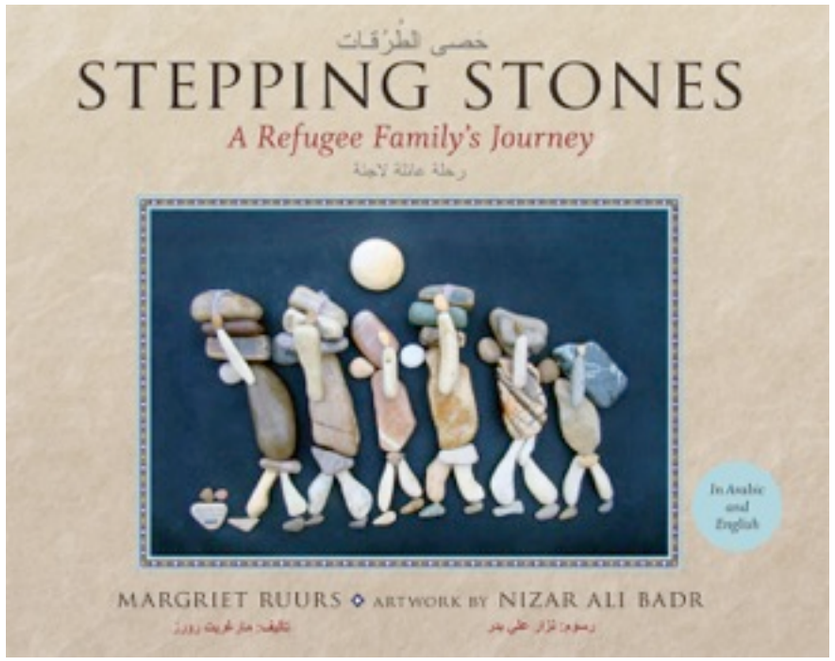
Roll a 1 - 10 dice.
Build that number.
Roll again. Do you need to shrink or grow?
By how many?

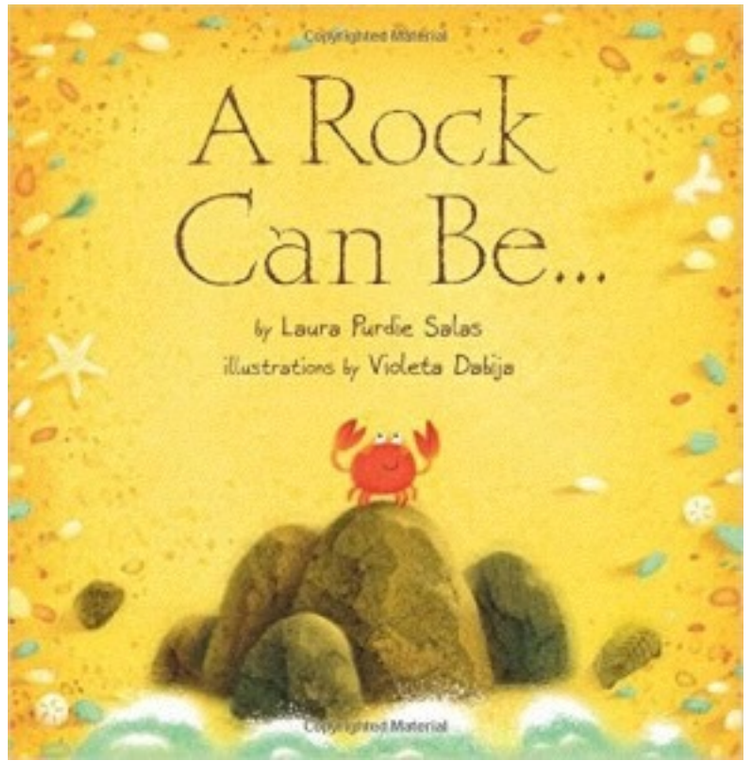
OR

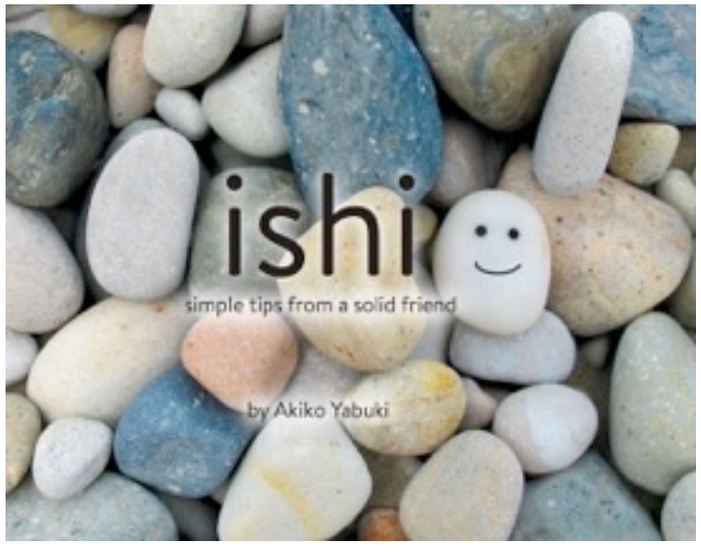
How many more for ten?
Can you record that?

Rock Books









"*We have found that when adults pay attention to the interests of children, children get serious about learning!*"

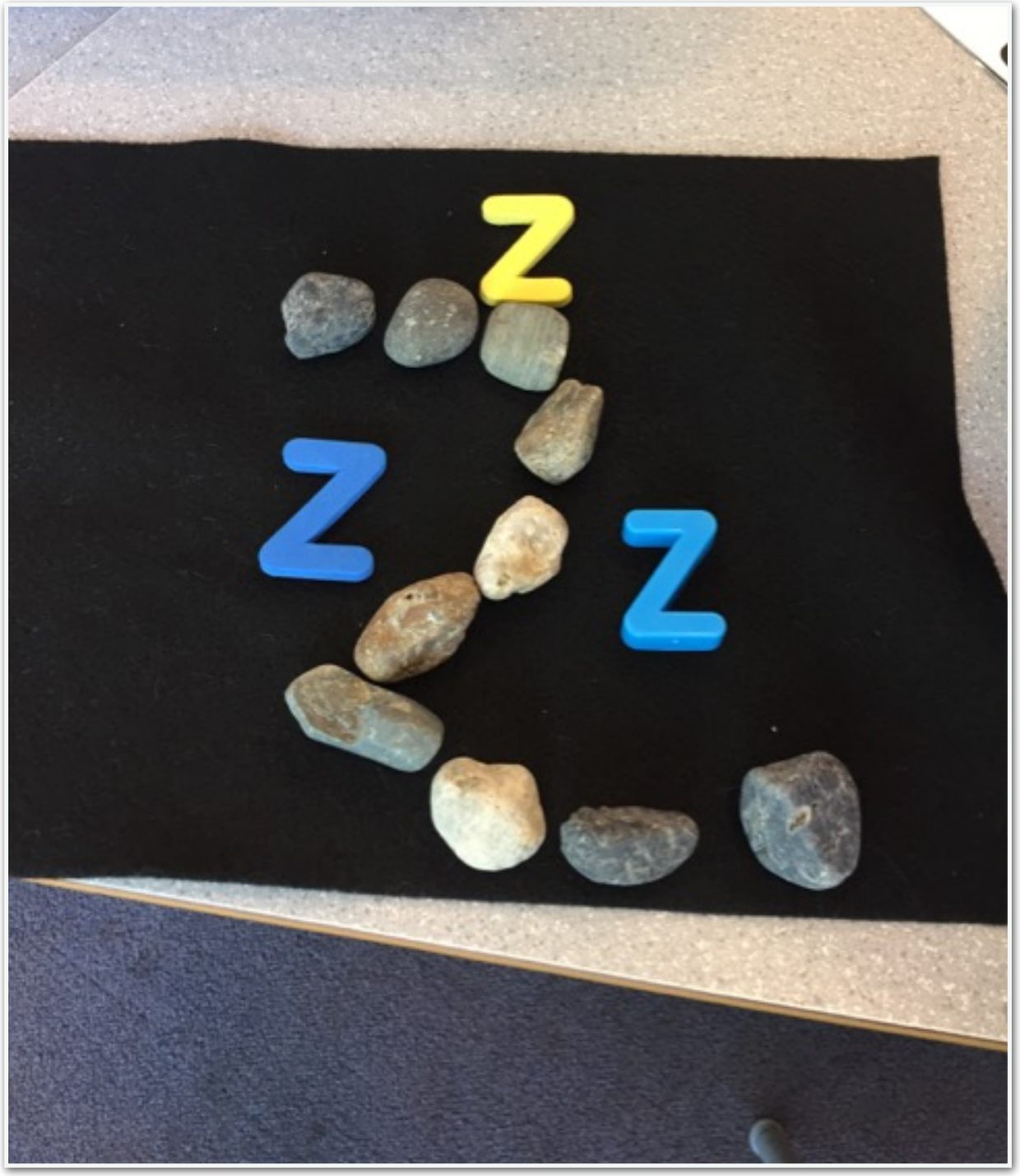
by Susan Harris MacKay,
The Principles of Playful Inquiry

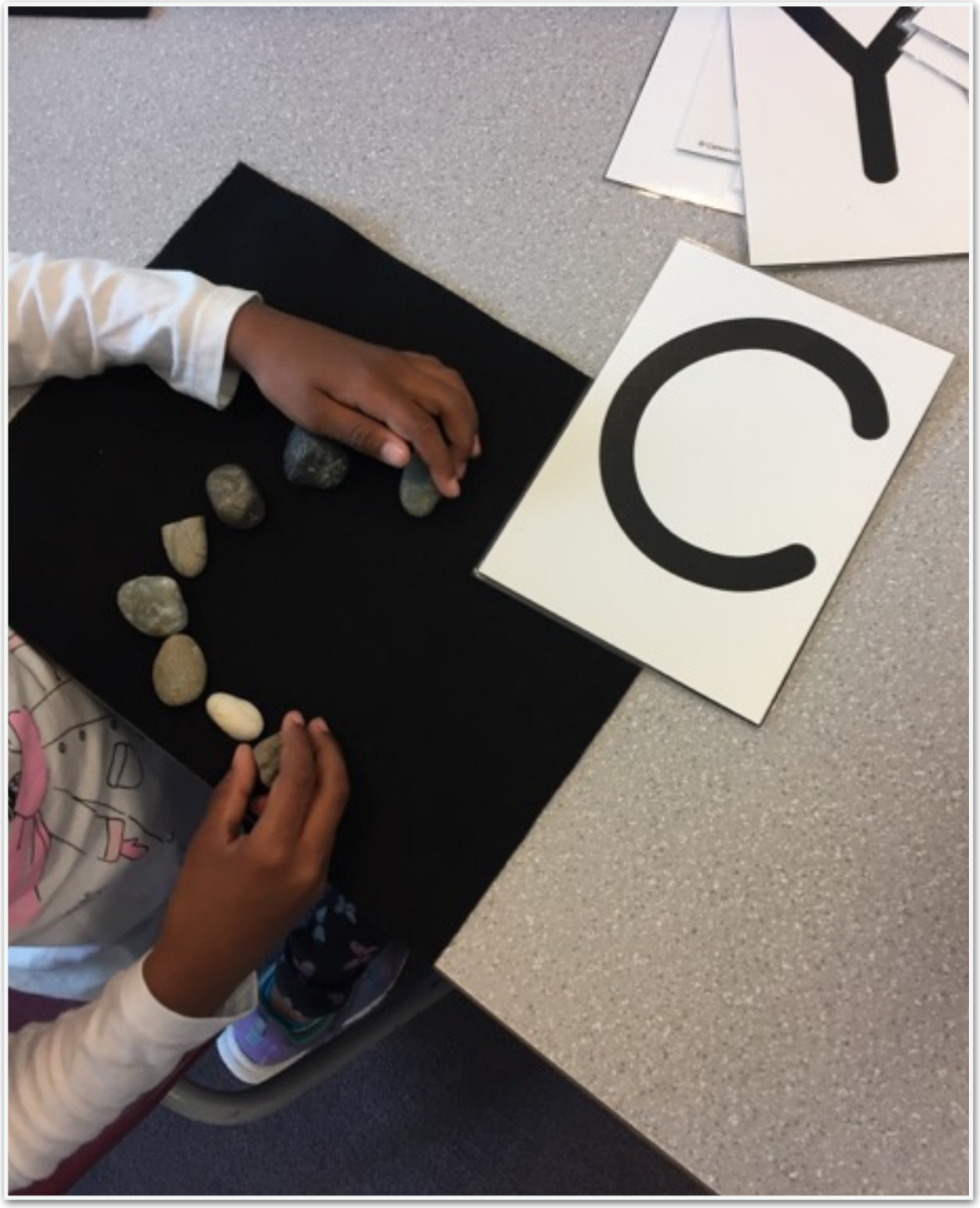
"There are many ways to fill [primary aged] children's literate lives with engaging, interactive, and developmentally appropriate experiences with letters and words that are both playful and purposeful."

(Lori Jamieson Rog)

Literacy Learning Intentions
I can explore the distinctive features of letters (letter formation).
I can tell a story using rocks. I can share my story with a friend.
I understand the left to right directionality of words.
I can use creative thinking to represent letter sounds in pictures.

Can you make letters with rocks?





"To recognize letters, children must understand key visual features such as letter shape, orientation, and directionality" (Bradley & Jones, 2007).

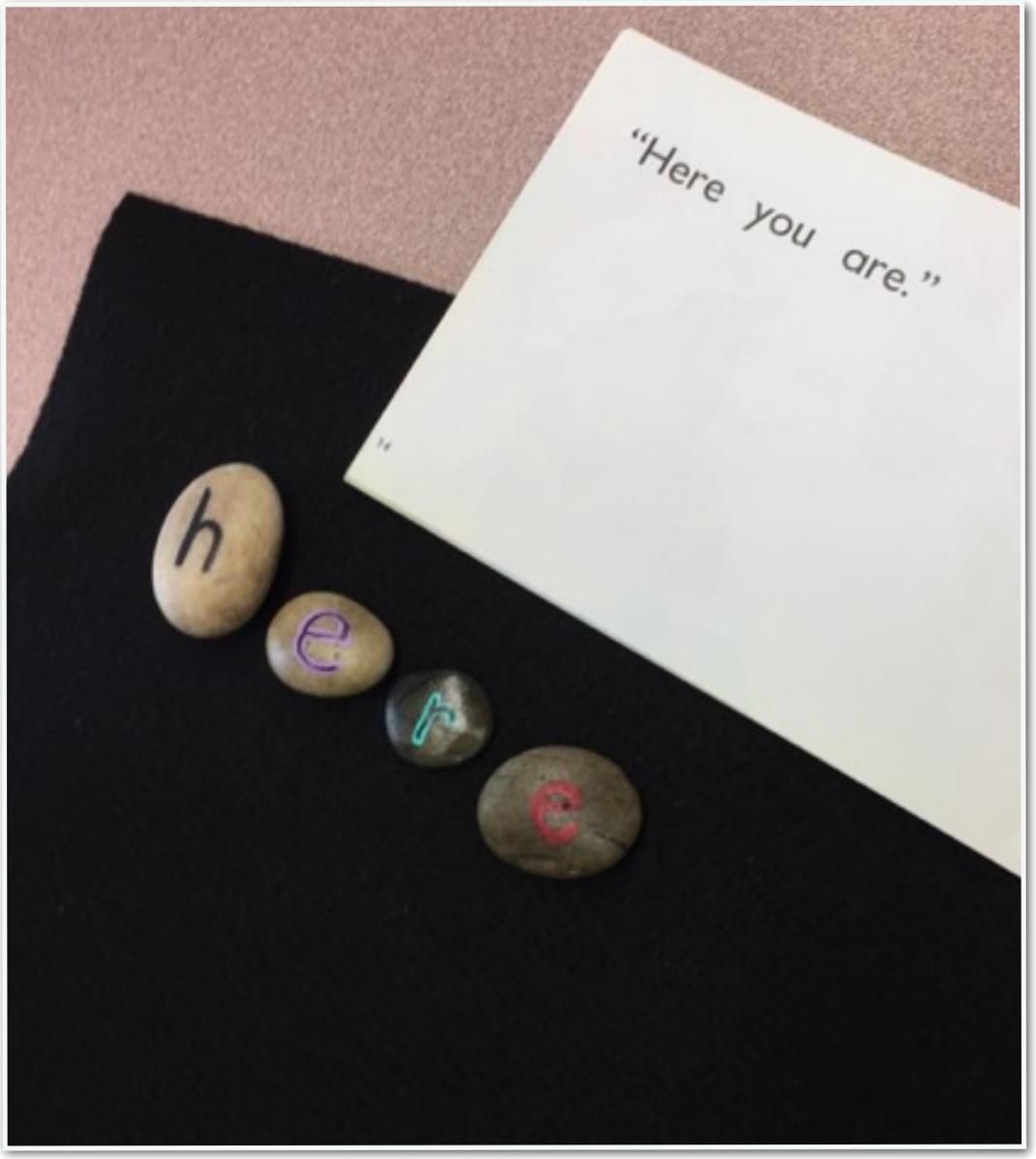
What words can you create with rocks?

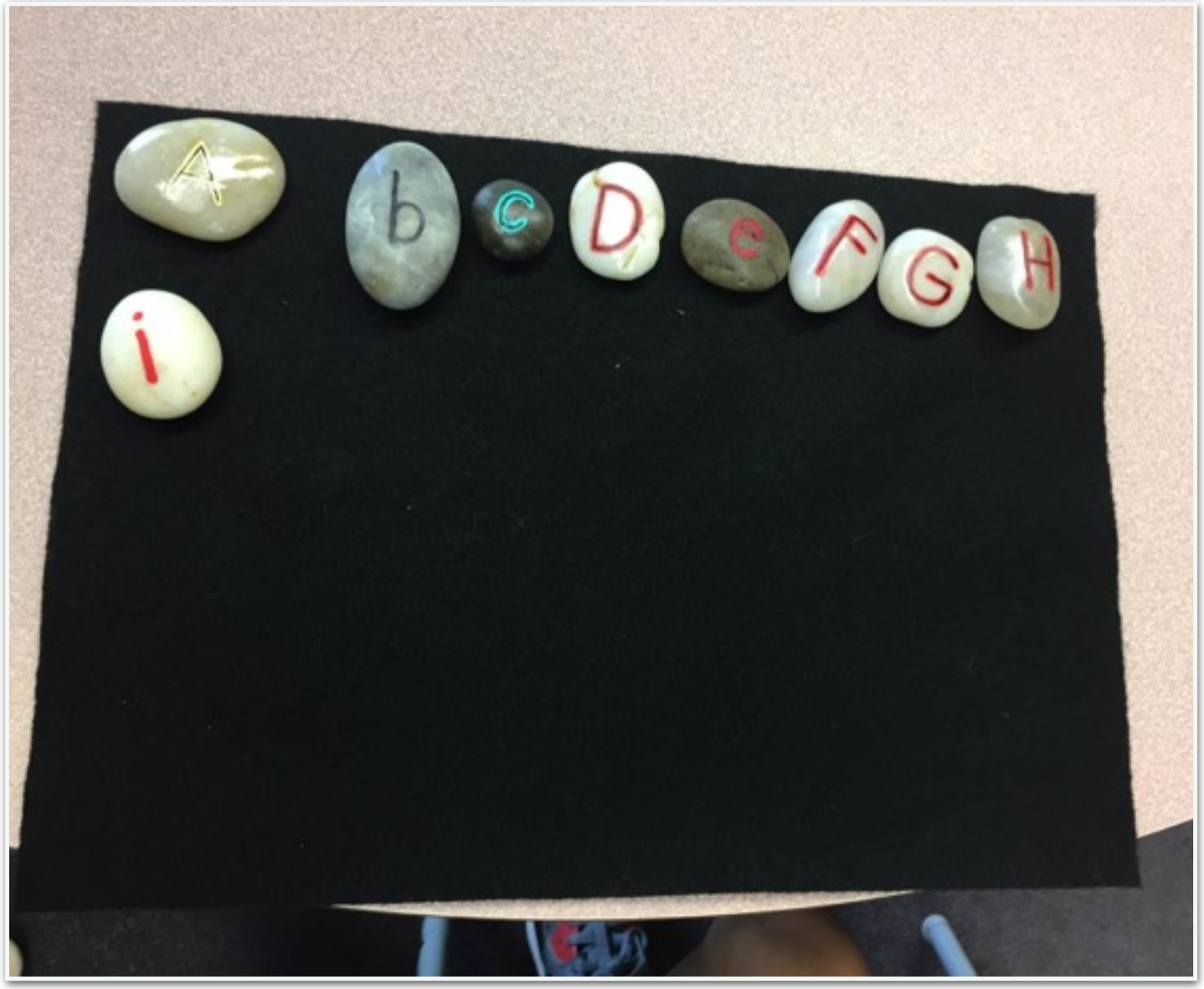
- Rocks with both uppercase and lowercase letters.

- Provide books at their approximate reading level, with words they are both familiar and unfamiliar with.

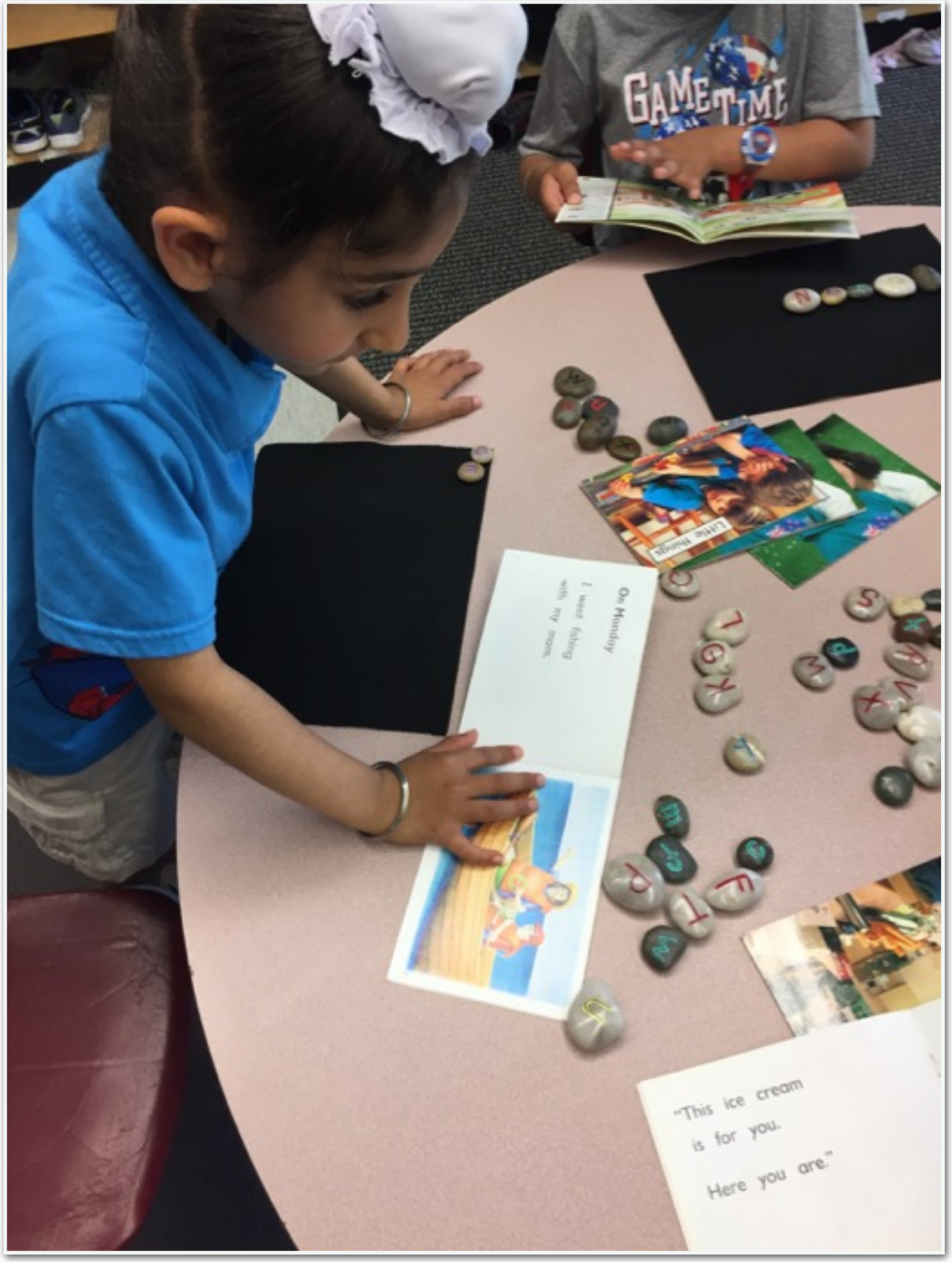
- The vowels could be in a different colour.

Ex: "What do you notice about the red letters?"





Open-ended for all degrees of ability
Everyone can participate & move their learning forward



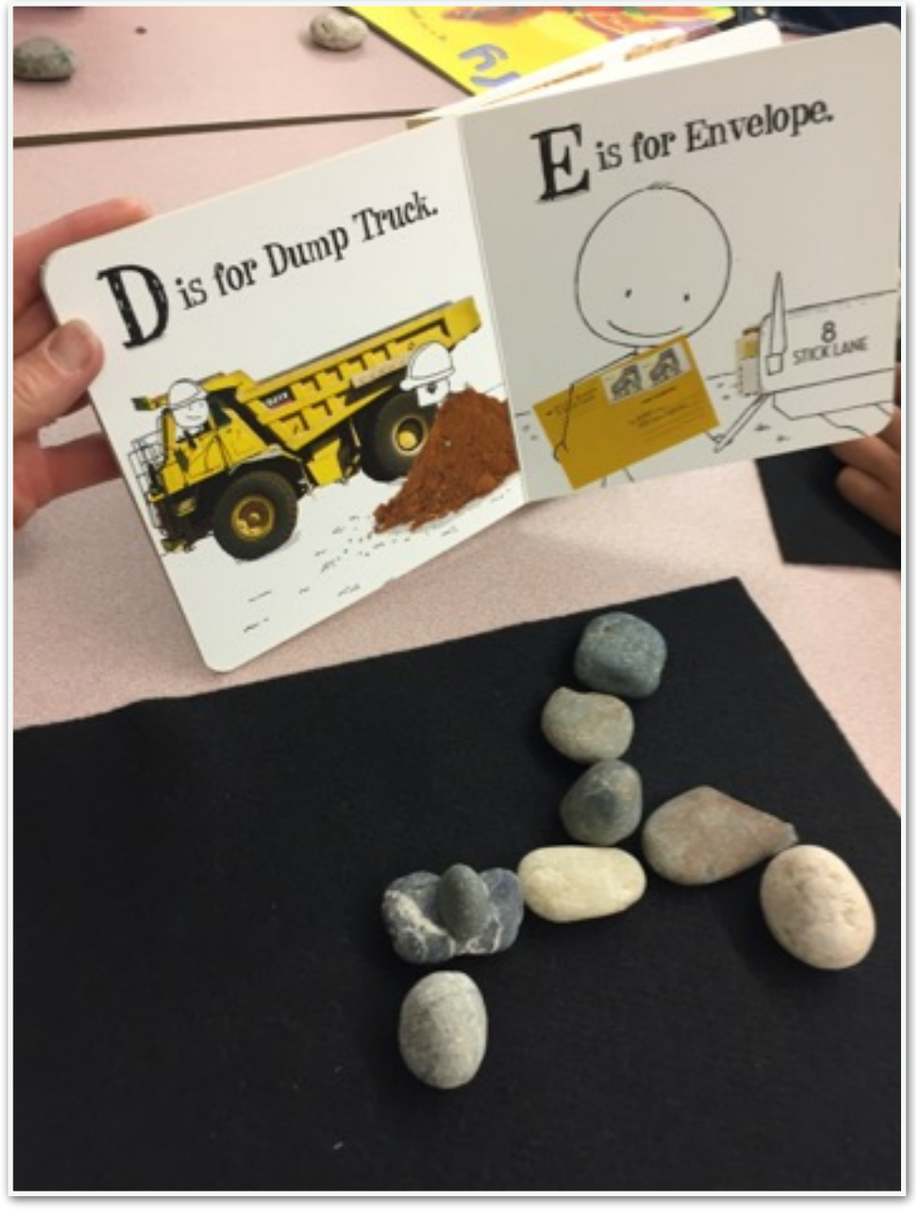
"This is my sister's name. It starts with an 'n' and it's really long!"

How would you nudge this child's learning?

"Children are especially motivated to read and write their names and the names of others in their class. Research does show that personal name learning does promote letter learning"
(Miriam Trehearne)

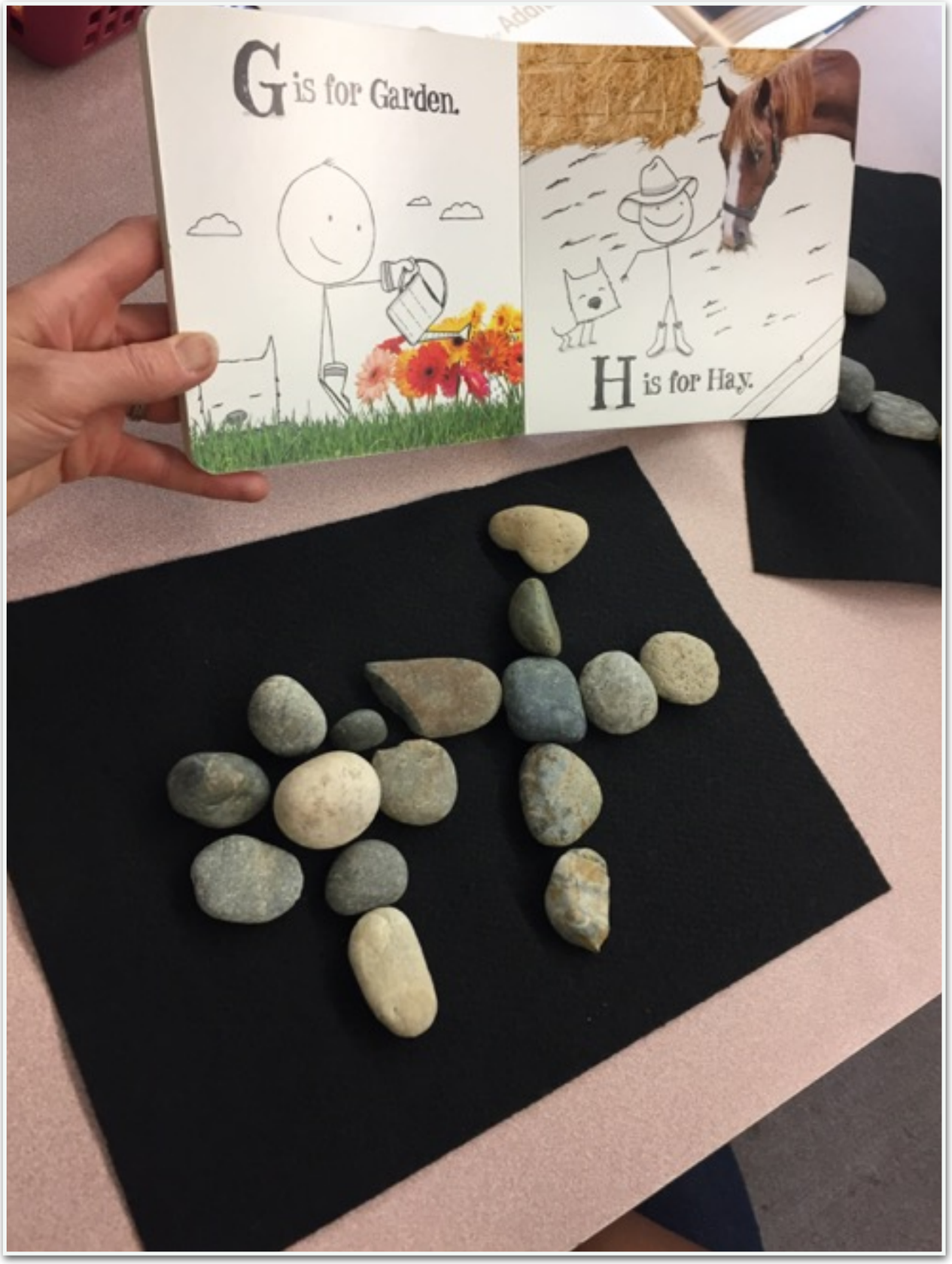
How many letters are in your word?

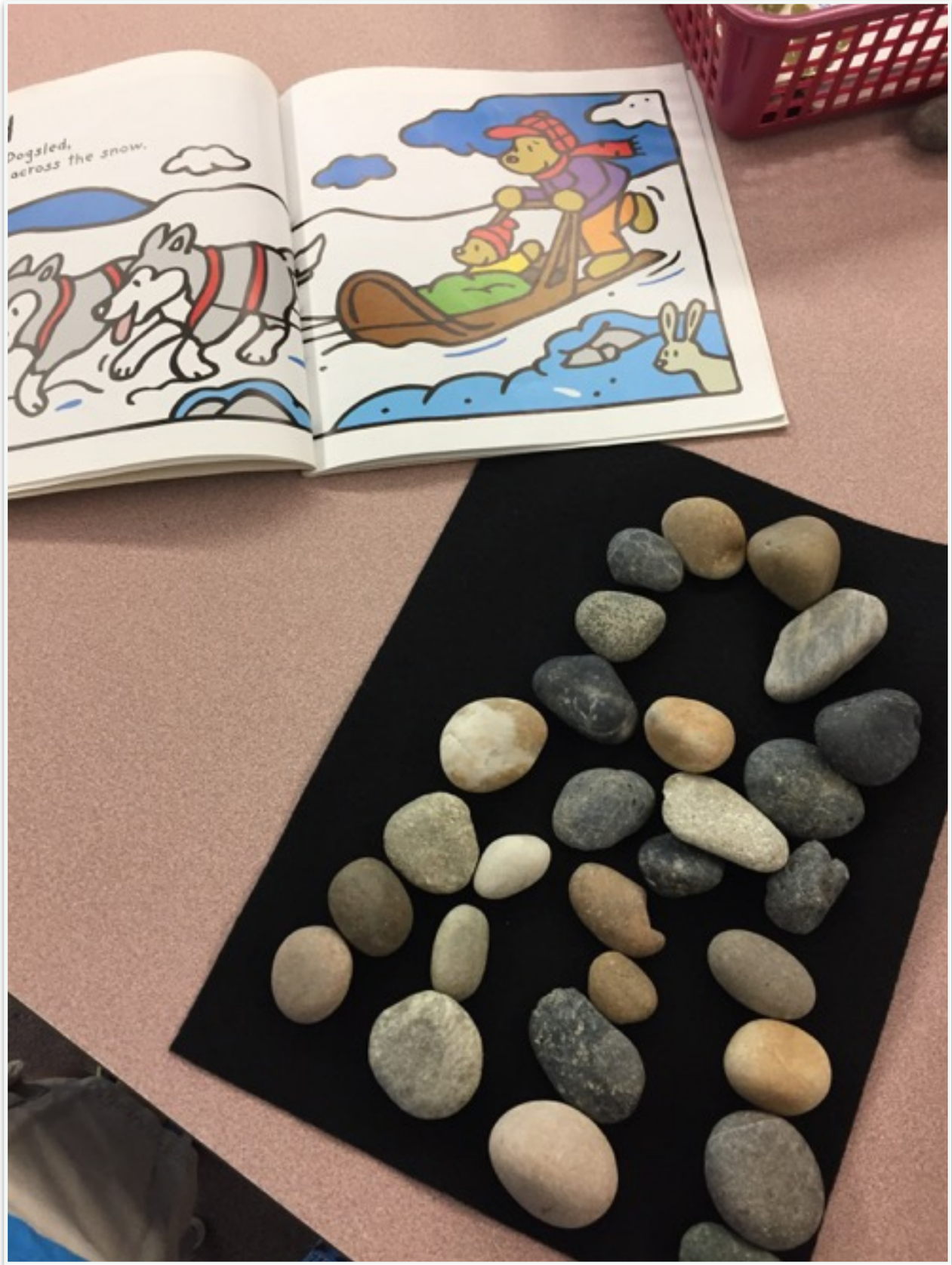
Can you make a picture that starts with a letter sound?



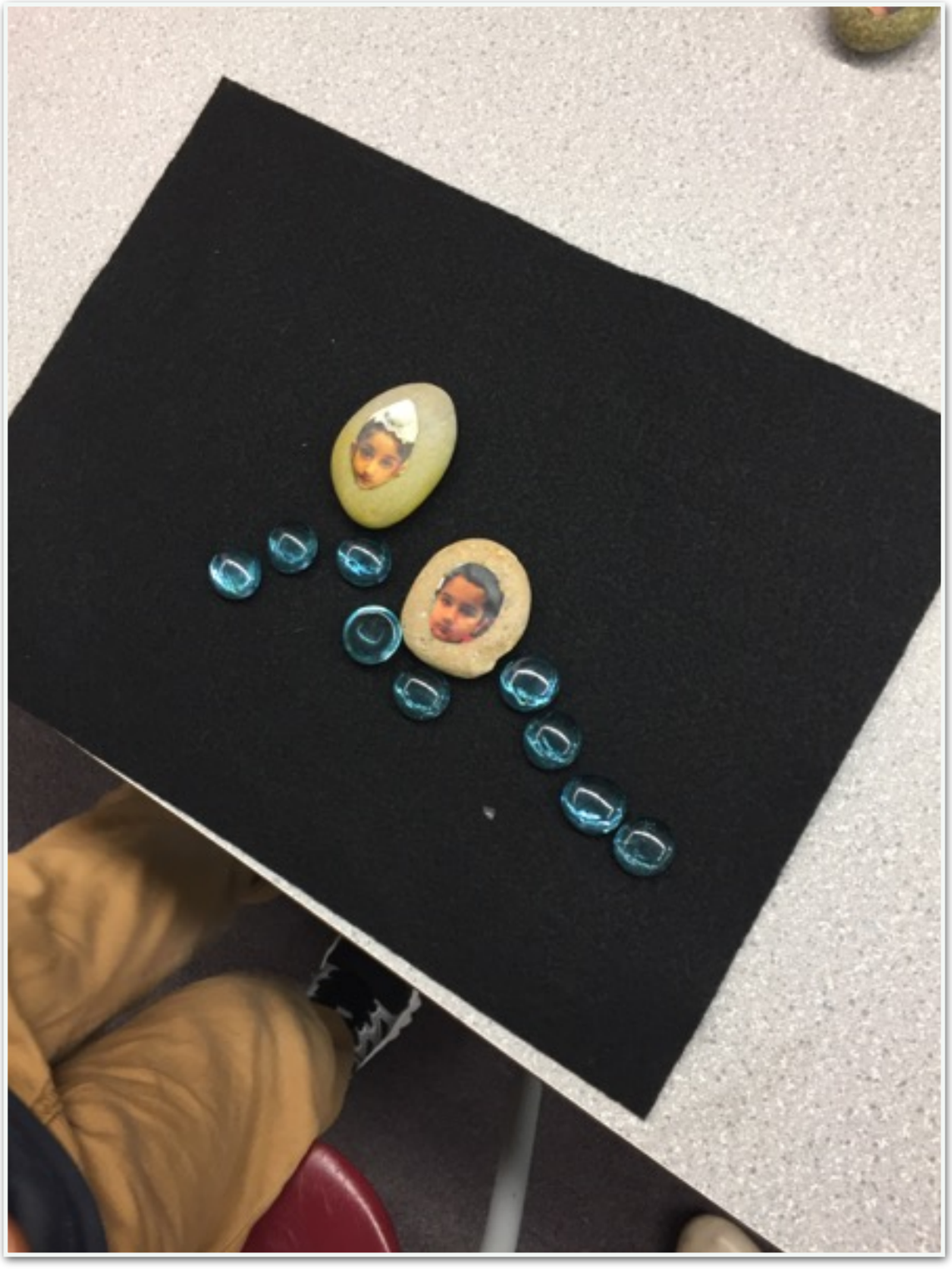
Support letter learning by connecting with WORDS!

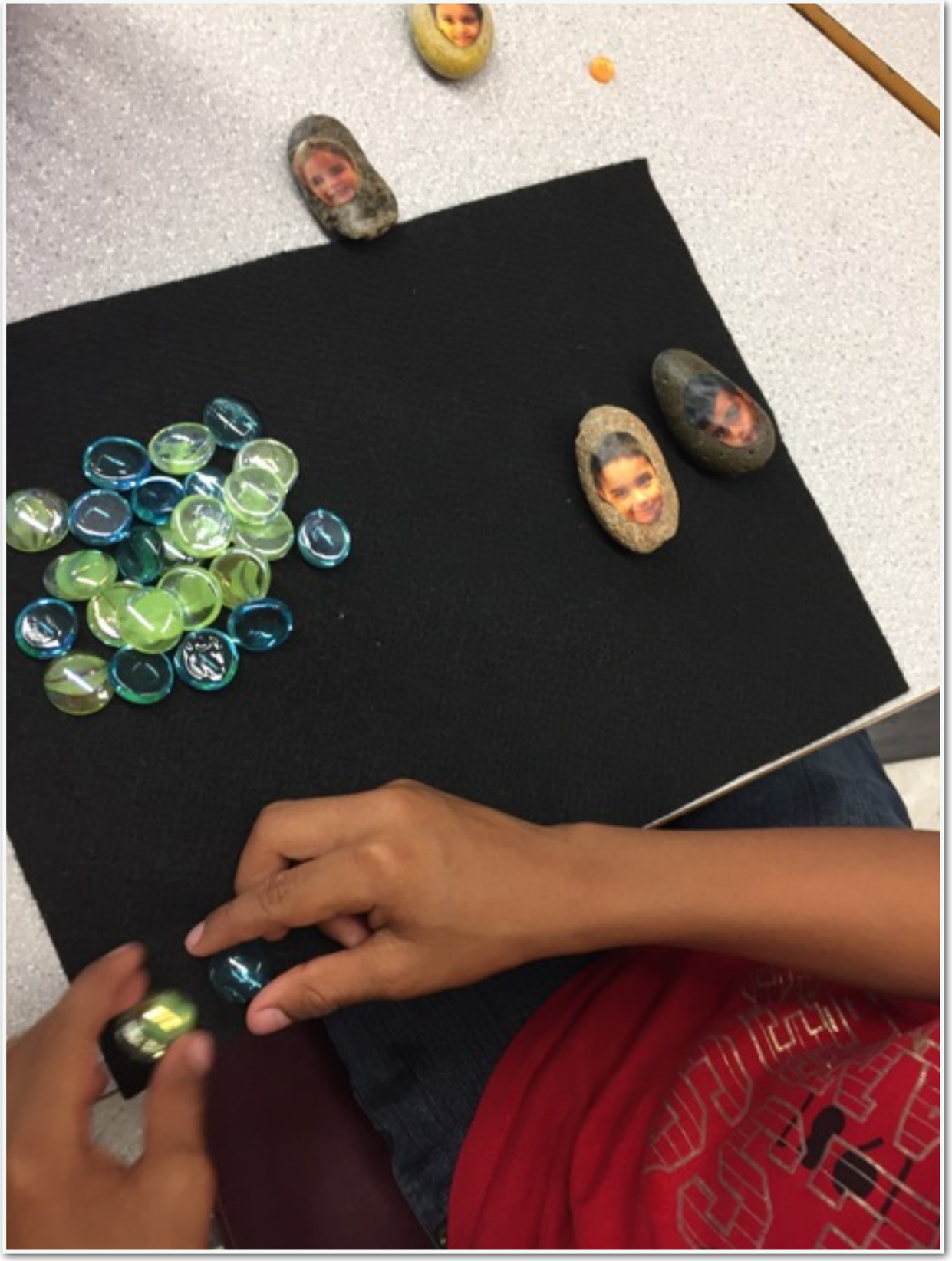
"For that child, the question of what *bear* begins with does not make sense, because it is seen as a whole meaning unit, not as a series of sounds that has a beginning and an end."
(Stahl, 1992)


G is for Garden.
H is for Hay.


Dogsled,
across the snow.

Can you tell a story?
What story can you tell about your friends?





For the FEW, or for grades 1-2

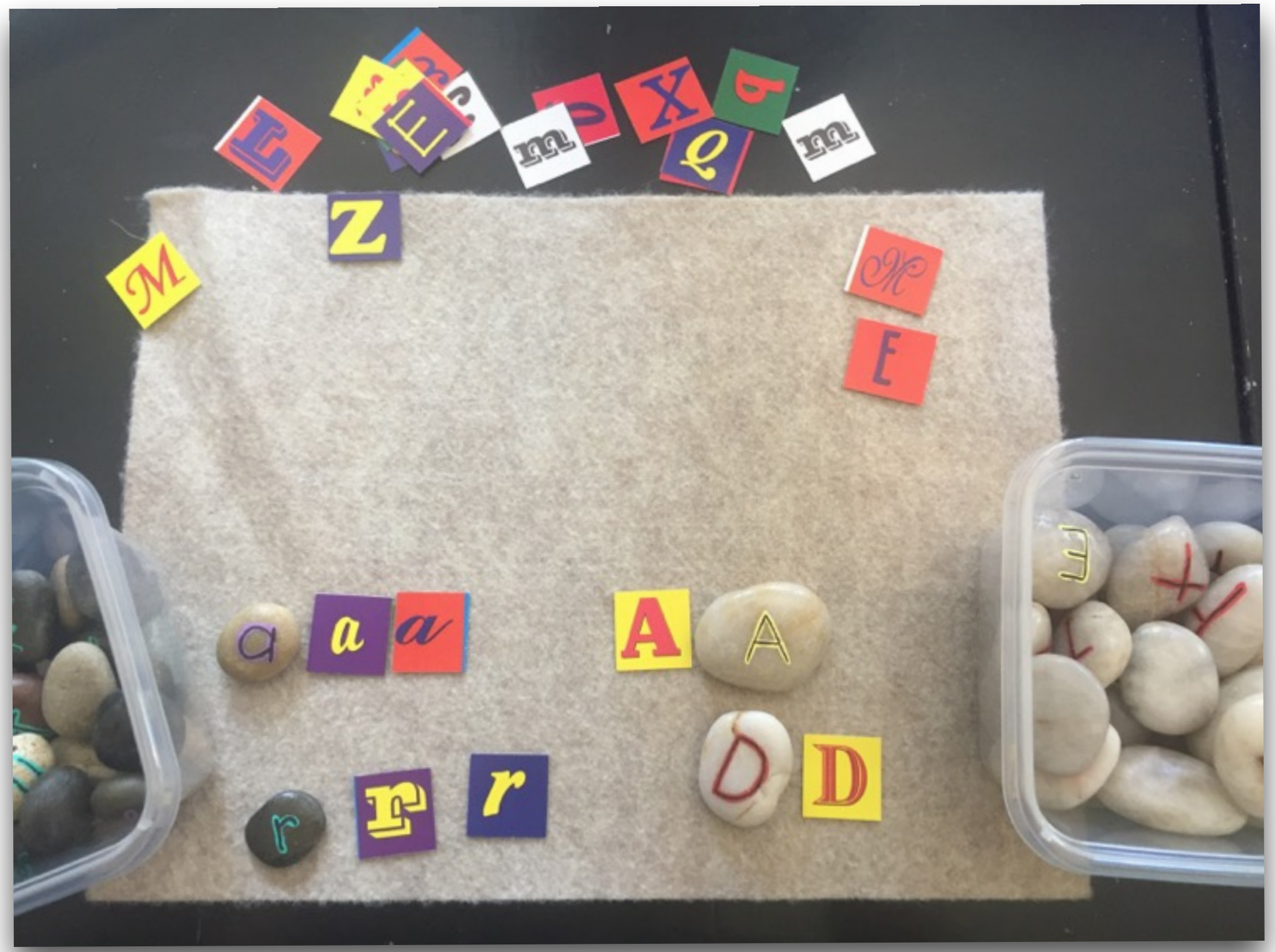
“What words can you make using these letters?”
“How many words can you make?”

For the FEW, or for grades 1-2

"What letters do you see in these shapes?"
"What pictures can you see in these rock shapes?"

For the FEW, or for grades 1-2

Recognizing letters in different fonts. Sorting and matching.

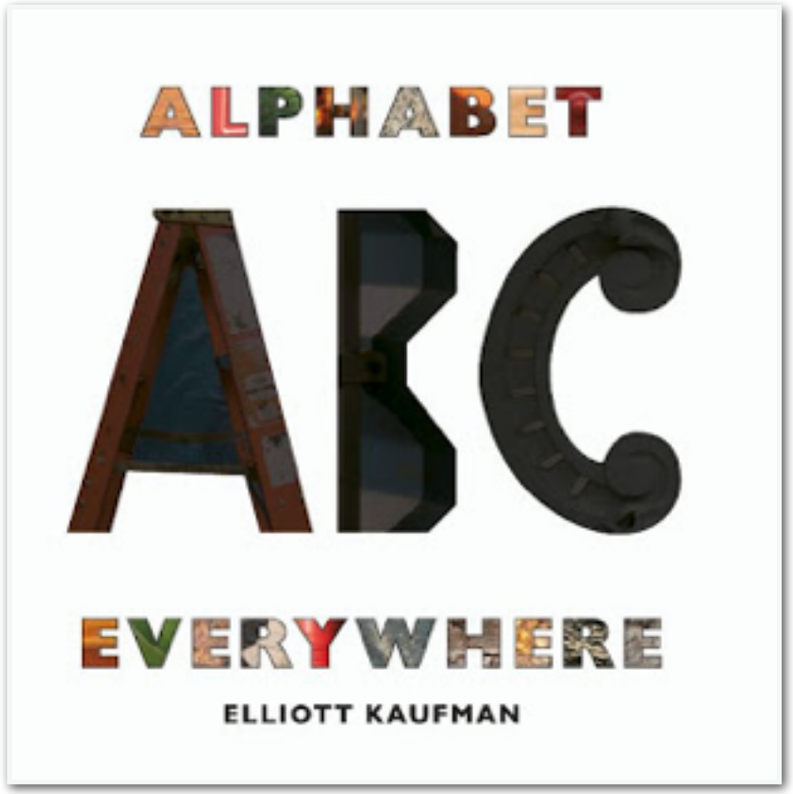


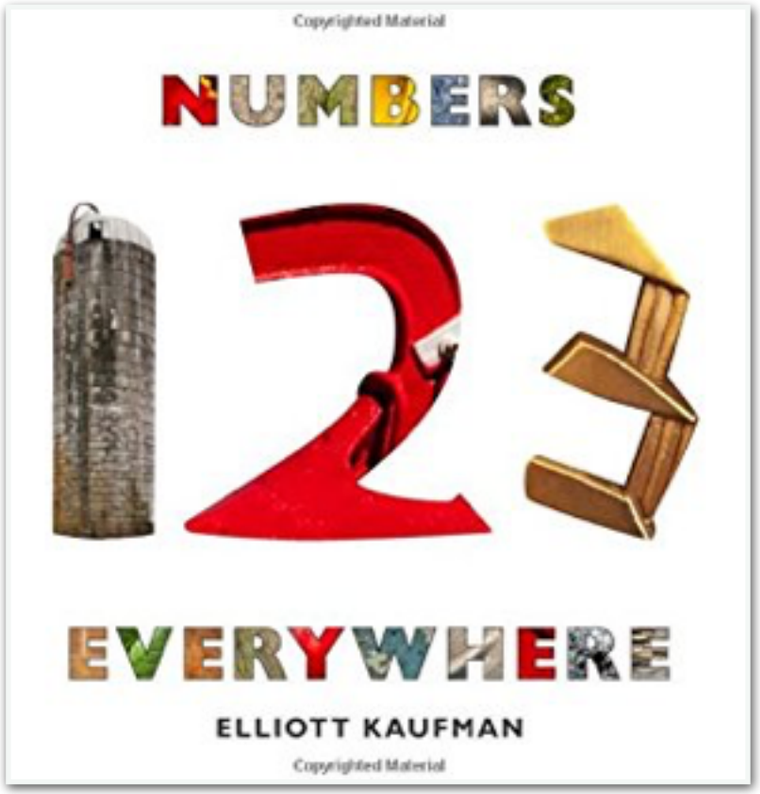
What numbers/letters can you find around you?

Classroom

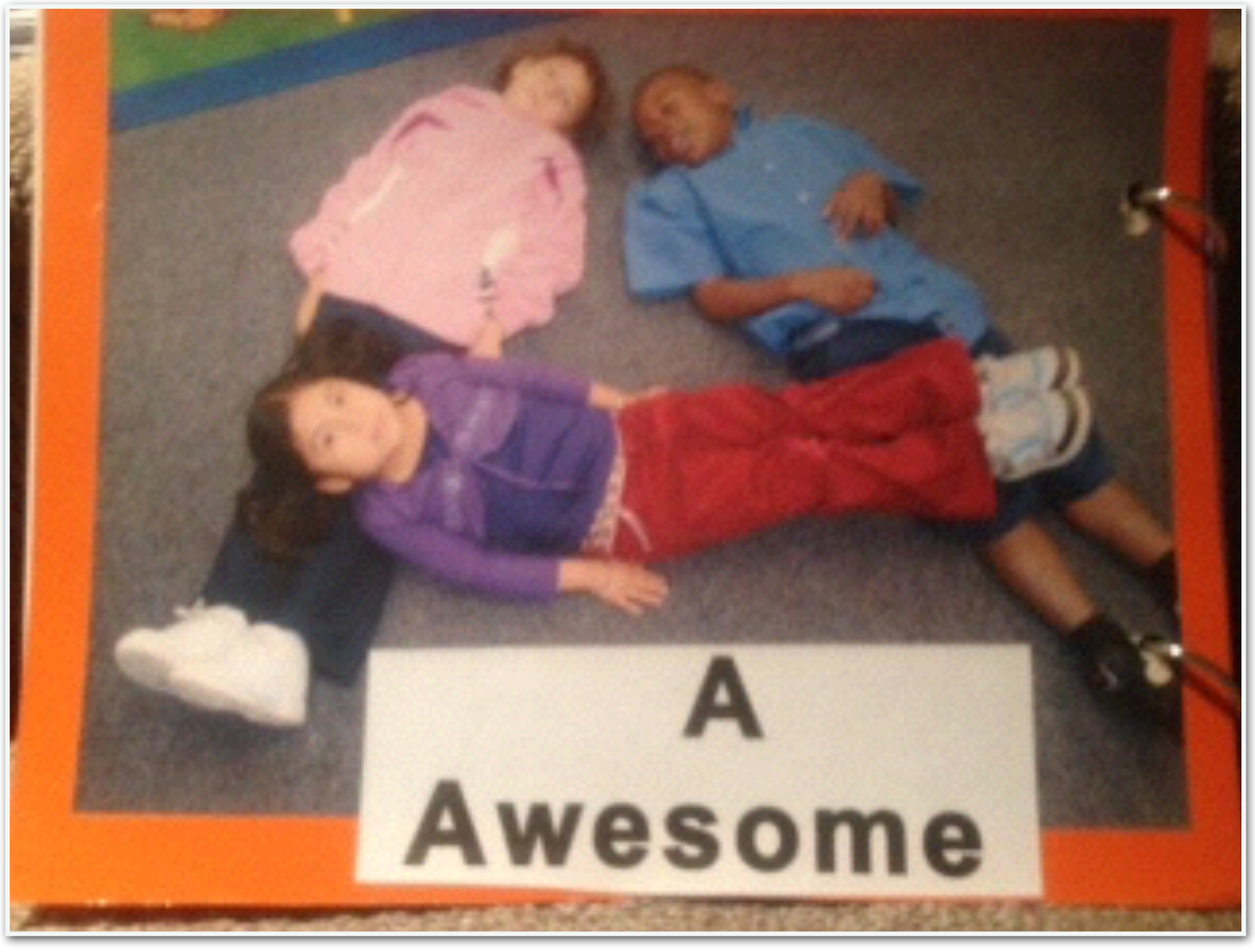
Around school (gym, library, etc.)

Outdoors/Nature walk





Take alphabet photos with iPads
Create alphabet books with “Book Creator”(app)
Make letters with their bodies



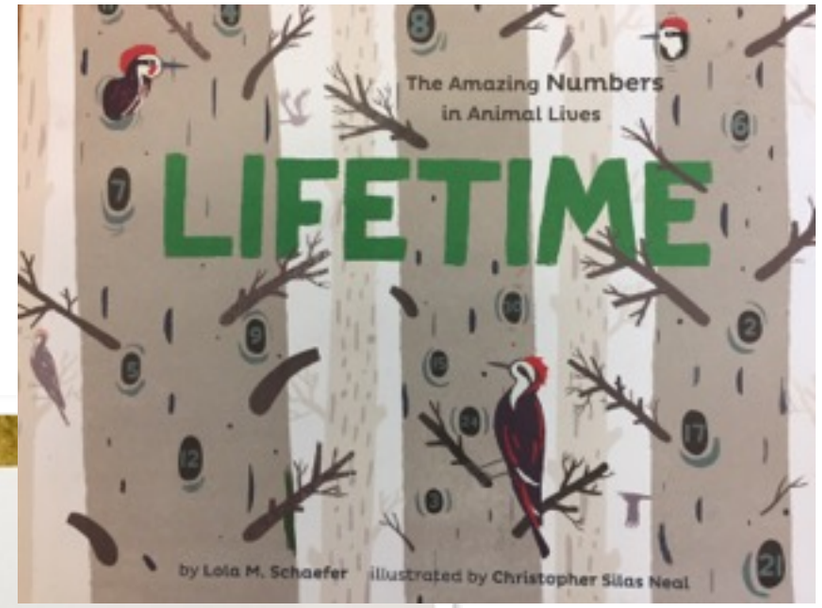
Example from: www.drjean.org

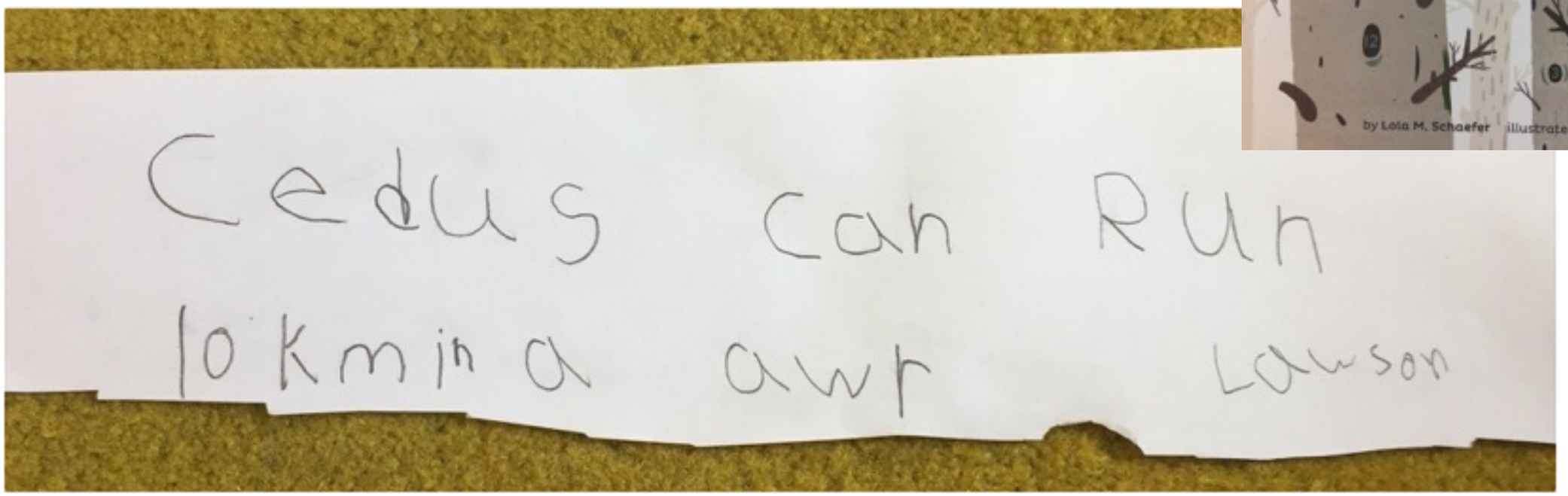
Or capture images and make them into a movie using Animoto!

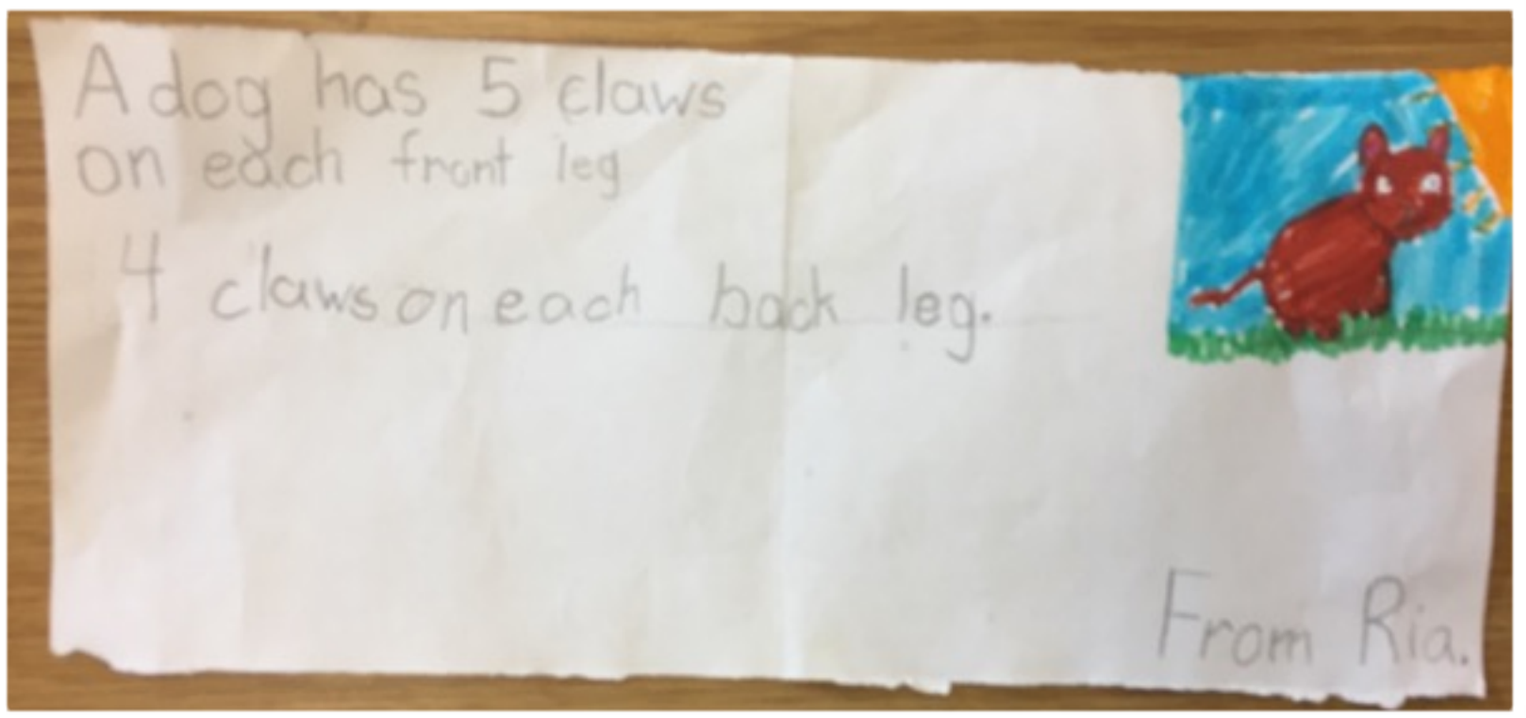
Collaborative chart using magazines
- Explore fonts

Photos sent from home or
taken by the students around school

What numbers are connected to animals?







Co-creating alphabet supports

What do you collect?

Where do you collect your items?

Why do you collect them?

How could kids' collections become meaningful literacy or numeracy learning opportunities?

Counting Collections

Learning Intentions:

- Subtilizing (Perceptual and Conceptual)
- One-to-one correspondence
- Cardinality
- Counting forward
- Skip counting
- Place Value

Items you could use:

- anything - straws, bottle caps, buttons, pompoms, craft sticks, beans, beads, toothpicks, mini-erasers, play cards, small animals

Play time

“Play gives children a chance to practice what they are learning.”

- Mr. Rogers

Please take 5 - 10 minutes to stretch and engage with the various learning activities at each table.


BREAK
TIME

What did you connect with?

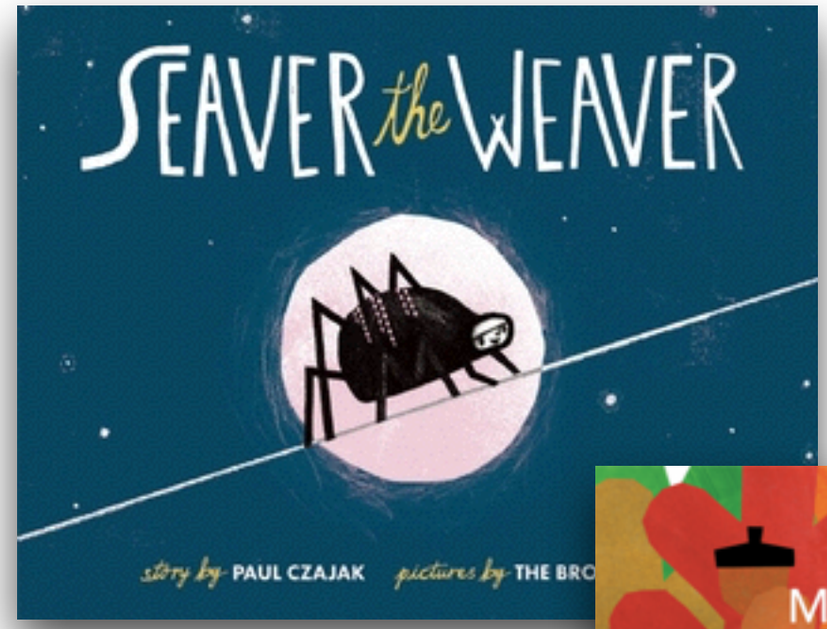
Any questions?

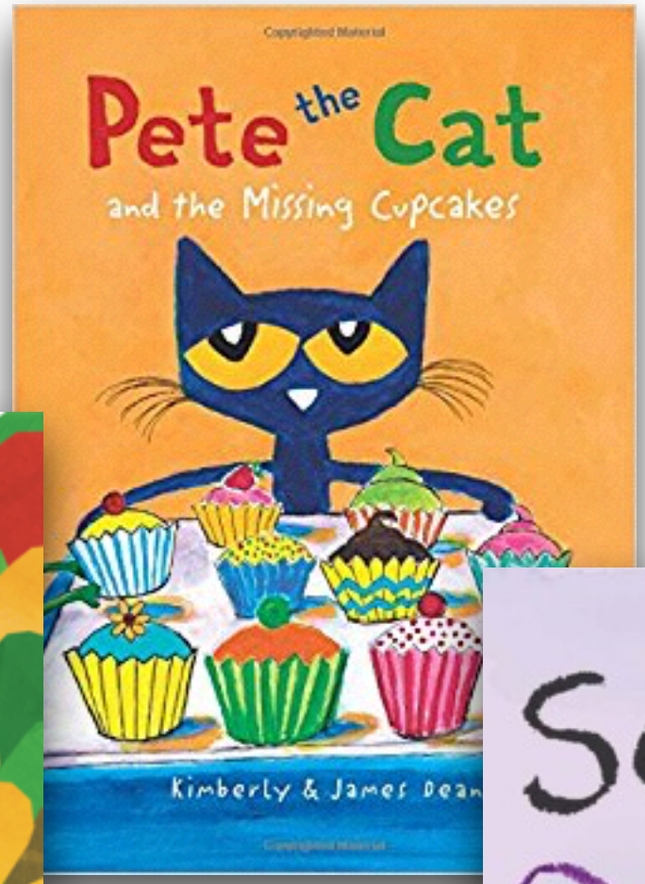
Suggestions?

Something you want to share?

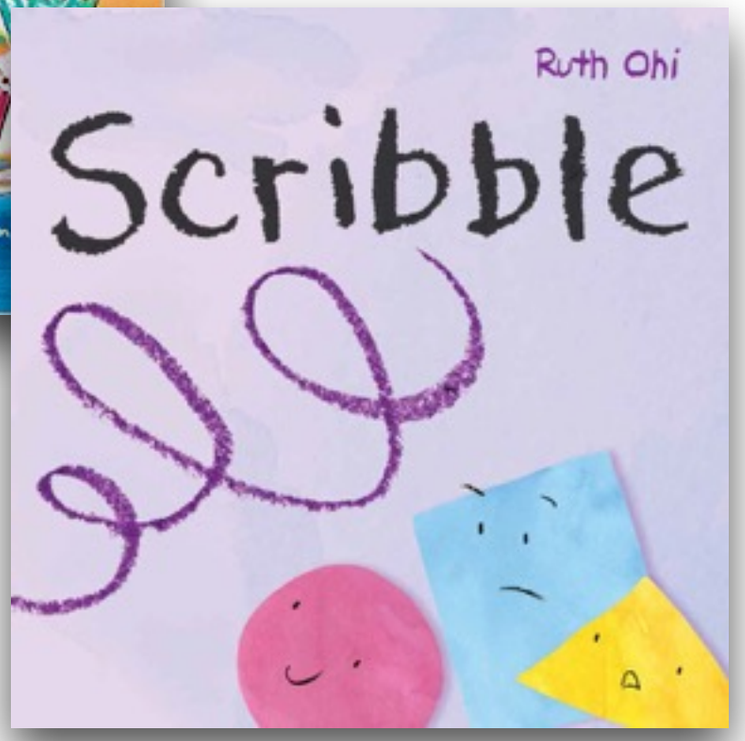
What other books or curriculum could it connect with?

Booktalk!


SEAVER the WEAVER
story by PAUL CZAJAK
pictures by THE BRO


Copyrighted Material
Pete the Cat
and the Missing Cupcakes
Kimberly & James Dean


Michael Hall
Wonderfall


Ruth Ohi
Scribble

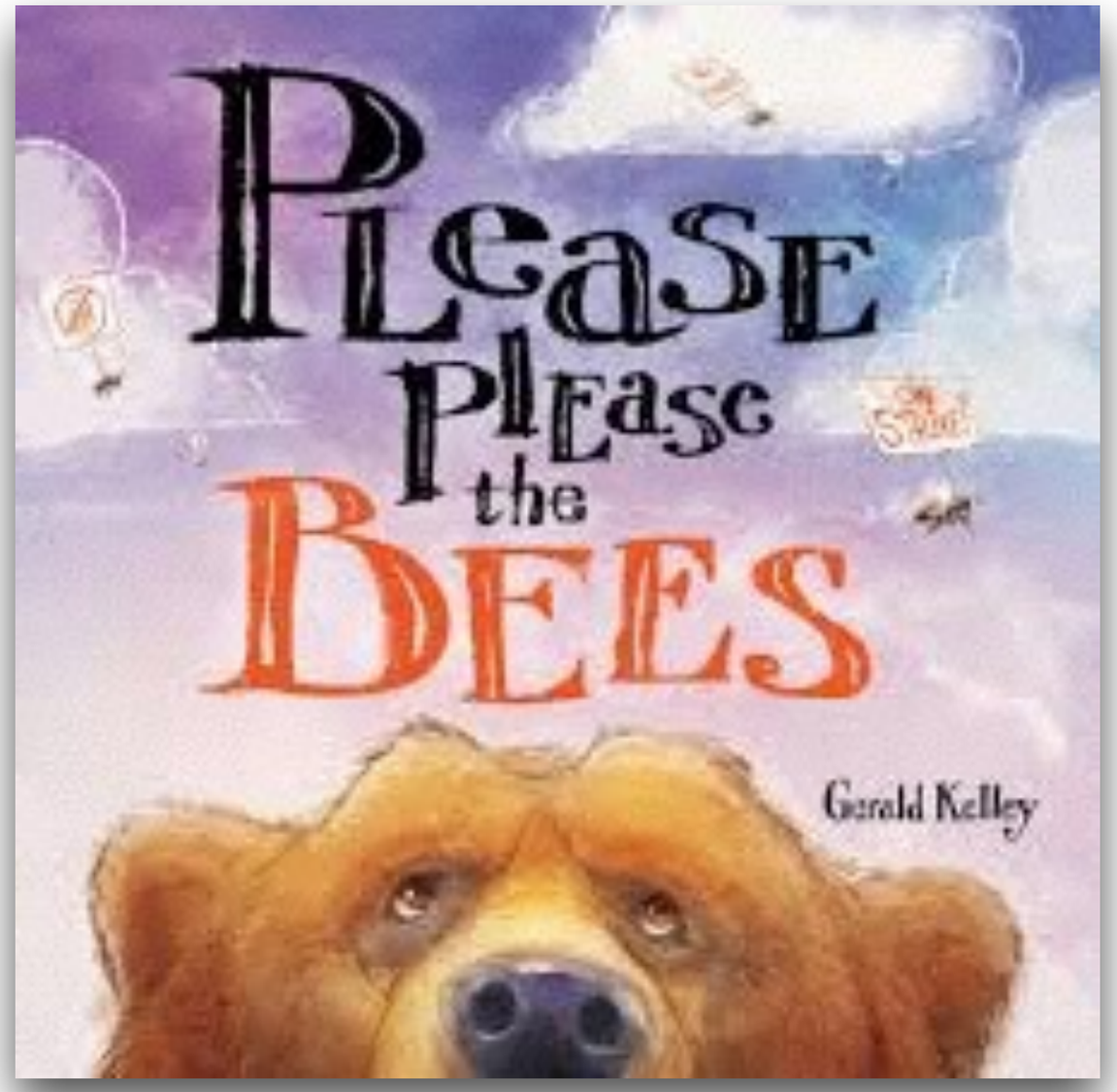
Students were given the choice of taking circles, squares, and/or a string (a squiggle) and asked to make a picture!

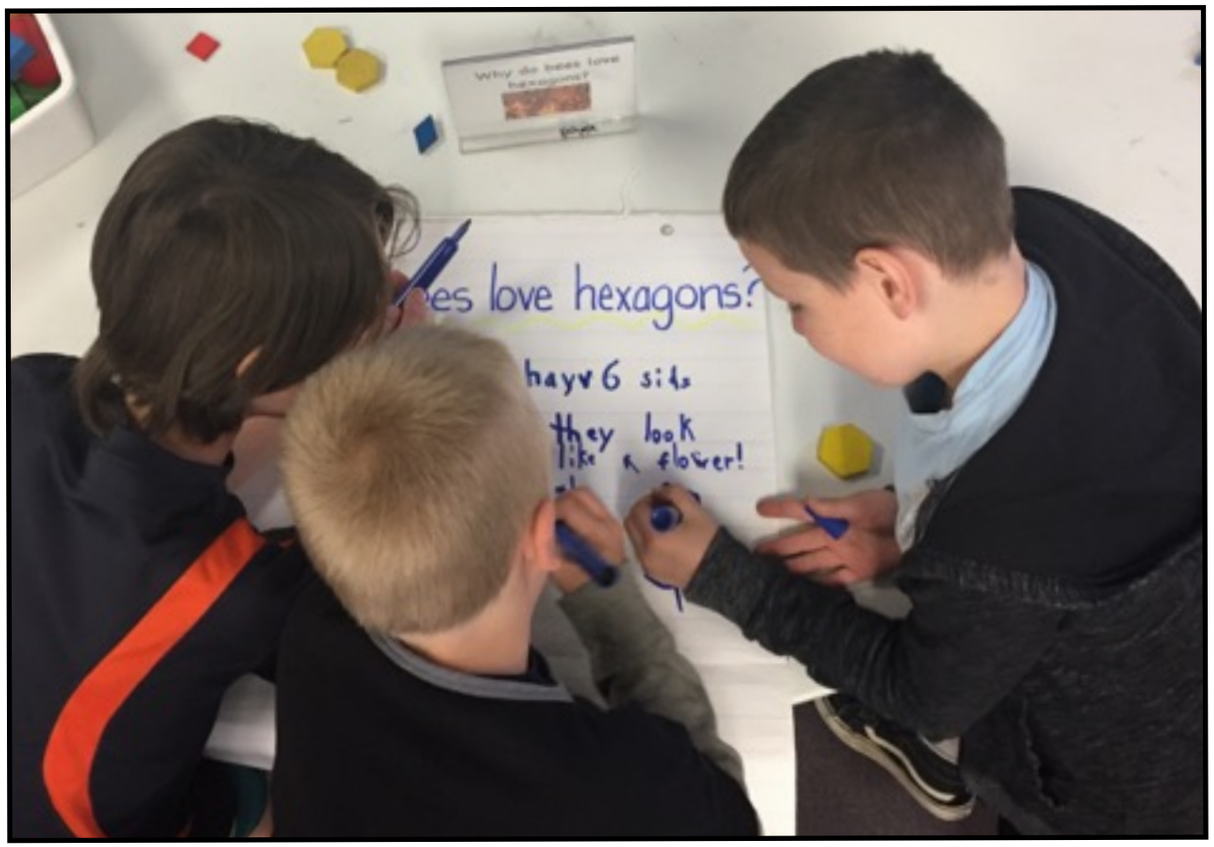
Please Please the Bees

by Gerald Kelley

Benedict the bear enjoys a seemingly-endless supply of fresh honey delivered daily to his back porch.

However, when the bees go on strike, Benedict's daily routine is interrupted and he must face the possibility of a world without honey.

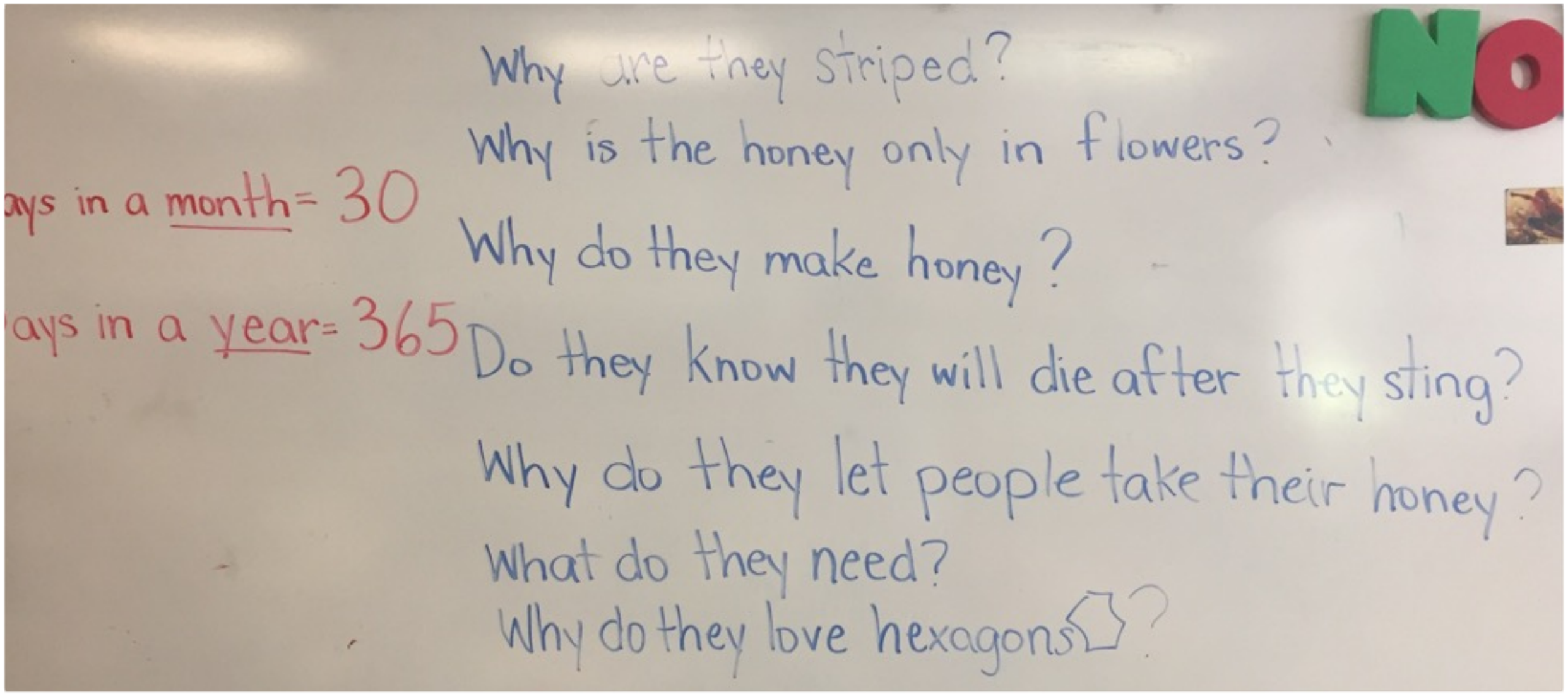




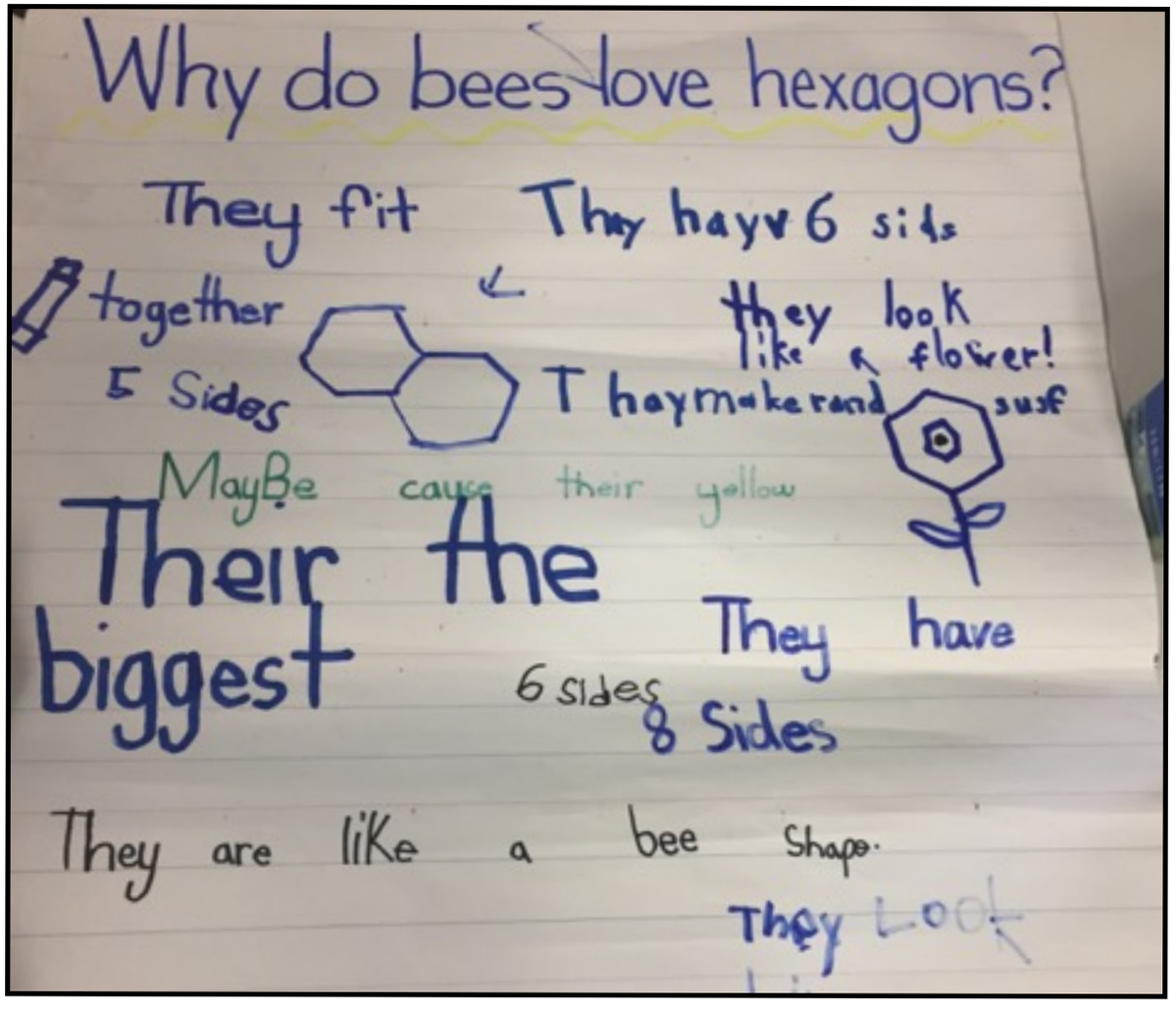
Numeracy Learning Intentions
I can communicate what I wonder about bees and specifically my questions connected to mathematics.
I can use concrete materials to explore how geometrical shapes fit together.
I can communicate my conjectures (ideas) about why I believe one shape works better than another.

Thank you to Christie Fraser and her Grade Two class for engaging in these activities!

“What do we wonder about bees?”



Students need opportunities to communicate their conjectures.



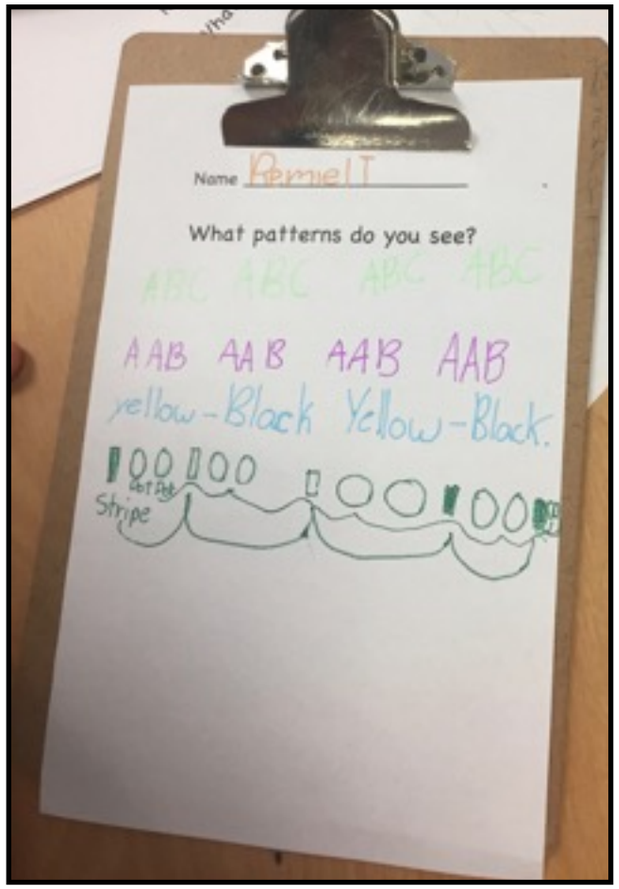
Primary students can construct arguments using concrete items, drawings, and actions. Students at all grades can listen to the arguments of others, decide whether they make sense, and ask useful to questions to clarify or improve the argument.

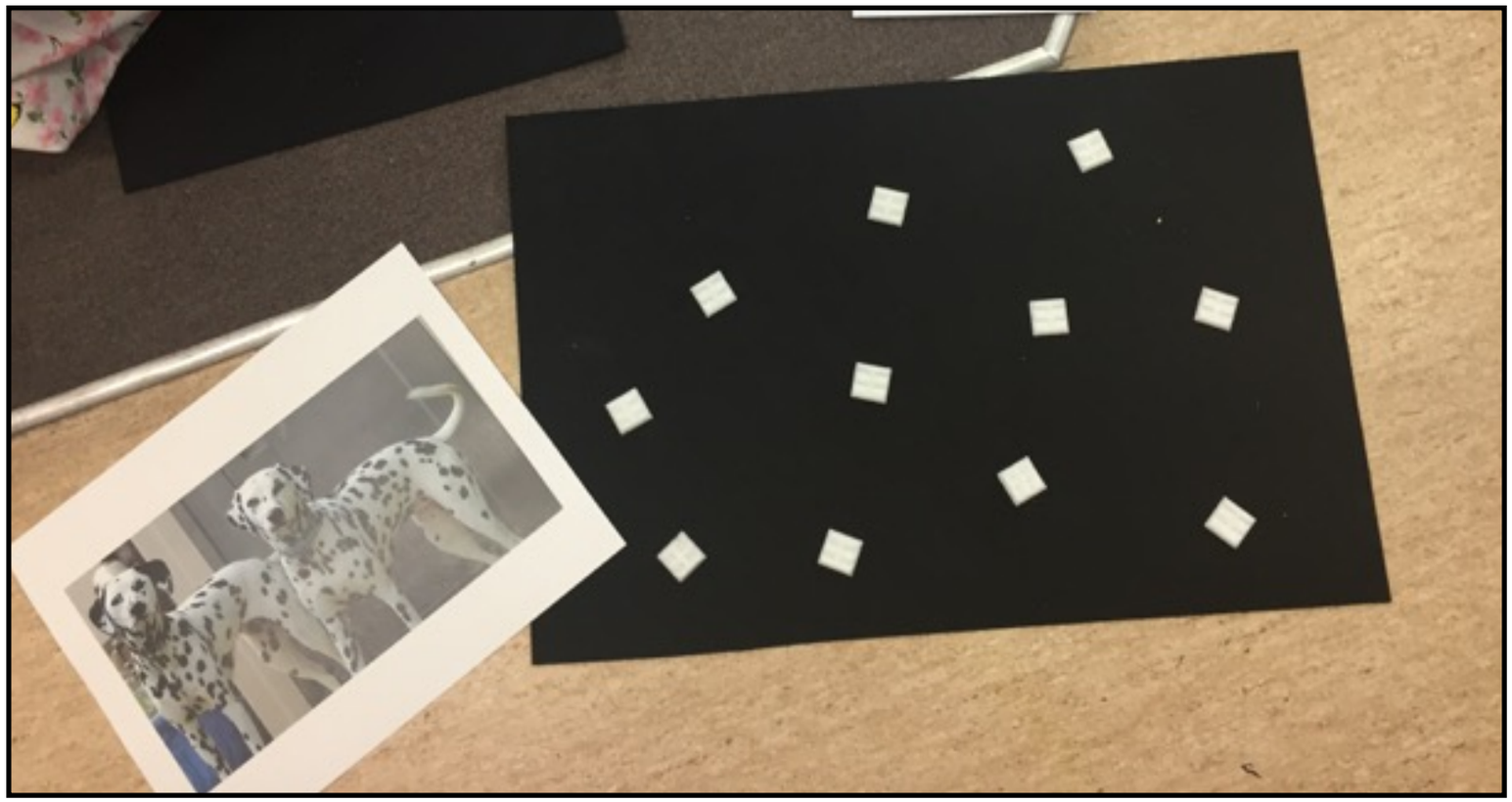
Build an anchor chart:

- I agree with _____ because _____.
- I didn't understand why you _____.
- I disagree with _____ because _____.
- I wonder why you _____.
- What if you had _____?

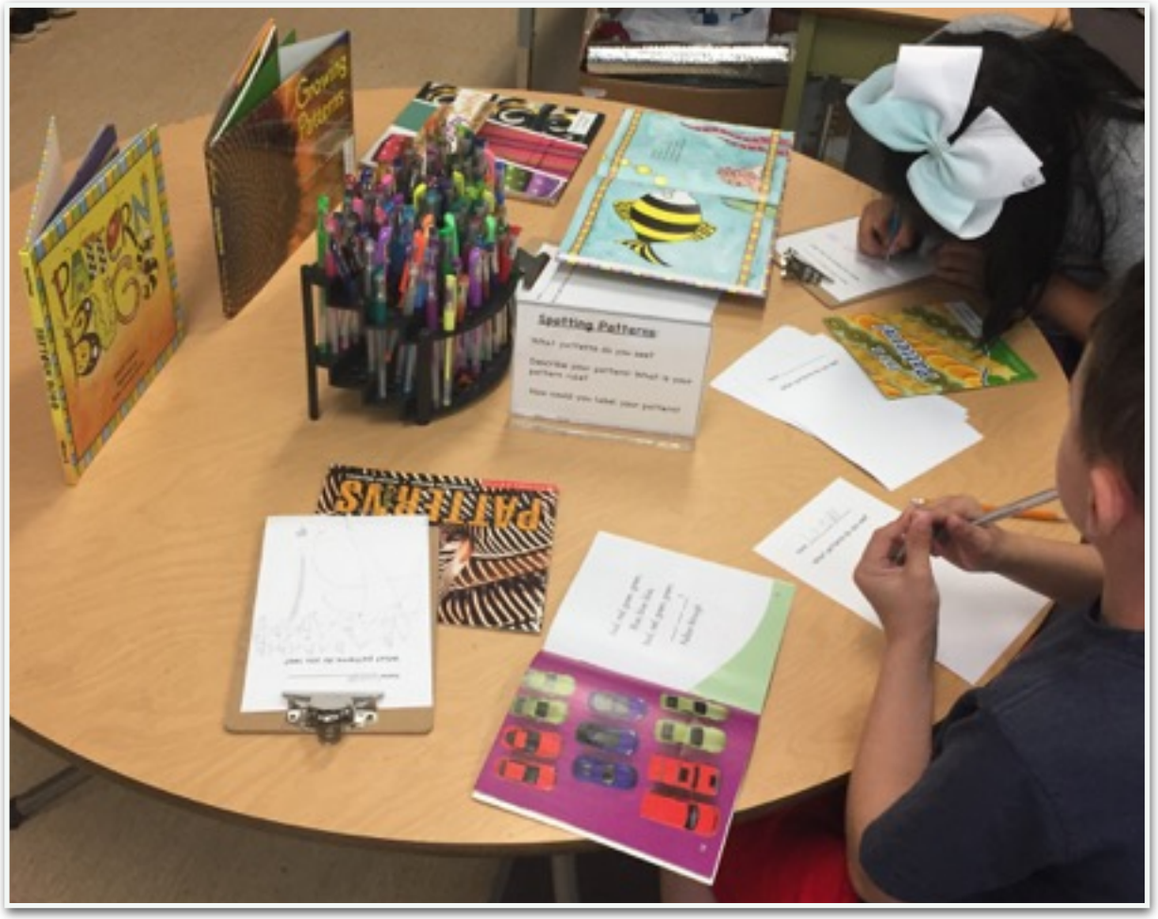
”Where does Math live in our world?”
Math is ALL around us!

“When connections to the world are natural and authentic, we should make our classroom walls porous.” (Zager, 2016)

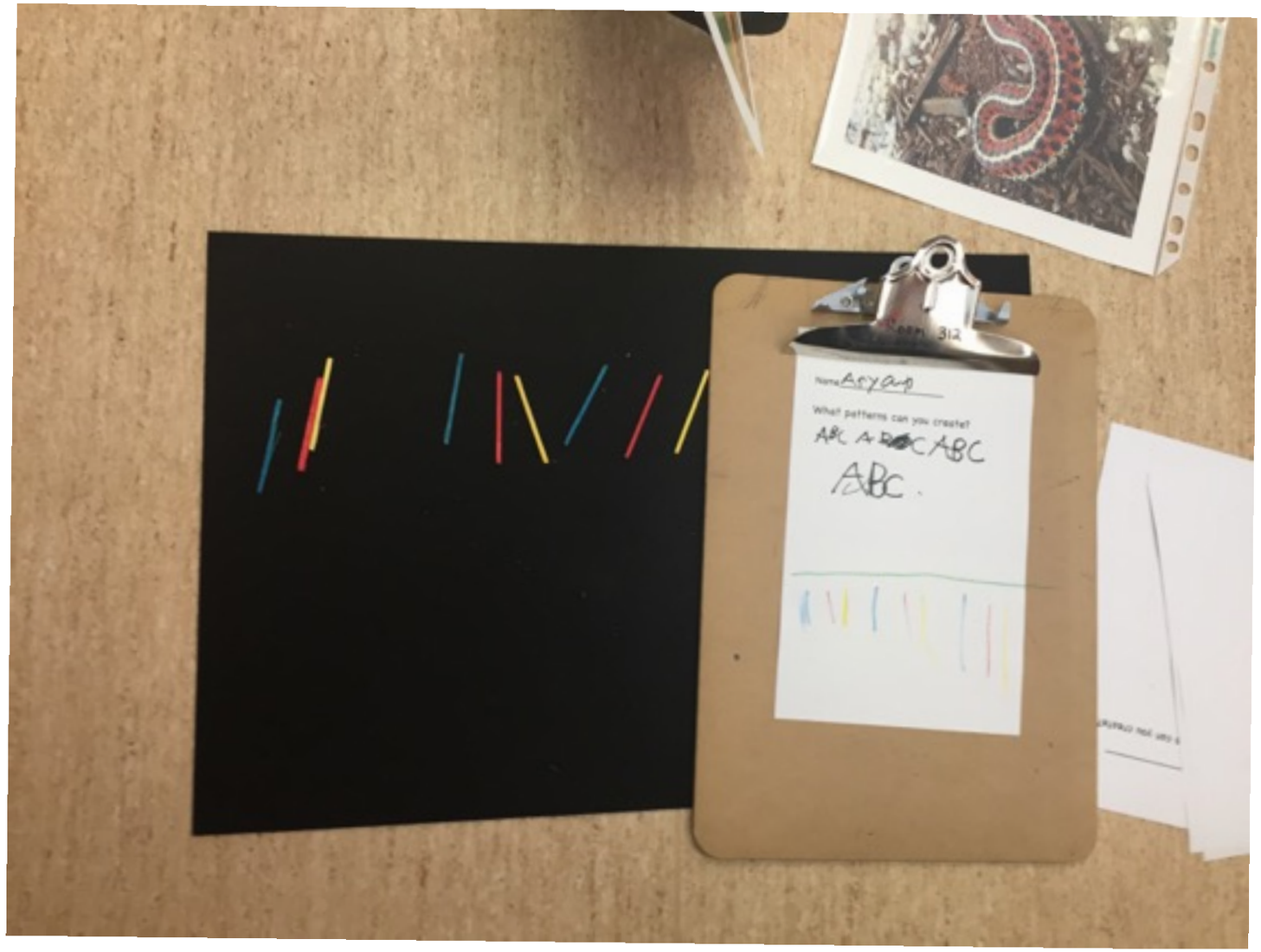


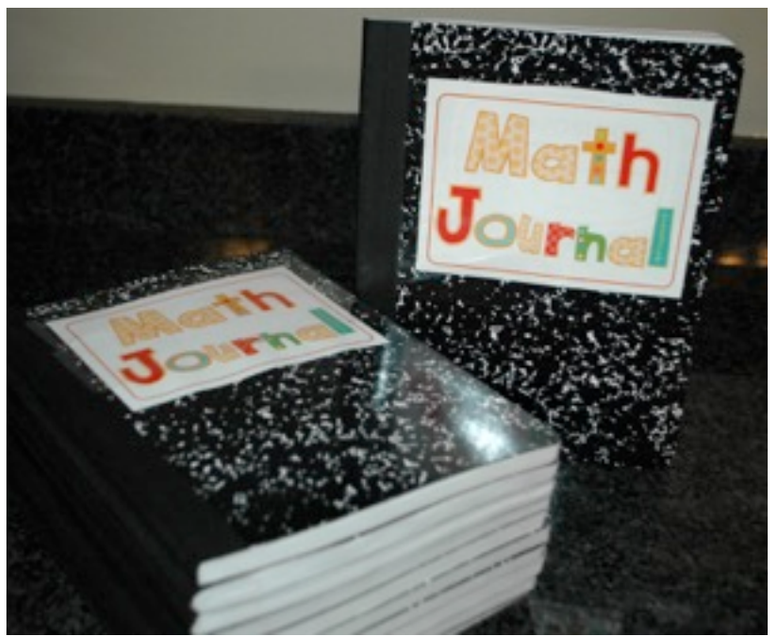


Numeracy Learning Intentions
I can describe the patterns I see in animals in the world.
I can create and represent patterns using concrete materials, pictures, and numbers and symbols.
I can describe patterns using mathematical language (e.g., attribute, core, repeat, increase, decrease)



Provide students with many examples of visual patterns in books, photos, and concrete materials.





When students are working with materials, look for ways to extend their thinking by asking guiding questions, such as

“How might you label your pattern using letter coding?”

Benedict did the same thing each day! This is called a pattern.

What patterns do you experience each day?

PS

When students begin to recognize the mathematical connections not just within the discipline, but also their lives, their understanding becomes deeper.

Word Problem Challenges:

Benedict receives three jars of honey every day for a month. How many jars of honey does Benedict have after a week?

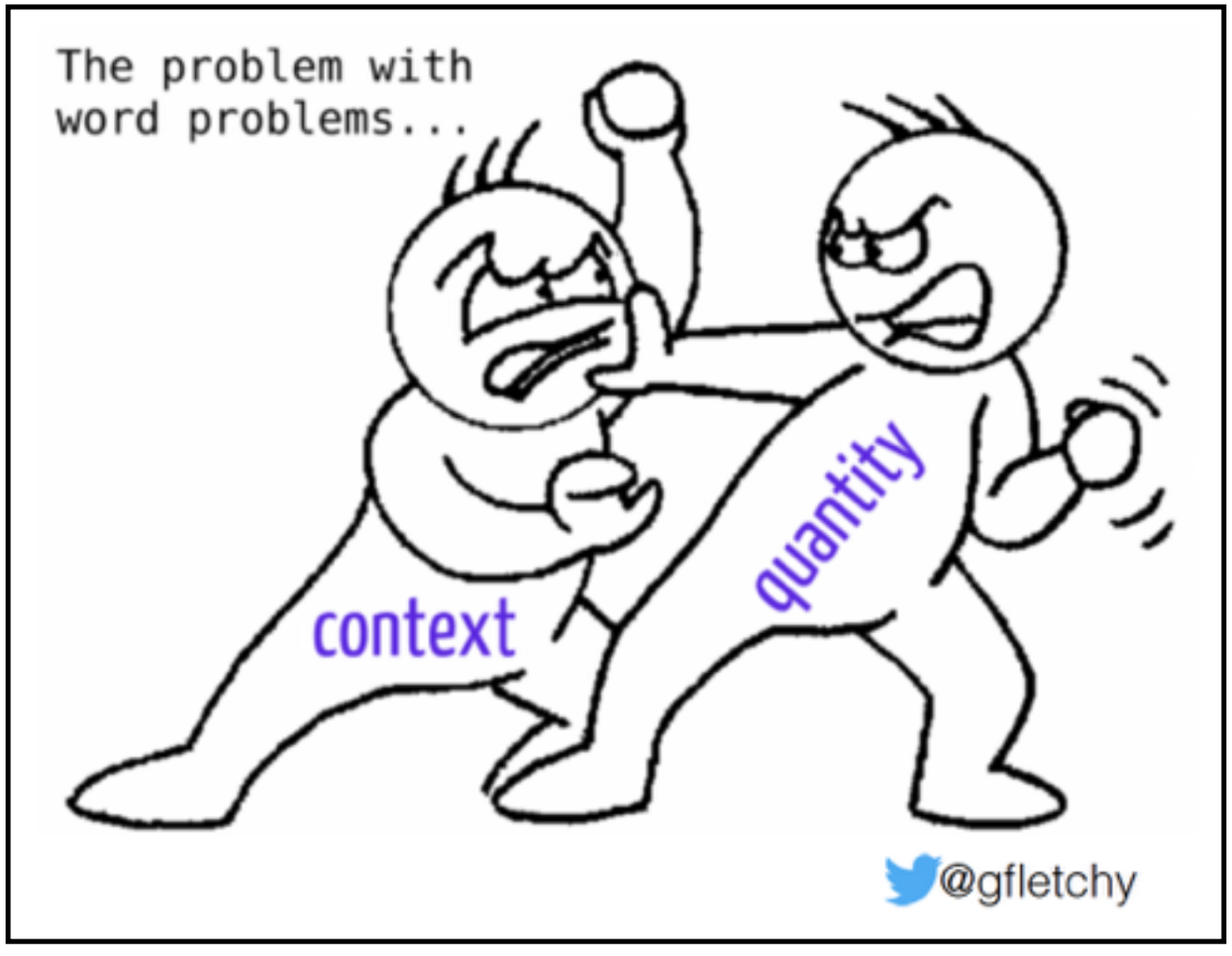
Student One: “I don’t get it!”

Student Two: “This is easy. I already know the answer”

What challenges might occur for these students?
How might you respond?

Student One: He/she may not participate, doesn't connect to their own thinking, loses out on the power of noticing and wondering.

Student Two: Narrows in too quickly on their thinking. He/she may confuse the context, ultimately they may lose out on the opportunity to gain insight/understanding from strategies shared by their peers.



Numberless Word Problems

A scaffolded approach to presenting word problems that gets students thinking before they ever have numbers or a question to act on.

- Begin with a situation - question comes later. This causes students to focus on sense making.
- As students notice and wonder - they visualize and predict. Similar to literacy this builds their comprehension and understanding of the context. It keeps some students from racing ahead as soon as they see the numbers.
- As students receive more information, they can reason about quantities and relationships, which develops their ability to problem solve.

Many examples can be found at https://bit.ly/NumberlessWP

Every day the bees gave Benedict some honey!

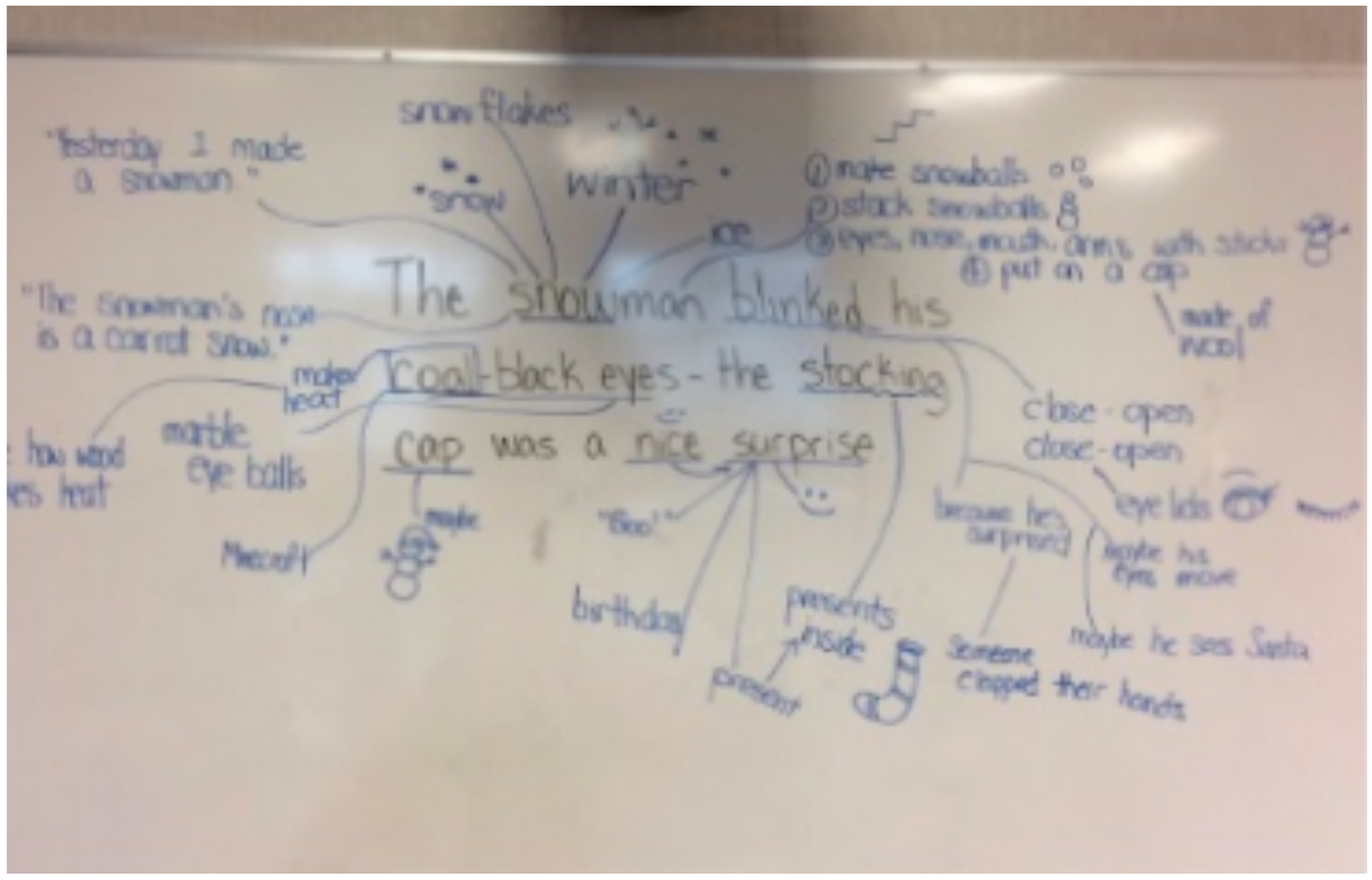
What do you notice?

What do you wonder?

Every day for one week, the bees brought Benedict some honey.

Each day the bees brought
Benedict three jars of honey.

Similarities between “Explode the Sentence or Image” and “Notice Wonder”



Faye Brownlie, Learning By Design, May 2017

Both readers and mathematicians need to spend time **SENSE MAKING**!

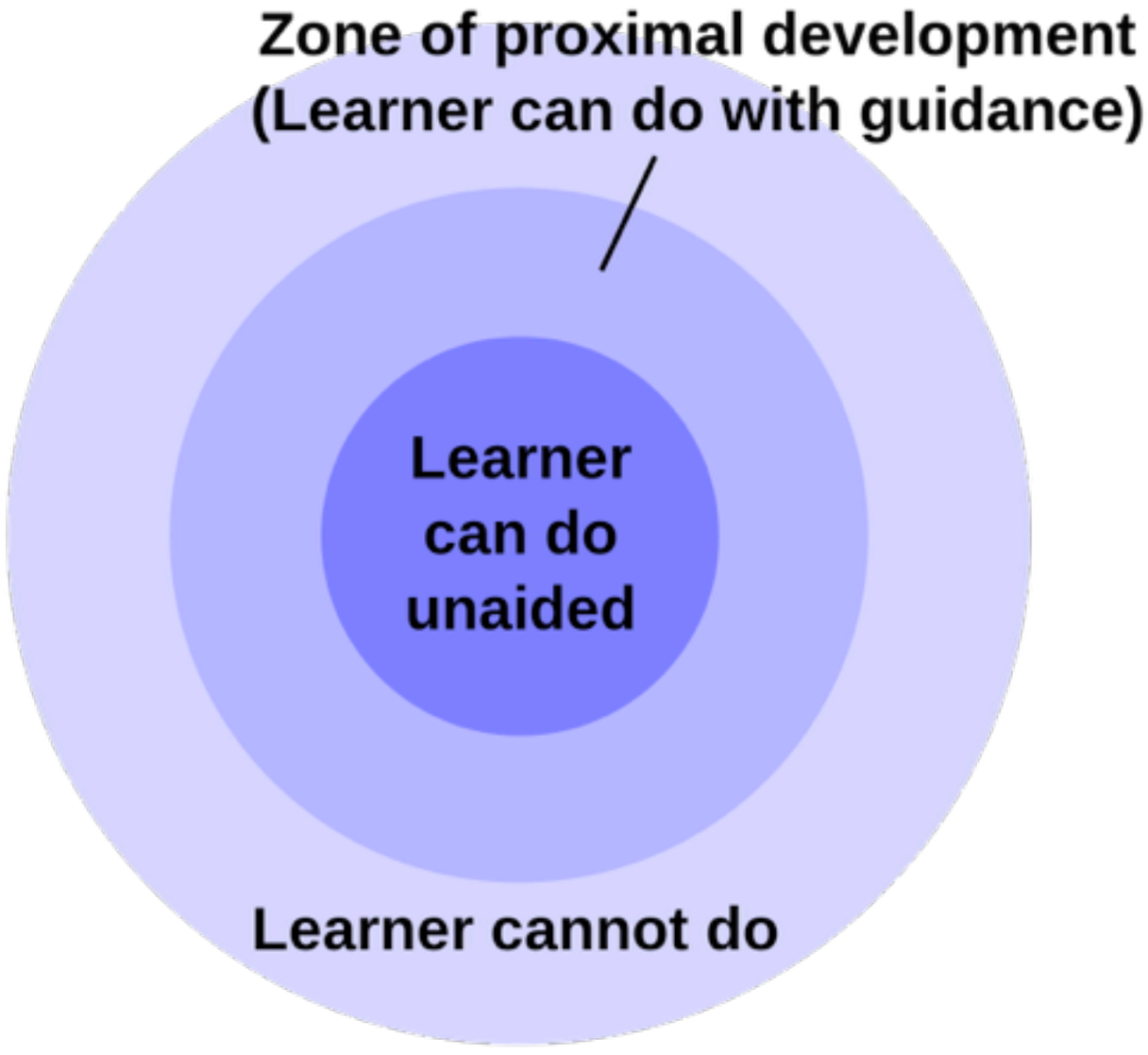
Numberless Word Problems include:

<u>Storytelling</u>:

- Actions
- Characters

<u>Scaffolding</u>:

- creates a safe space to take risks when the numbers are removed
- connects to prior knowledge
- increases communication and collaboration



Through visualizing and predicting, students develop problem solving abilities.

Open Strategy Share

Elicit many different ideas to hear the range of ways our students are thinking

Building students' repertoire of strategies

Generate many different ideas

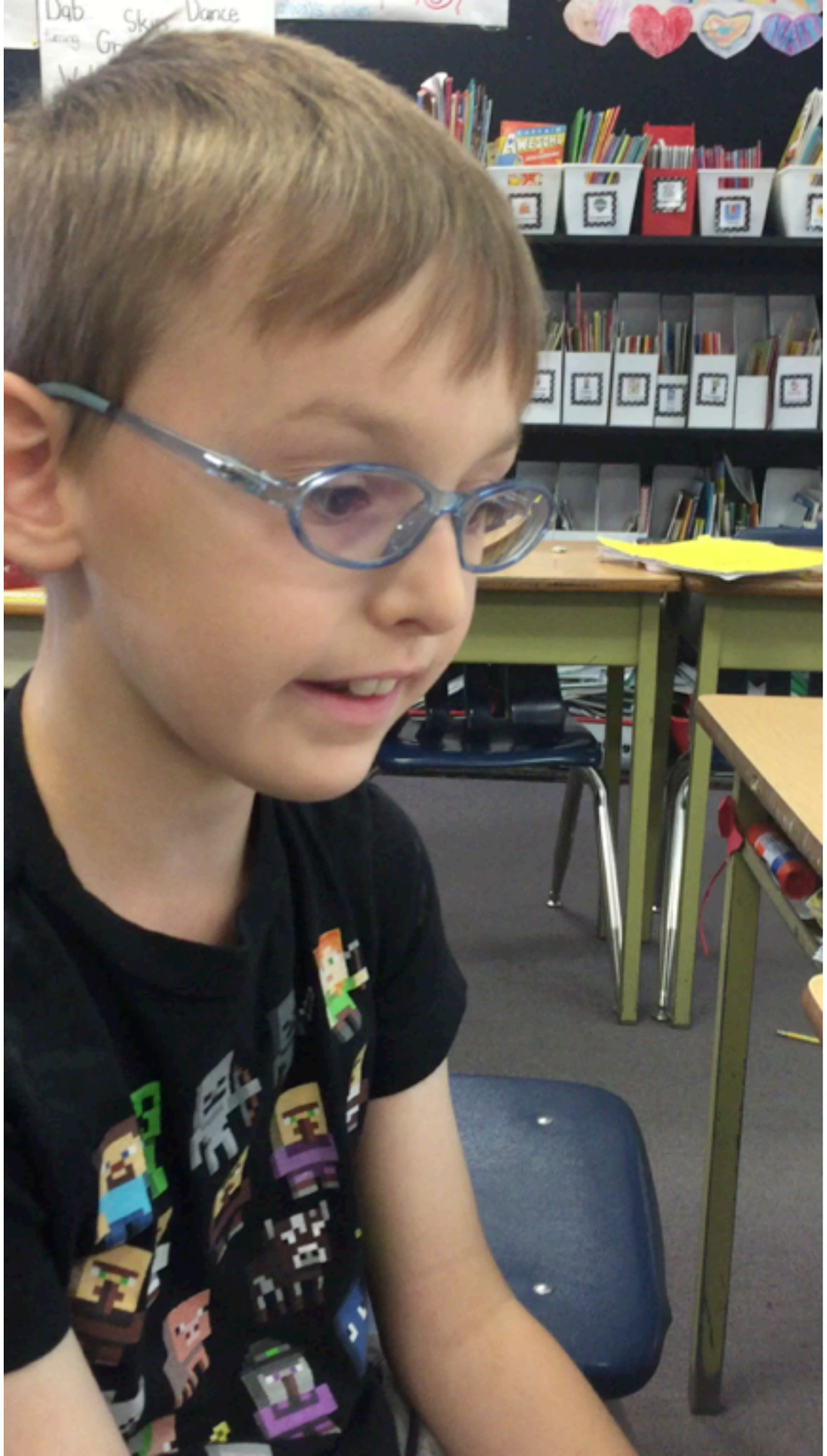
Can you explain how you solved?

Students listen for and contribute in different ways to solve the same problem

Move across a broad terrain of concepts, procedures, representations, explanations

Did anybody solve in a different way?

Slide from VMS17, Intentional Talk, Kazemi and Hintz



"I want teachers to become addicted to listening to students' mathematical ideas…

Once we become fascinated by our students' creativity and ingenuity, we become more motivated to teach math…

Aspire to talk less, and listen more, to ask better questions, to make more thoughtful instructional decisions, to support our young mathematicians."

- Zager, (2017)

"A mathematical representation often highlights only one aspect of a mathematical concept. To restrict oneself to any one mathematical representation is to approach the concept blindfolded. A holistic picture of the concept begins to emerge only when one removes the blindfold and looks at the idea from different perspectives."

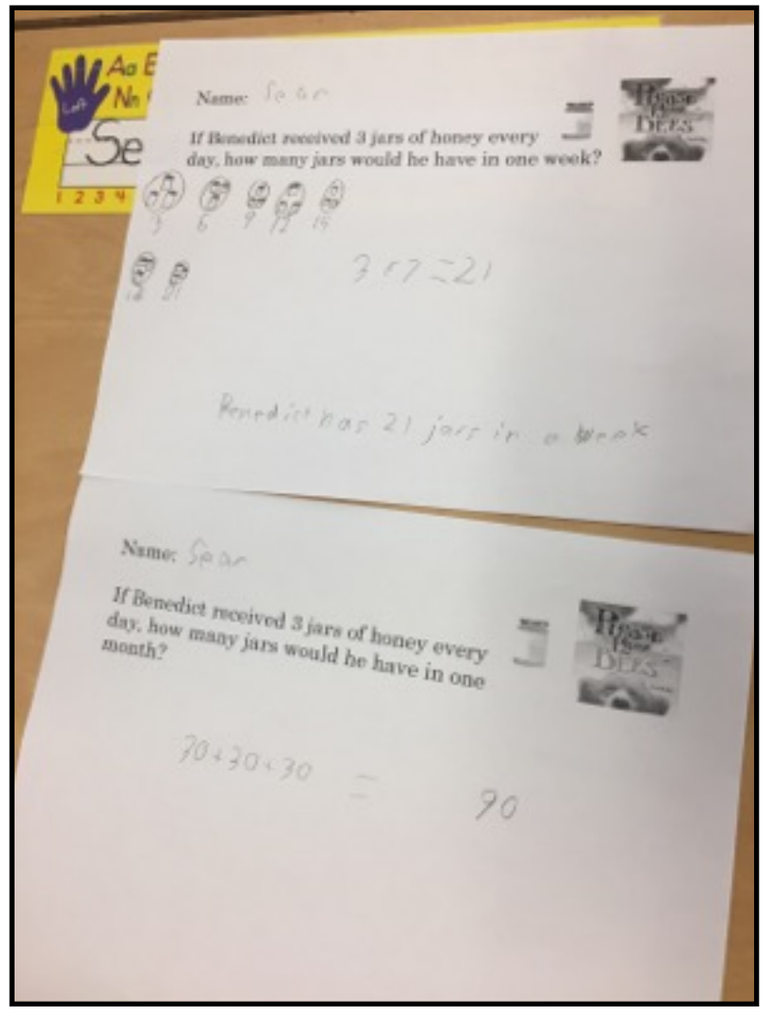
–Preety Tripathi in Zager, 2017

Connecting Representations

- Walk around the room and find one or two other students. Compare your strategies. Be prepared to tell me about one of your friend's strategies.

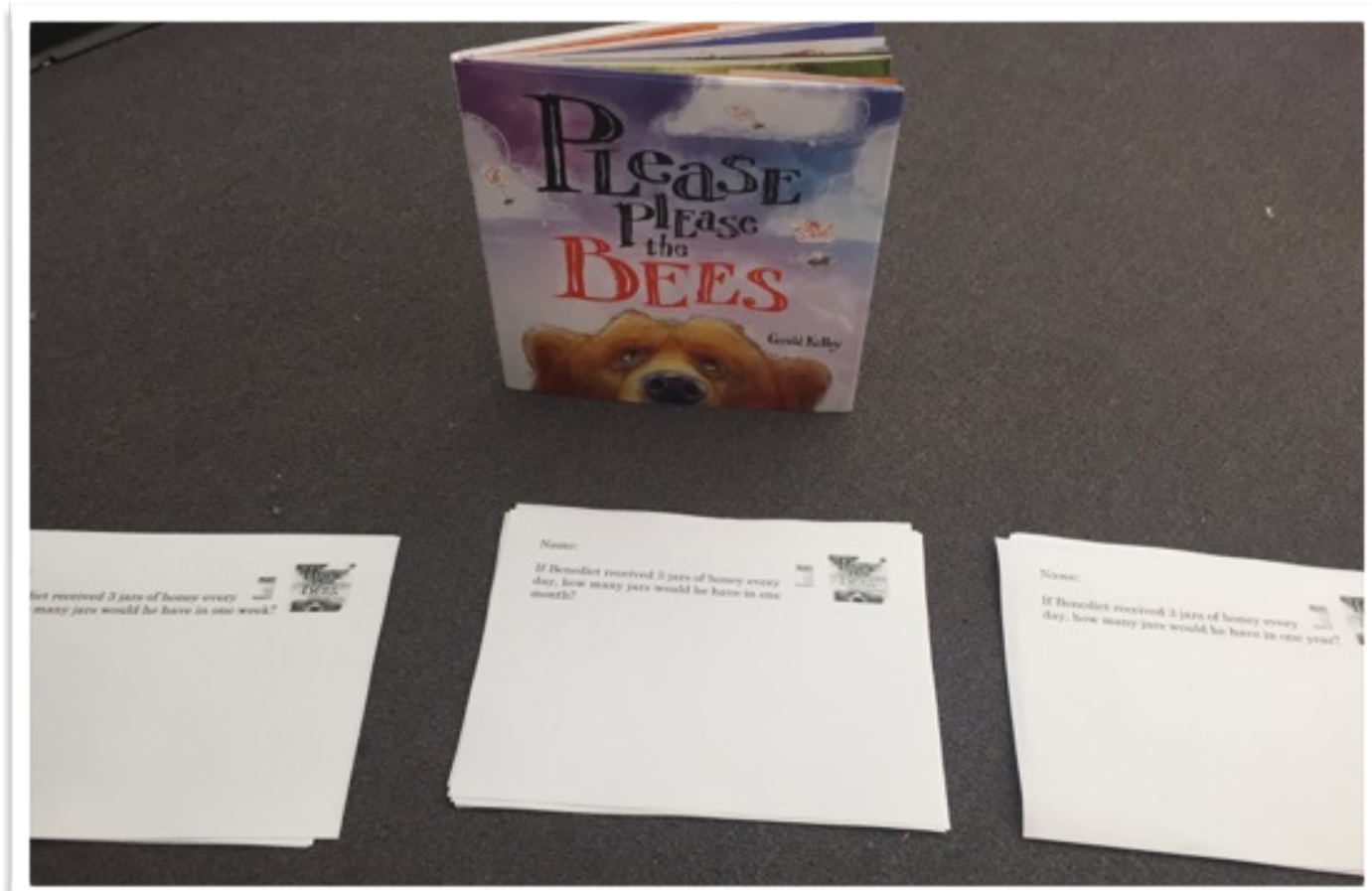
- Try to find one person whose strategy you think makes sense and one person whose representation you're not quite sure about.

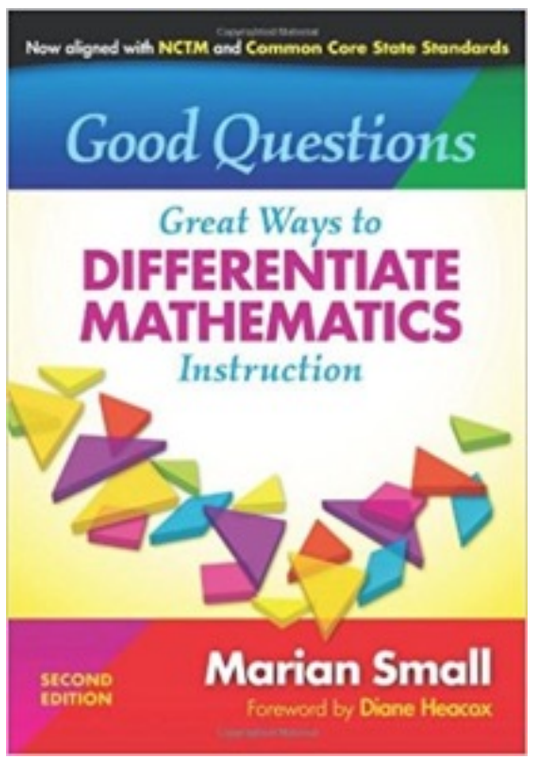
Note: Discussion should occur about talking about the math, not putting down the person. Remember that anchor chart!



How Do I Ensure A Productive Struggle for ALL My Students?

<u>Parallel Tasks</u>: Two or more tasks that focus on the same big idea at different developmental levels.





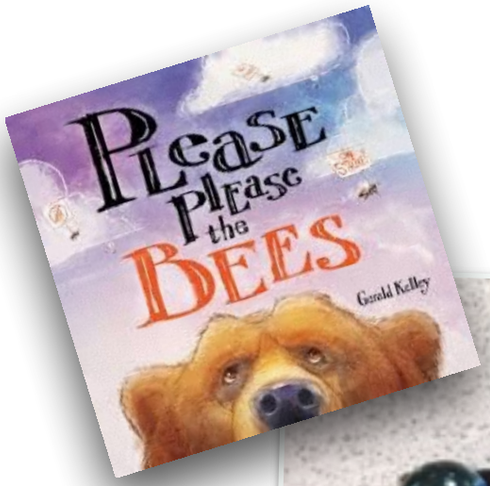
Literacy Learning Intentions
I can tell a story using what I know about bees. I can add to/change my story with new information.
I understand that readers read for different purposes.
I know how text features work in non-fiction books.
I can share facts and information orally and in writing.

“Do you like bees?”

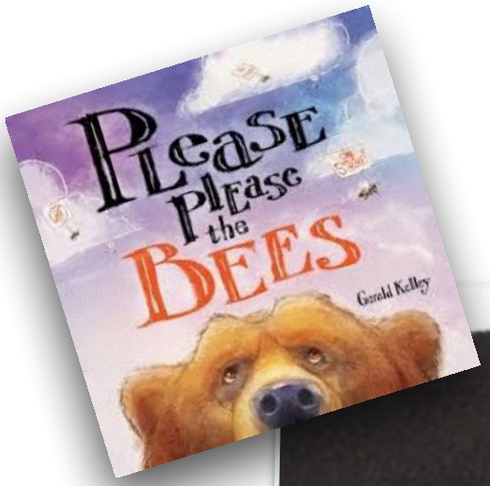
C

Talking/listening about personal opinions,
based on prior experience and knowledge of Bees.

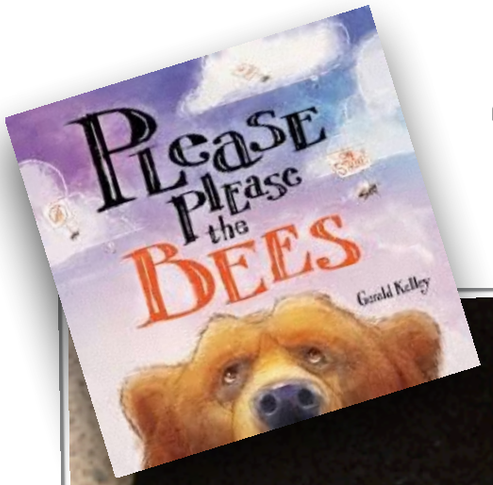
I recognize that there are different points-of-view and I can disagree respectfully.



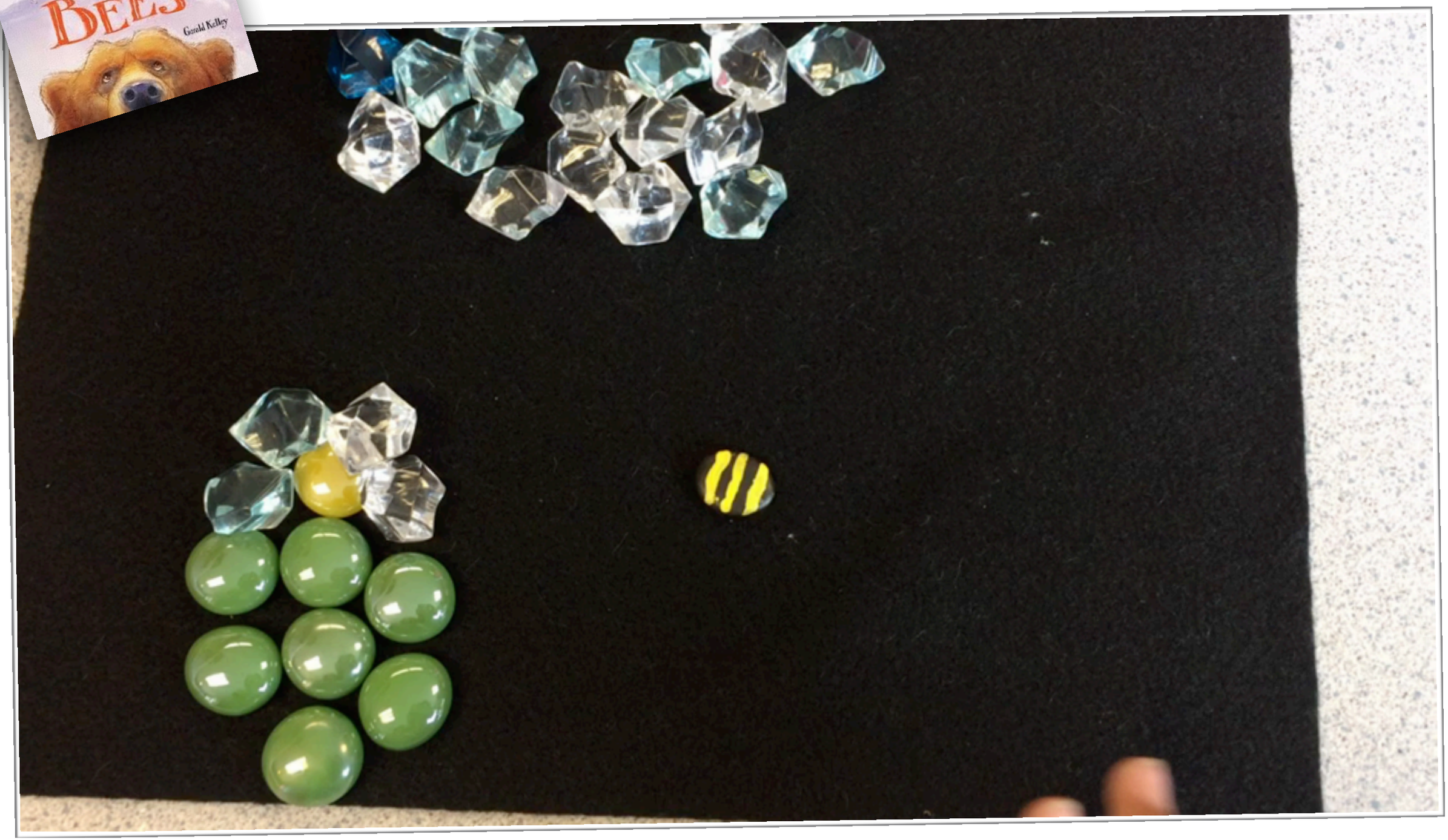
“Can you tell a story about this bee?”



“Can you tell a story about this bee?”



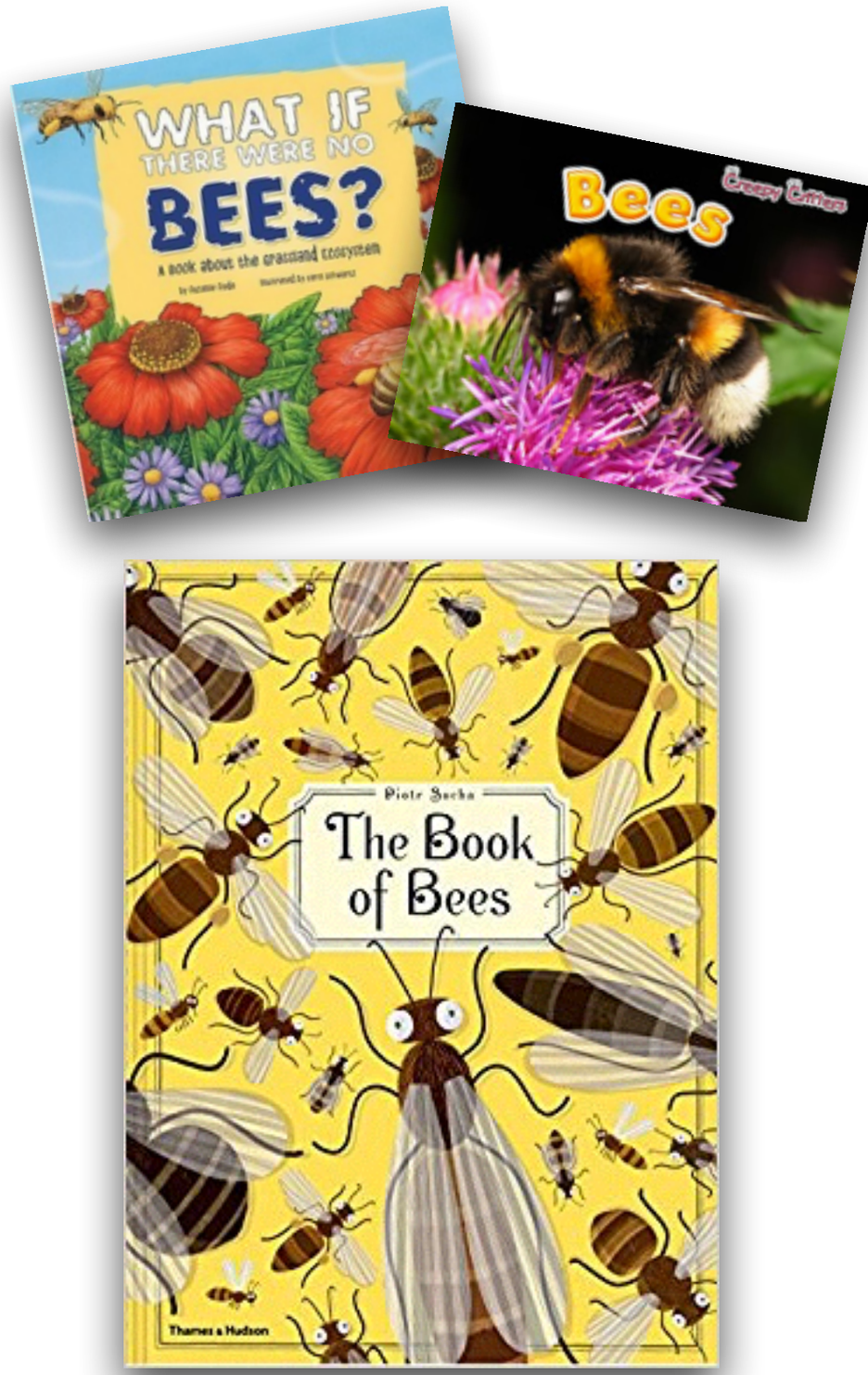
“Can you tell a story about this bee?”



I’m noticing: Can she tell a story? What vocabulary does she know?

Let’s notice what Benedict did to please the bees.
What can we tell about bees from what he did?

How could we help bees?
What could we do to please the bees?



Videos and/or information books

Types of non-fiction books:

CONCEPT BOOKS : Single topic, simple, interesting

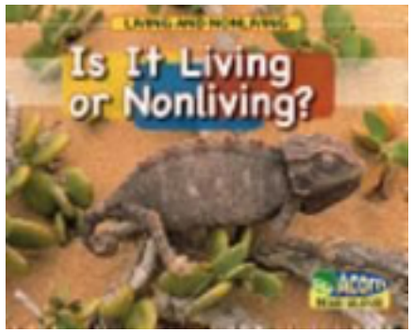
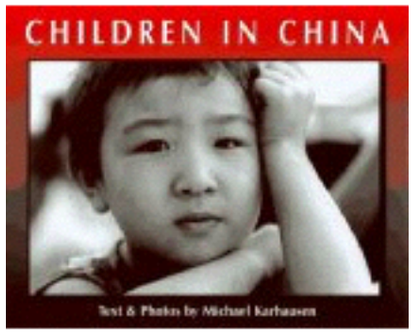
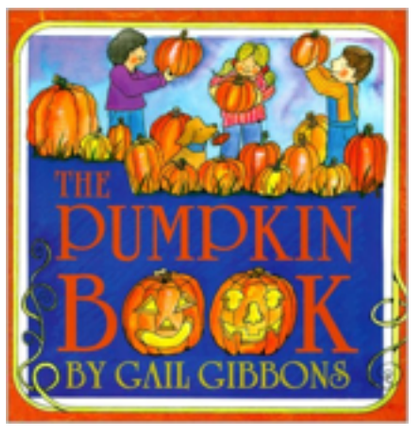
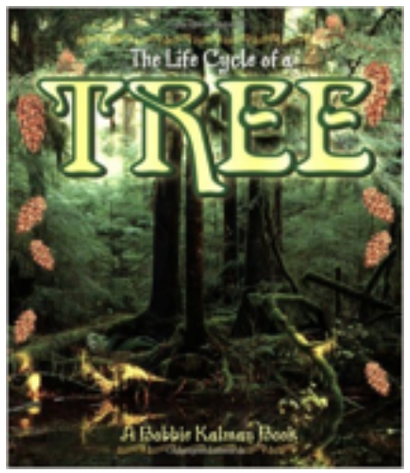


PHOTO ESSAYS: Extends text with photos



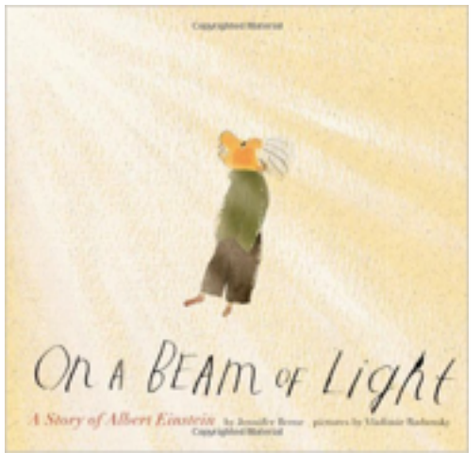
LIFE CYCLE BOOKS: Presents life cycle in more detail & more appeal

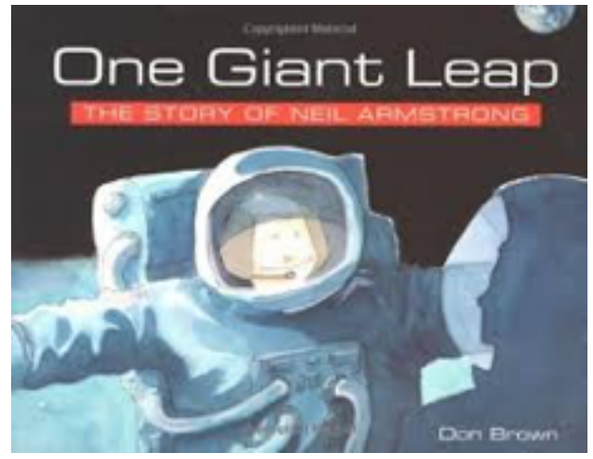


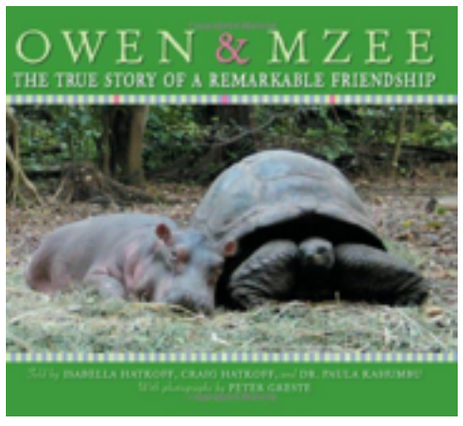


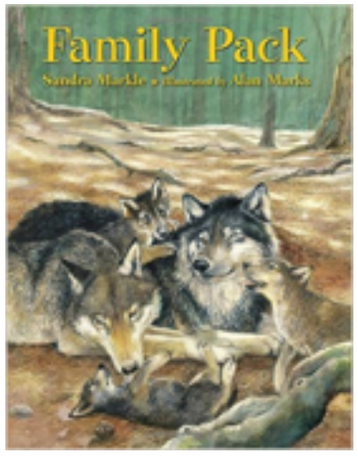
Types of non-fiction books:

NARRATIVE NONFICTION:
Factual information written in narrative format,
also known as
"creative nonfiction"









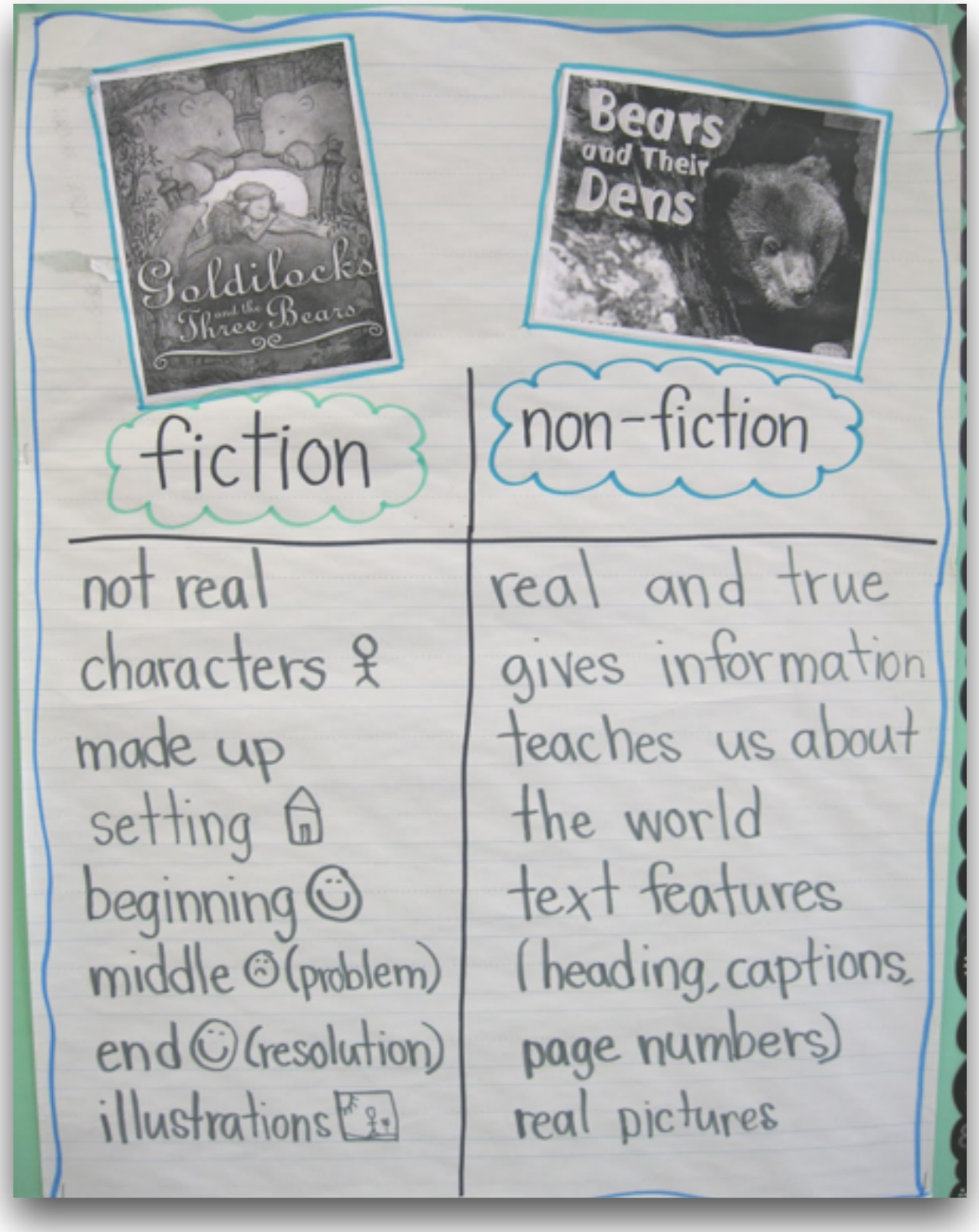
- **Concepts are *embedded in narrative***
- ***Language is both academic and conversational***
- ***Cognitively less demanding for ELL students***

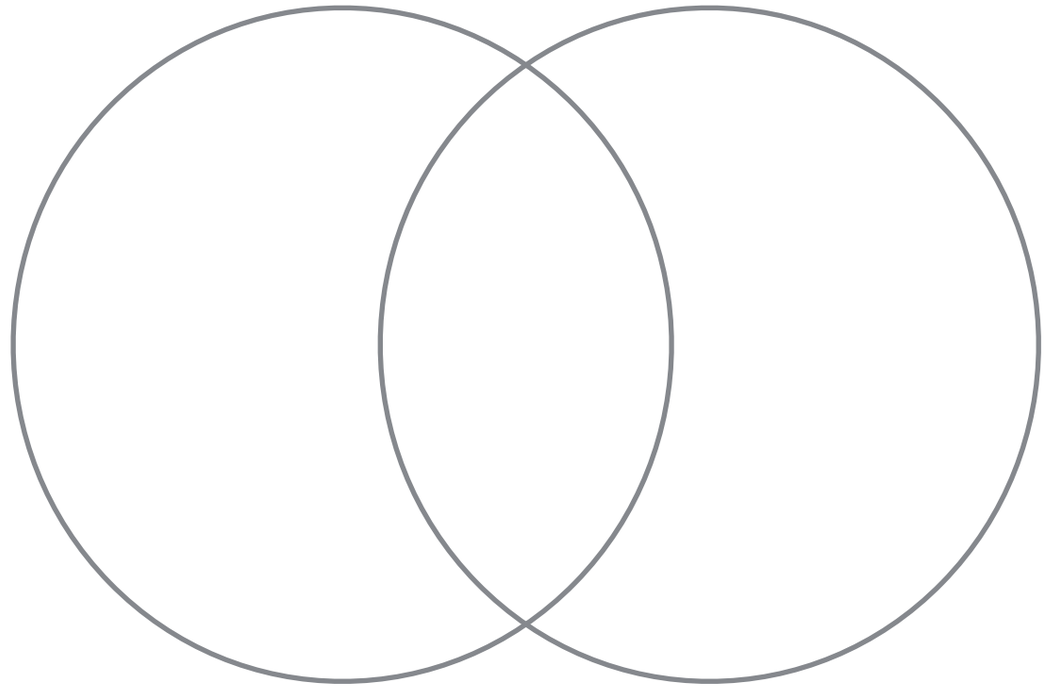
Acquire, interpret, and present information

"What job will your bee have?"

"What might you add to your story with what you now know about bees?"

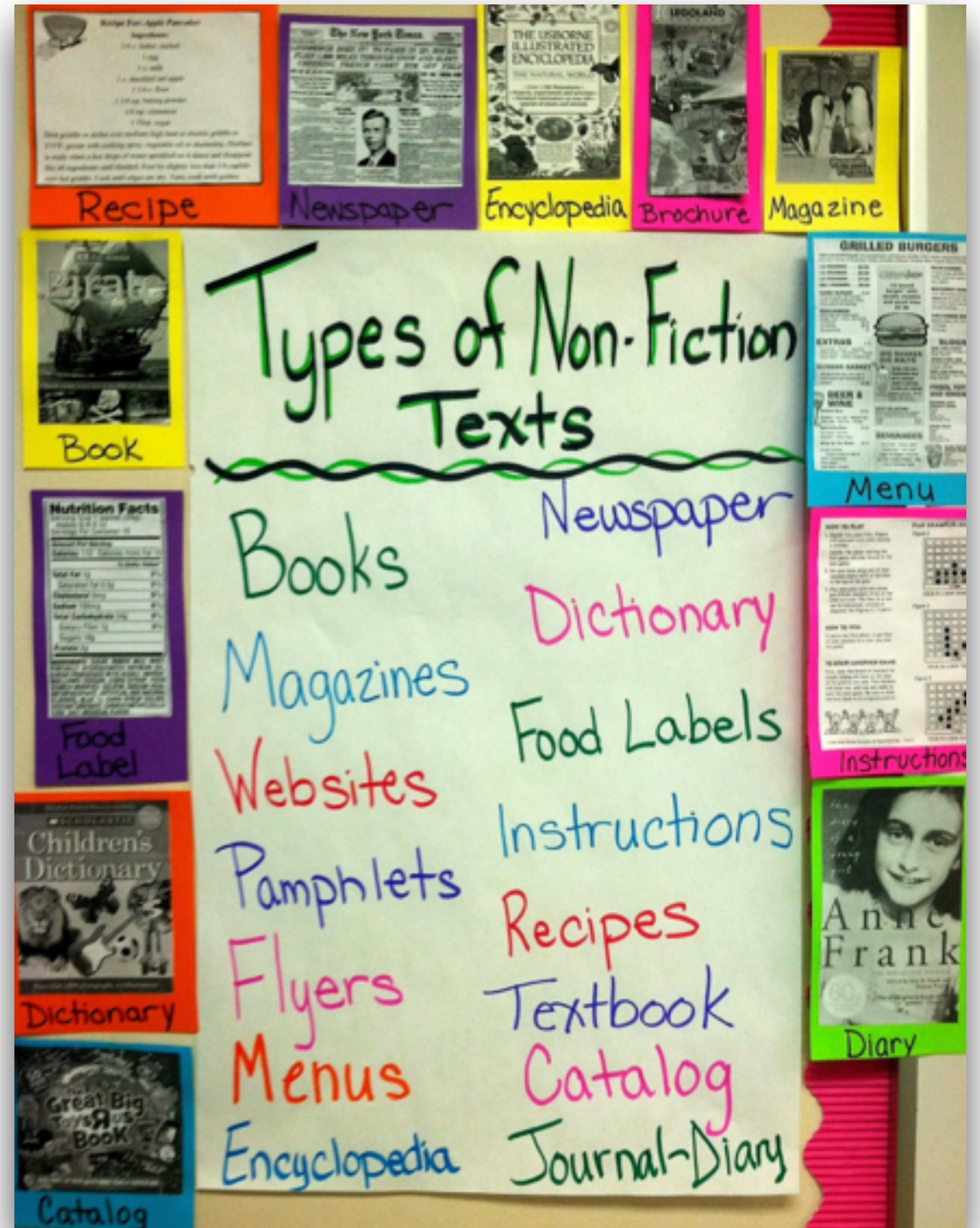
Compare/Contrasting book purposes





www.shipshapefirstgrade.com

Explore different forms & purposes for text - to entertain, to inform, to persuade



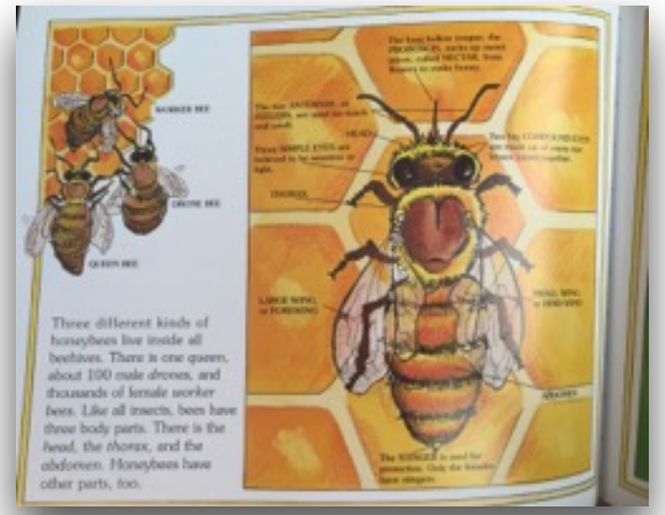
hellolearning.blogspot.ca

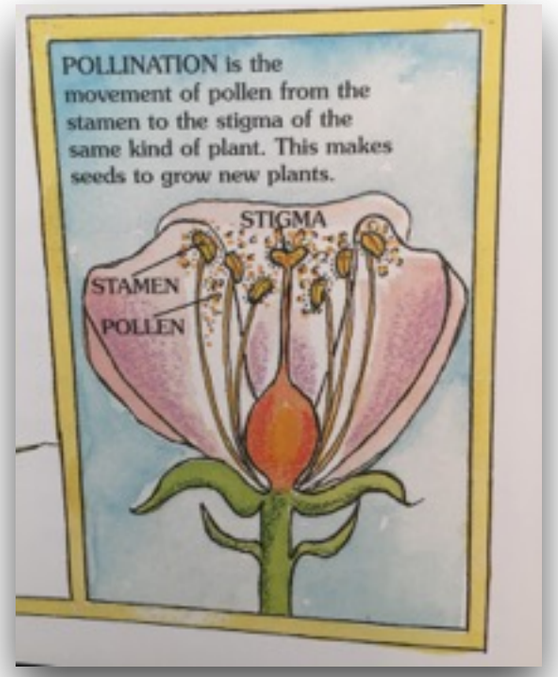
conversationsinliteracy.blogspot.ca

Non-fiction text:

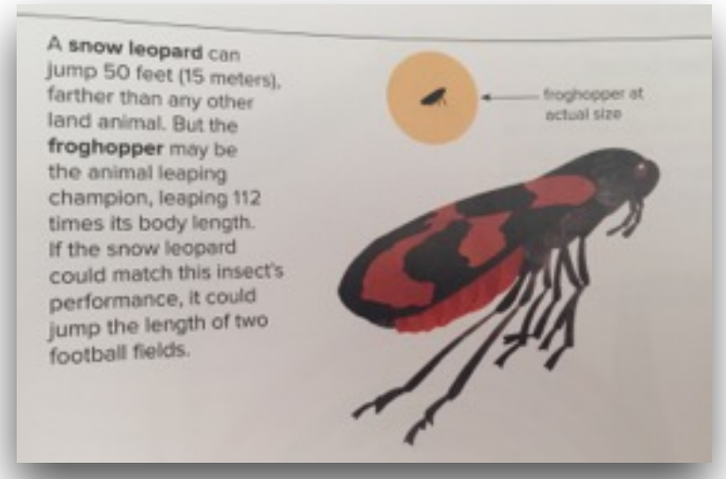
Academic language and an understanding of *text features* helps us learn from non-fiction texts.

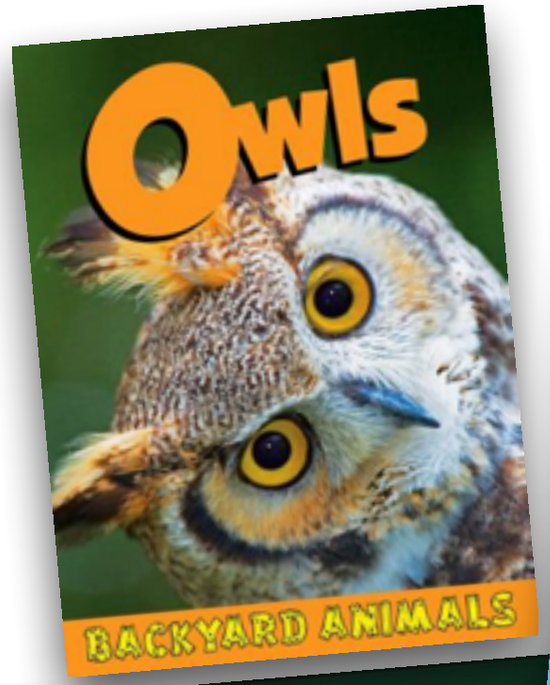
Non-Fiction text features

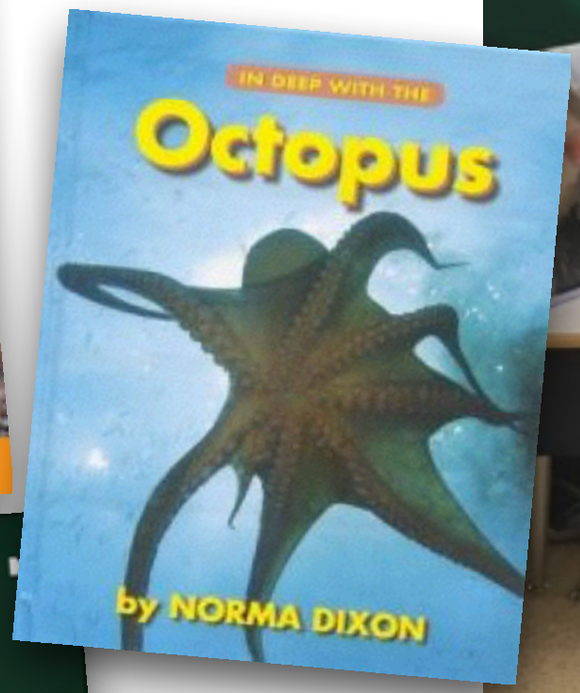




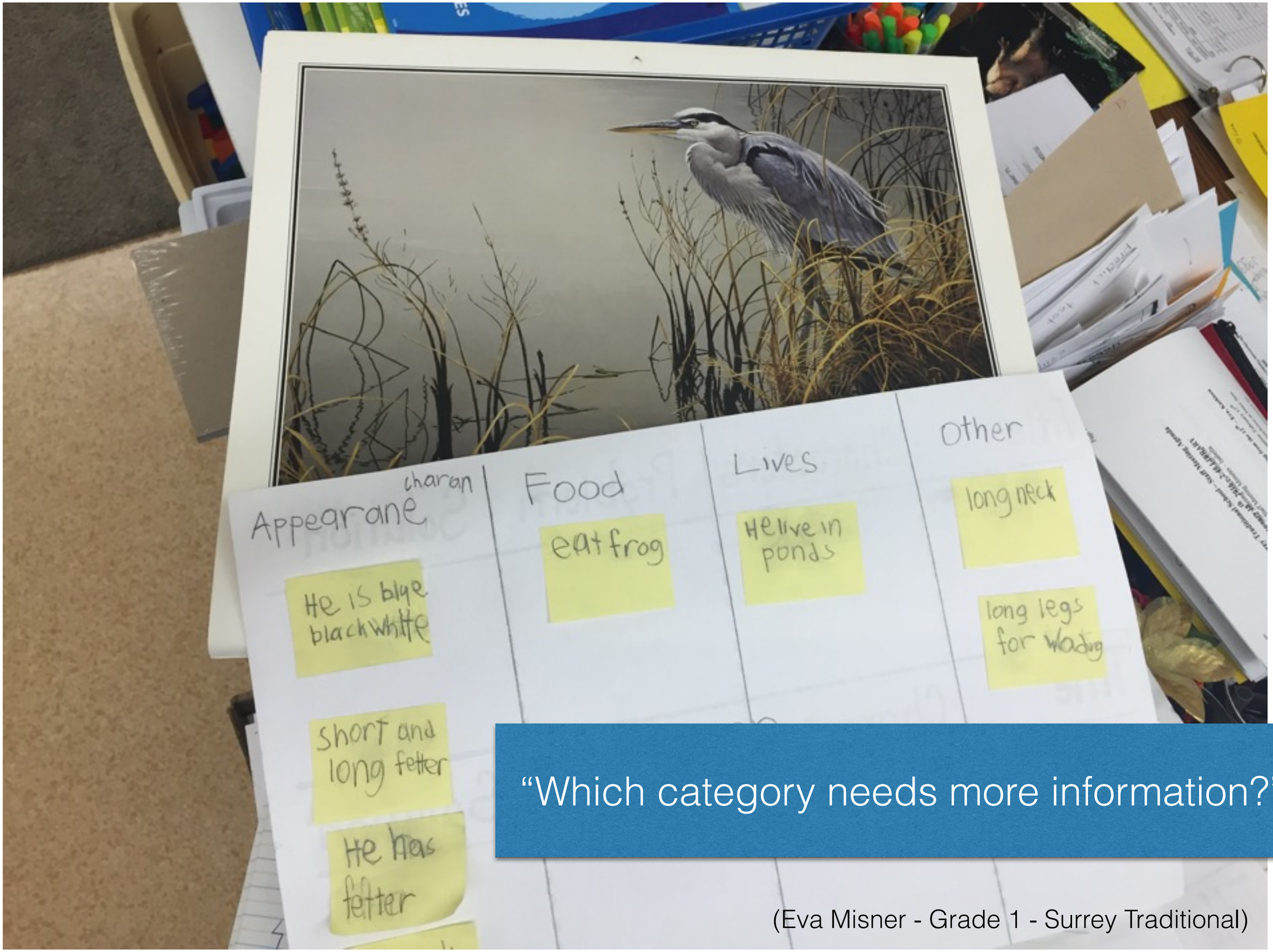
- Photos/Illustrations
- Tables of Contents
- Graphs & Charts
- Diagrams
- Headings & Bold Lettering
- Timelines
- Glossaries & Indexes







Talking, noticing, wondering, writing



"Which category needs more information?"

(Eva Misner - Grade 1 - Surrey Traditional)

Model non-fiction language:

Giraffes have _____.

Alligator babies are _____.

Dear eat _____.

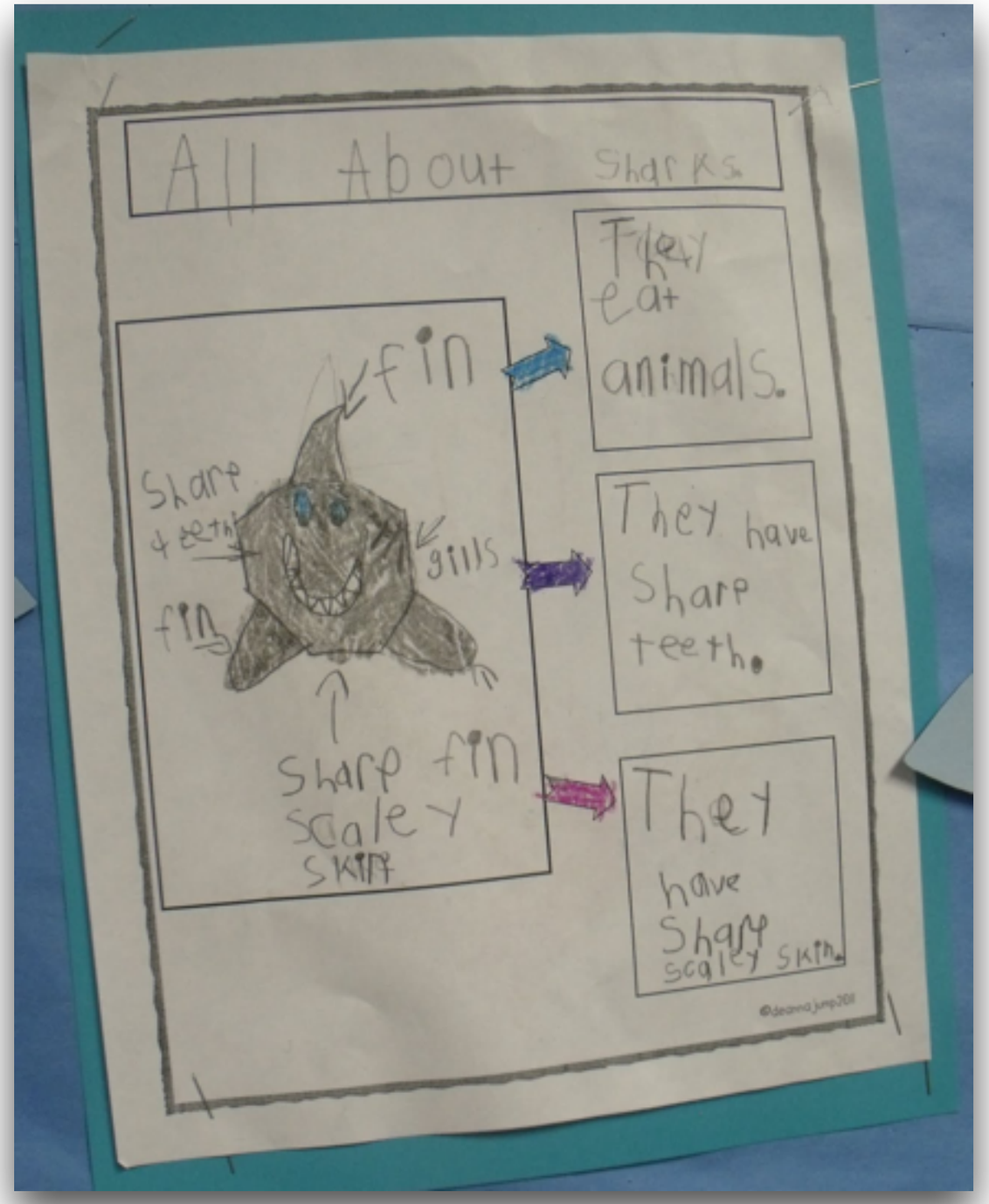
Bears live in _____.

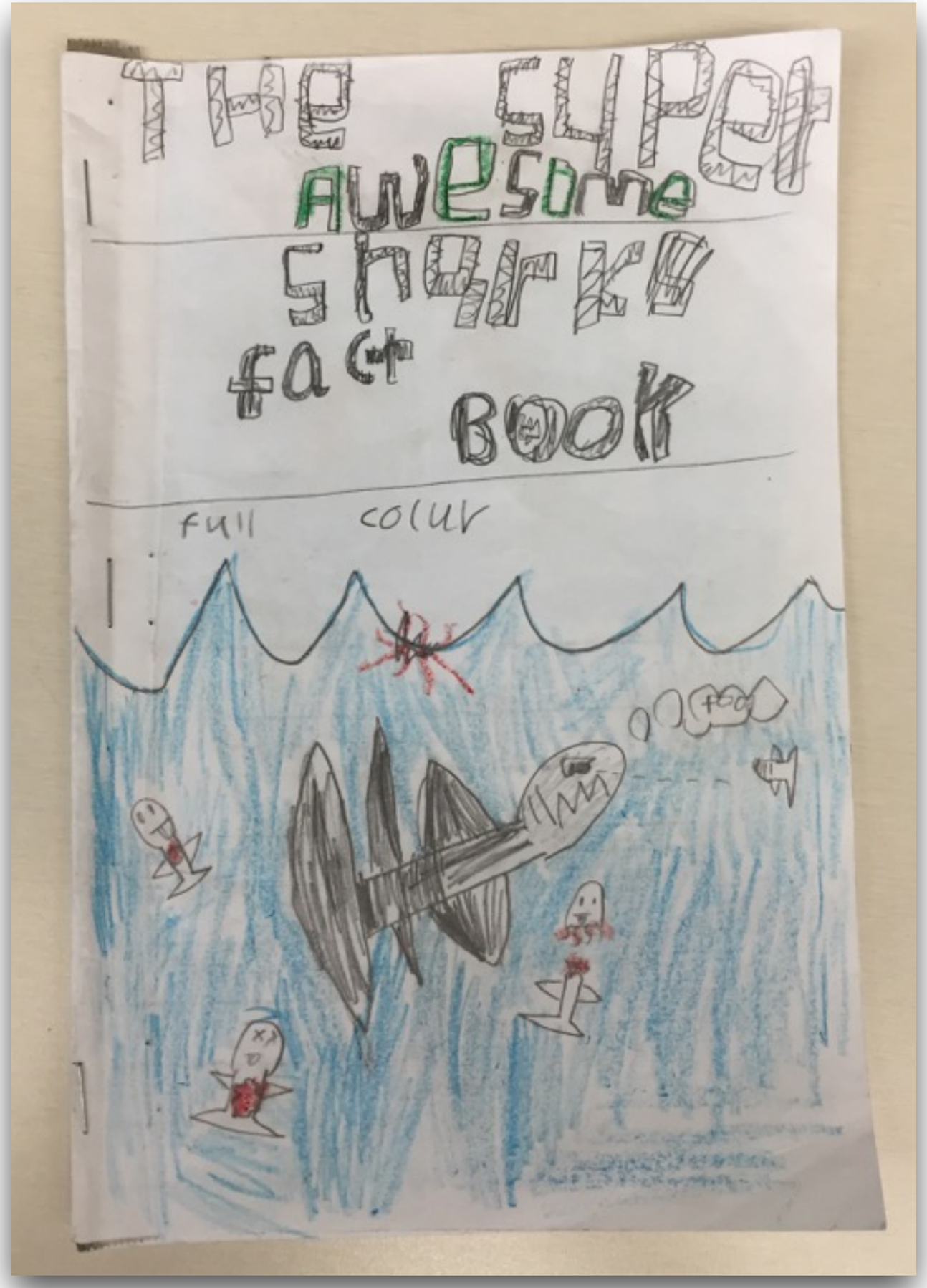
Sharks like to _____.

Dolphins protect themselves by _____.

TIME TO TALK

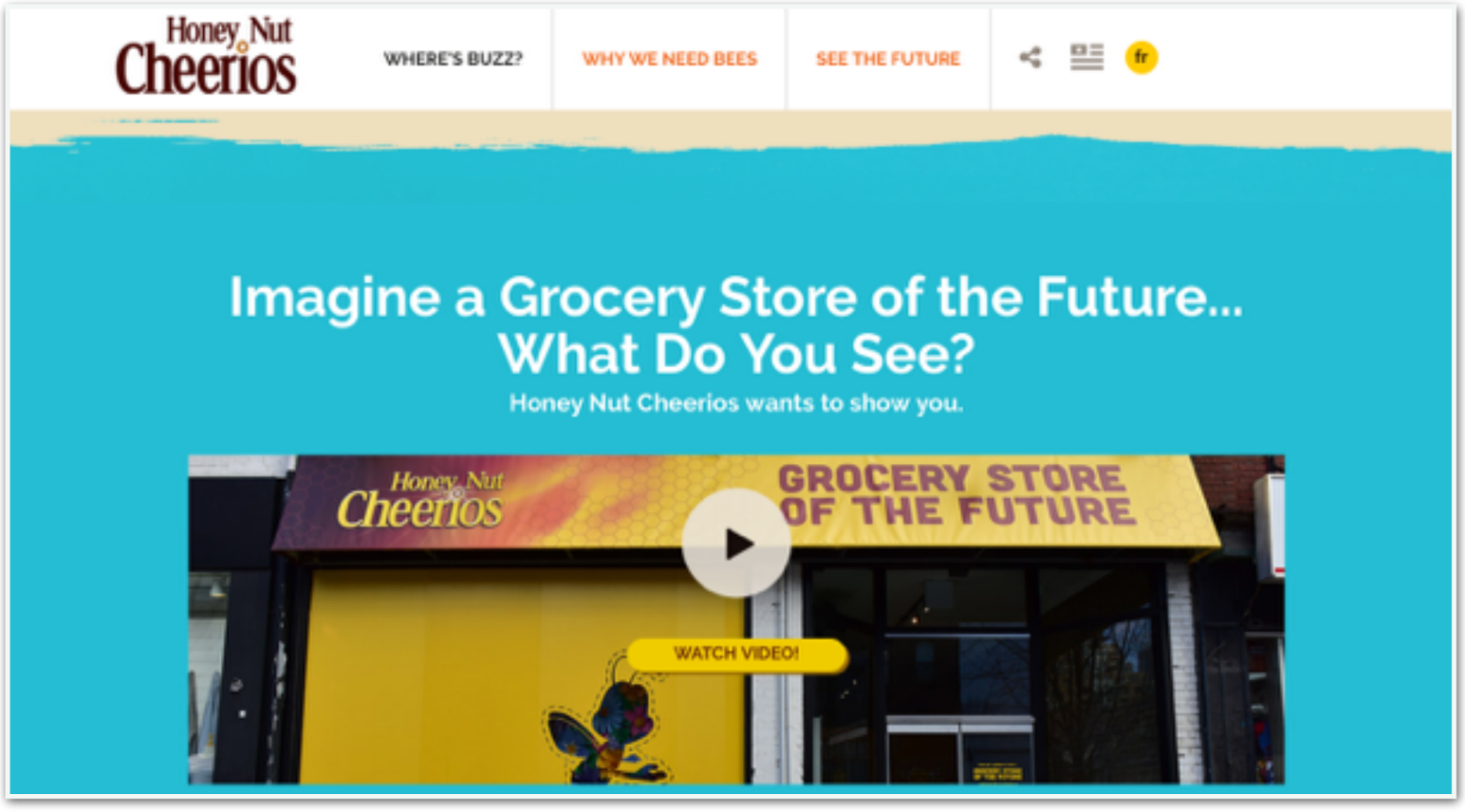
Rehearse non-fiction language


All About Sharks
fin
Sharp teeth
gills
fin
Sharp fin
scaley
skin
They eat animals.
They have Sharp teeth.
They have Sharp scaley skin.
©deanna jump 2011


The super awesome sharks fact Book
full colur

“Why is the bee population declining?”

Research current news articles, websites, videos
Brainstorm ideas of how students can help
Create a way to communicate this message to other classes/community
Write letters to newspapers or make videos for school website
Make posters or plant a garden of wildflowers



Integrate science, math & social studies

Wordless picture book

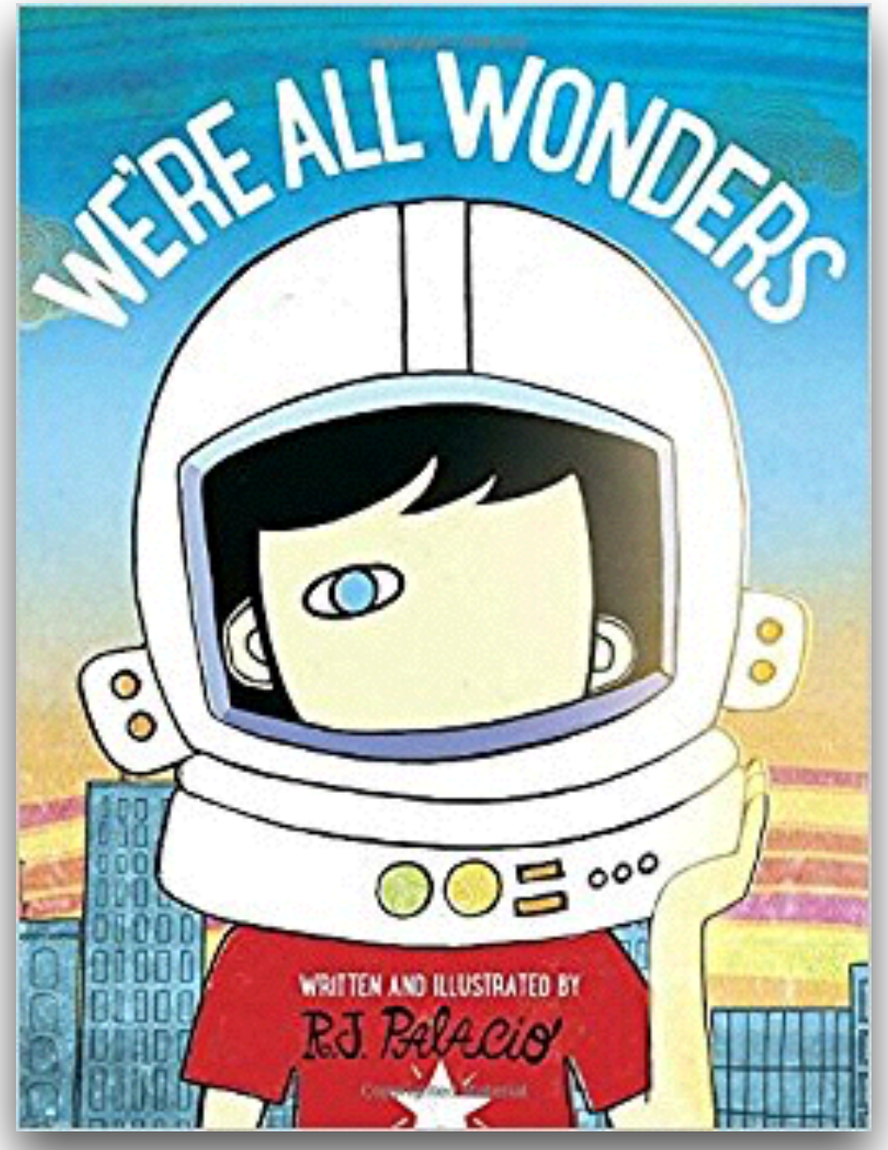
What are you connecting with?
What ideas are surfacing? Please share them!
How might you see yourself using these books?

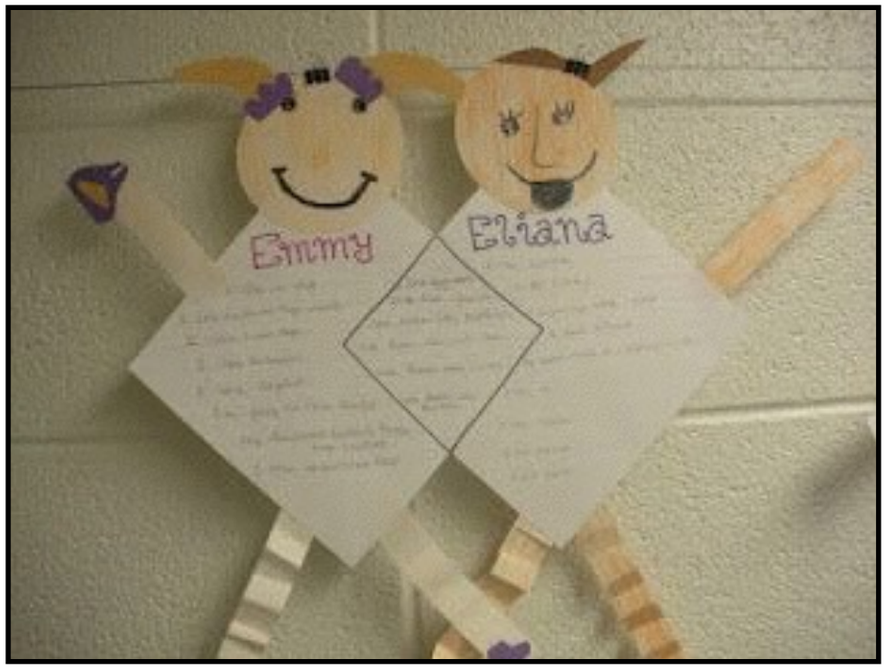
We're All Wonders

by RJ Palacio

A picture book extension of Palacio's middle-school novel "Wonder", staring Auggie, the ordinary boy born with an extraordinary face.

The picture book explores the same themes as the novel: kindness and tolerance to others, and recognizing unique qualities of each child.

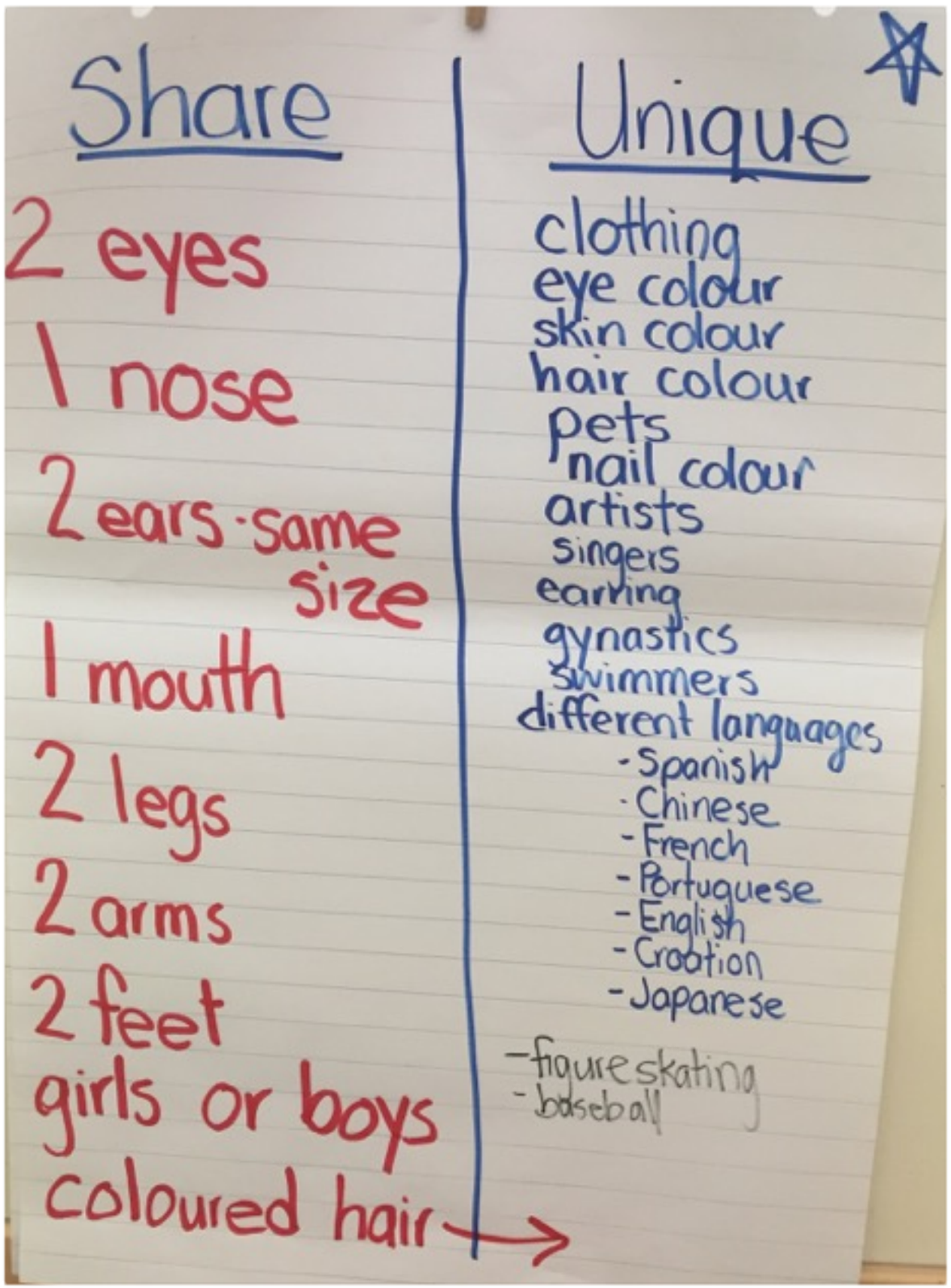


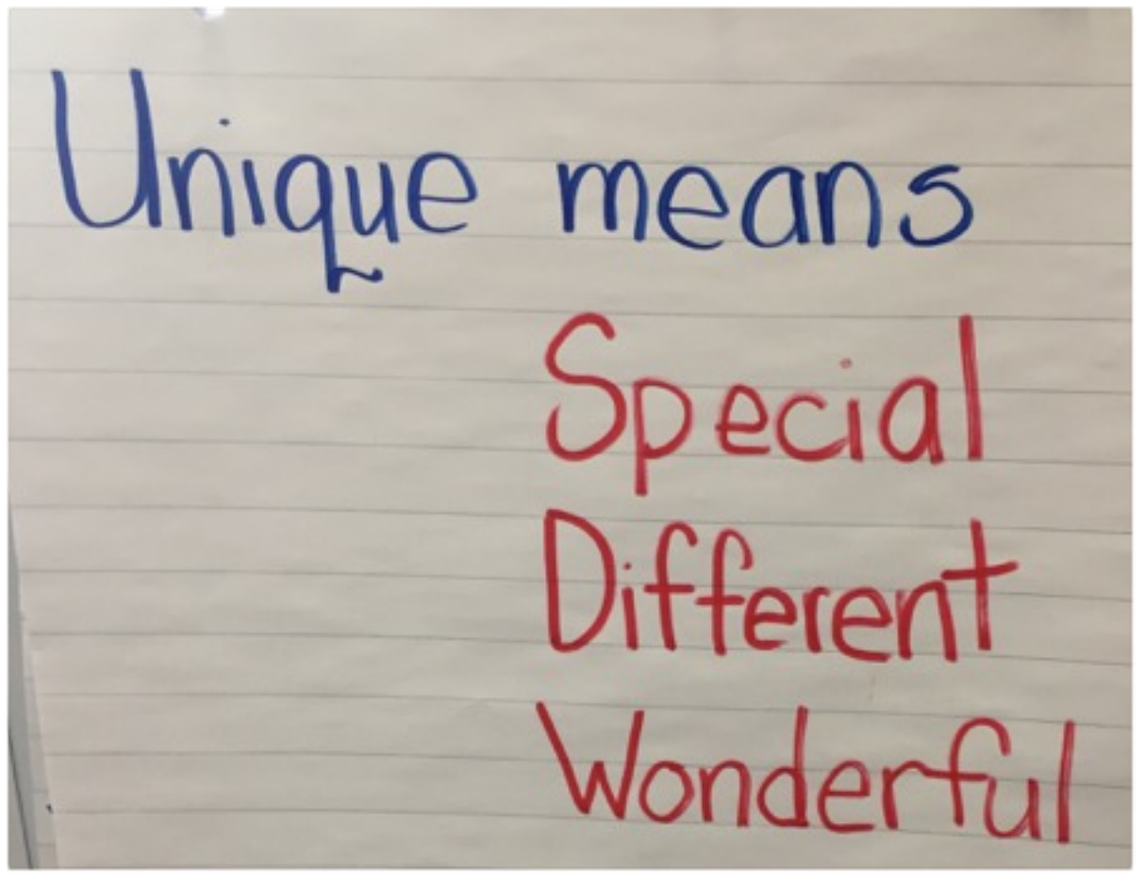


Concrete items can be represented, compared, and interpreted pictorially in *graphs*.

Numeracy Learning Intentions
I can collect data and create a concrete or pictorial graph.
I can describe and compare the information in graphs.
I can represent a concrete graph pictorially.

Thank you to Venessa Bentley and her Grade One class for engaging with this book!



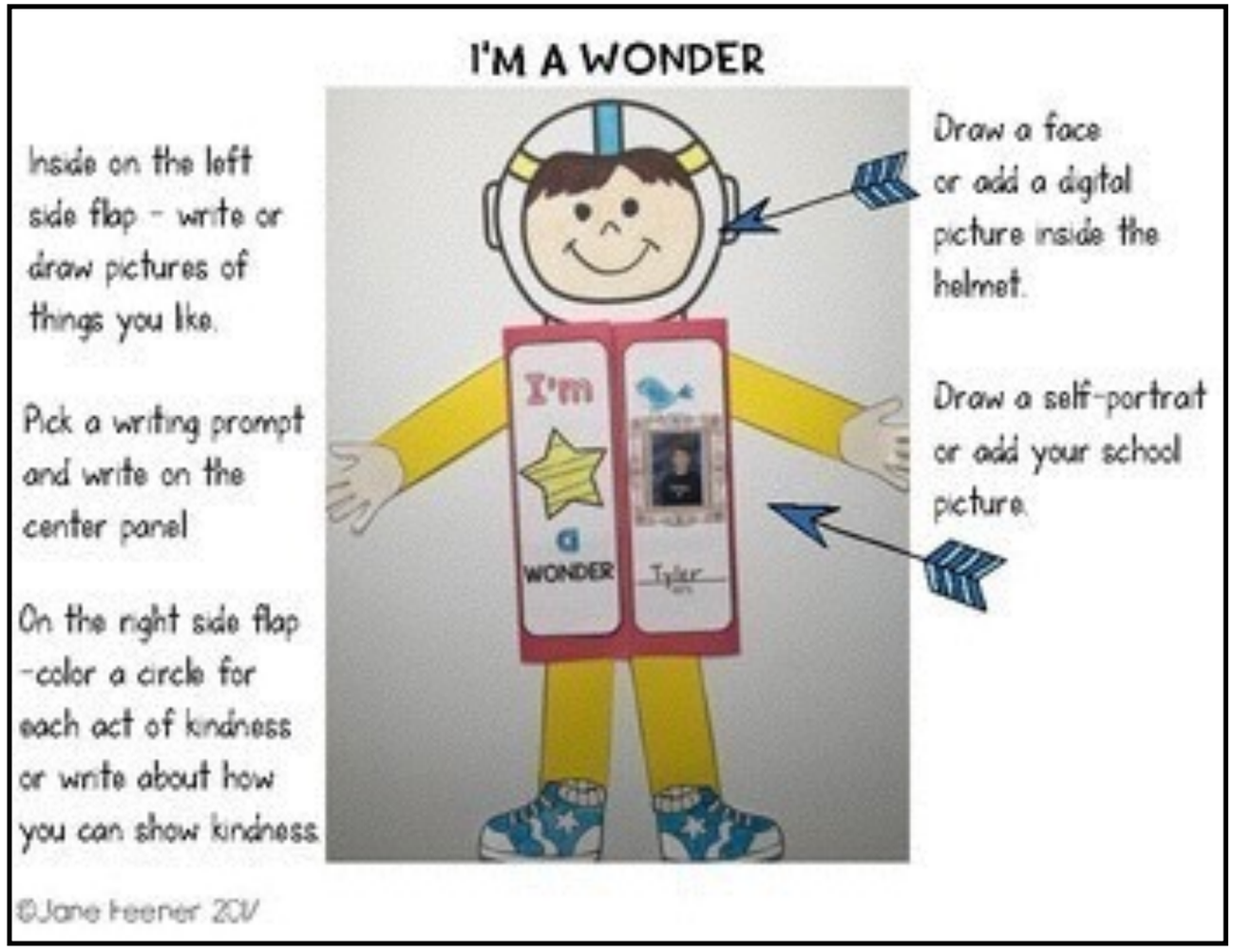


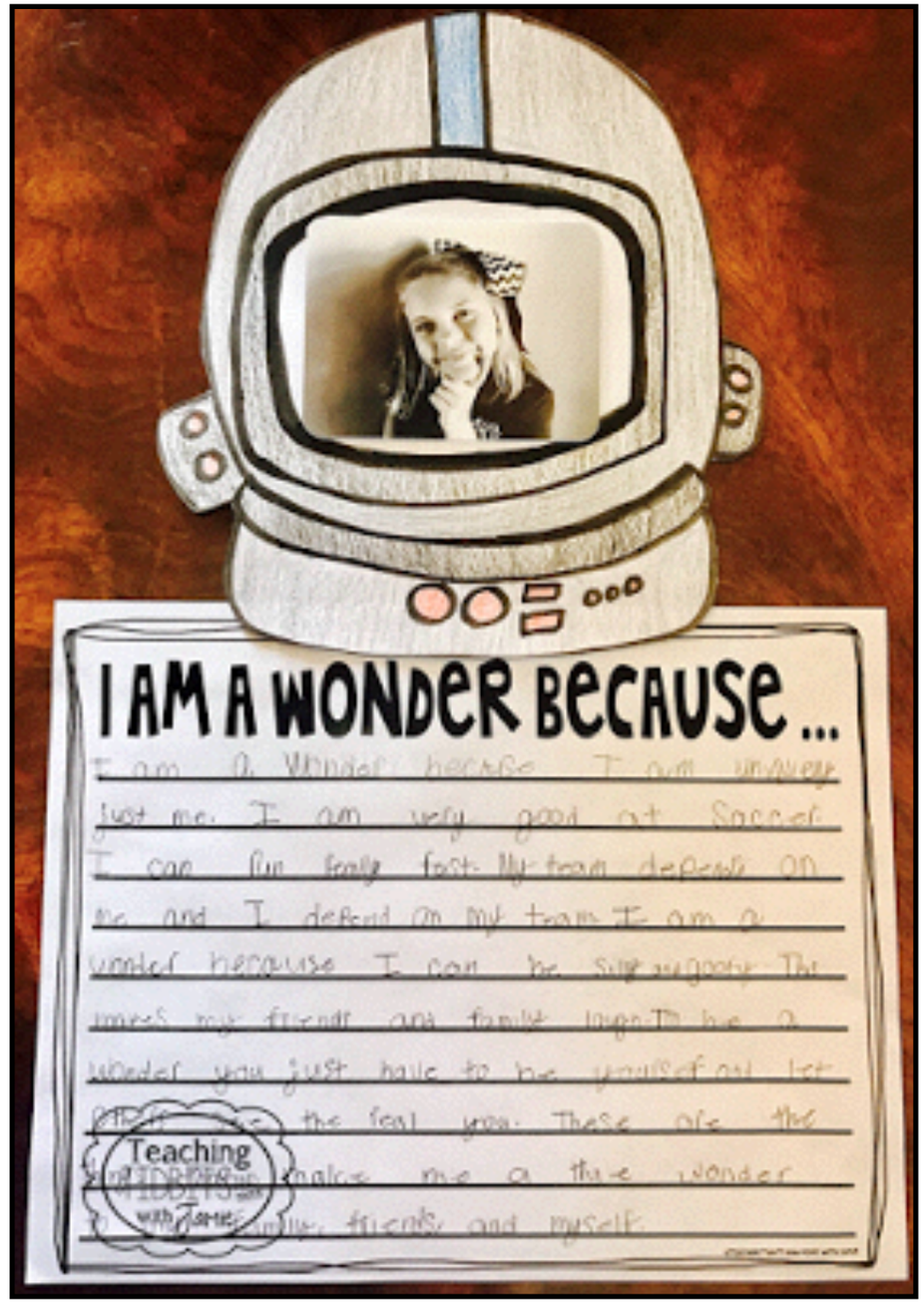
Community building:

Find someone who shares _____ as you!

What do you and your group members have in common?

What makes you unique?





Numeracy + Literacy = Amazing!

After brainstorm all the attributes that could make someone unique, have the students write about why they are WONDERFUL!

What do we notice?

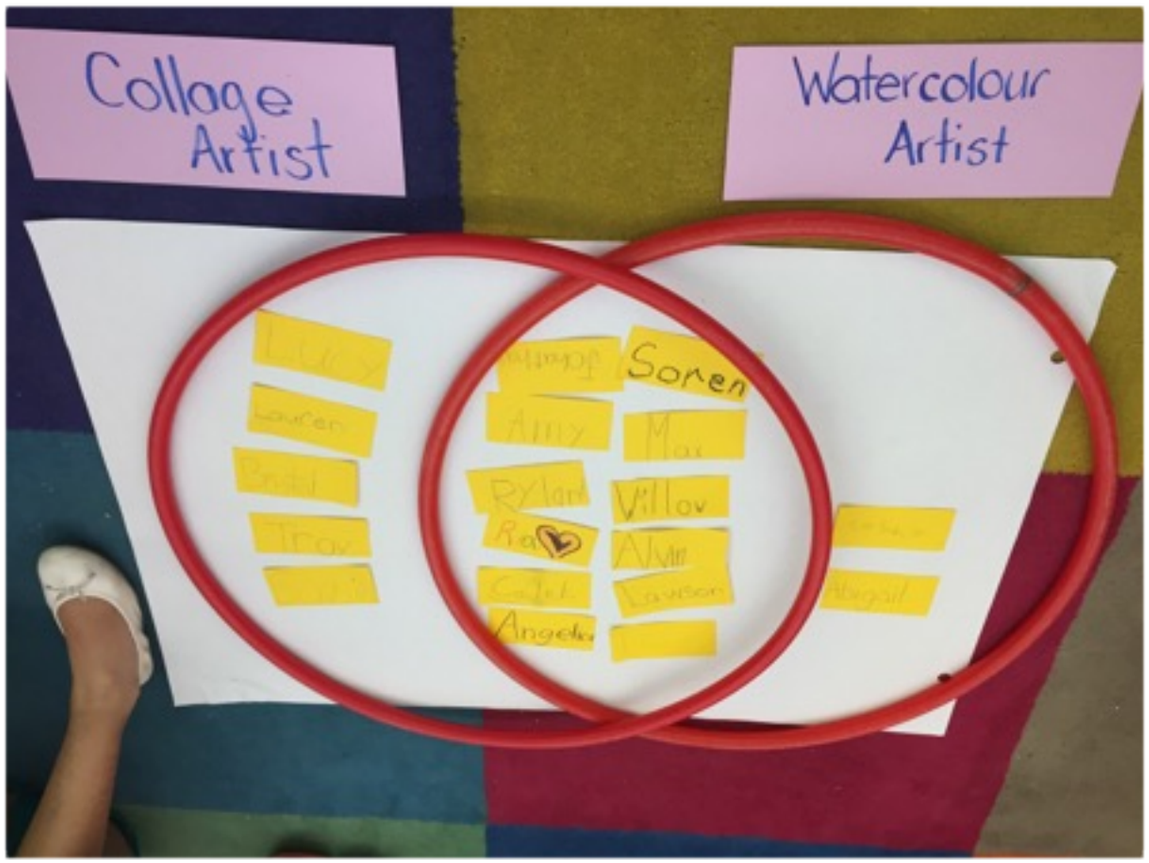
What do we wonder?

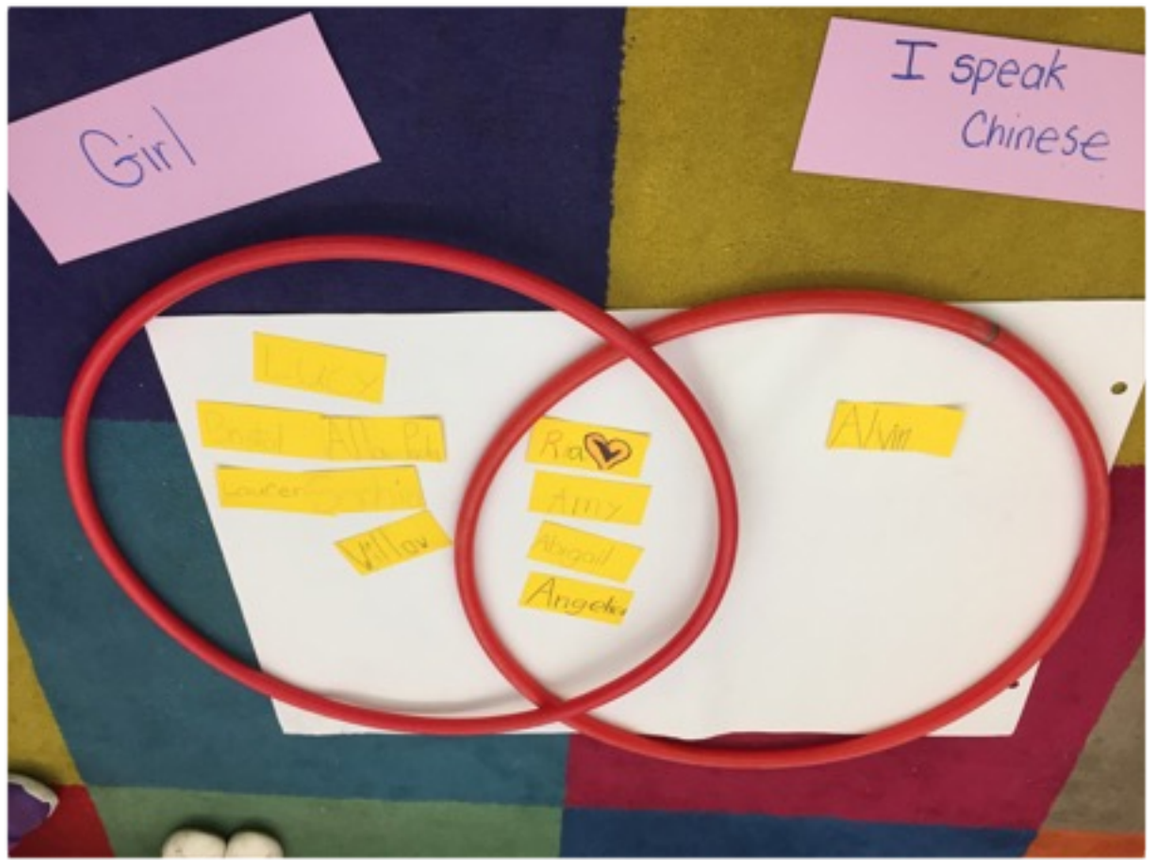
How do graphs help us make sense of the world?

C

What do you notice?
What do you wonder?

Are your students able to create, describe, and compare concrete and pictorial graphs?





PS

How could you represent the type of artist you are?

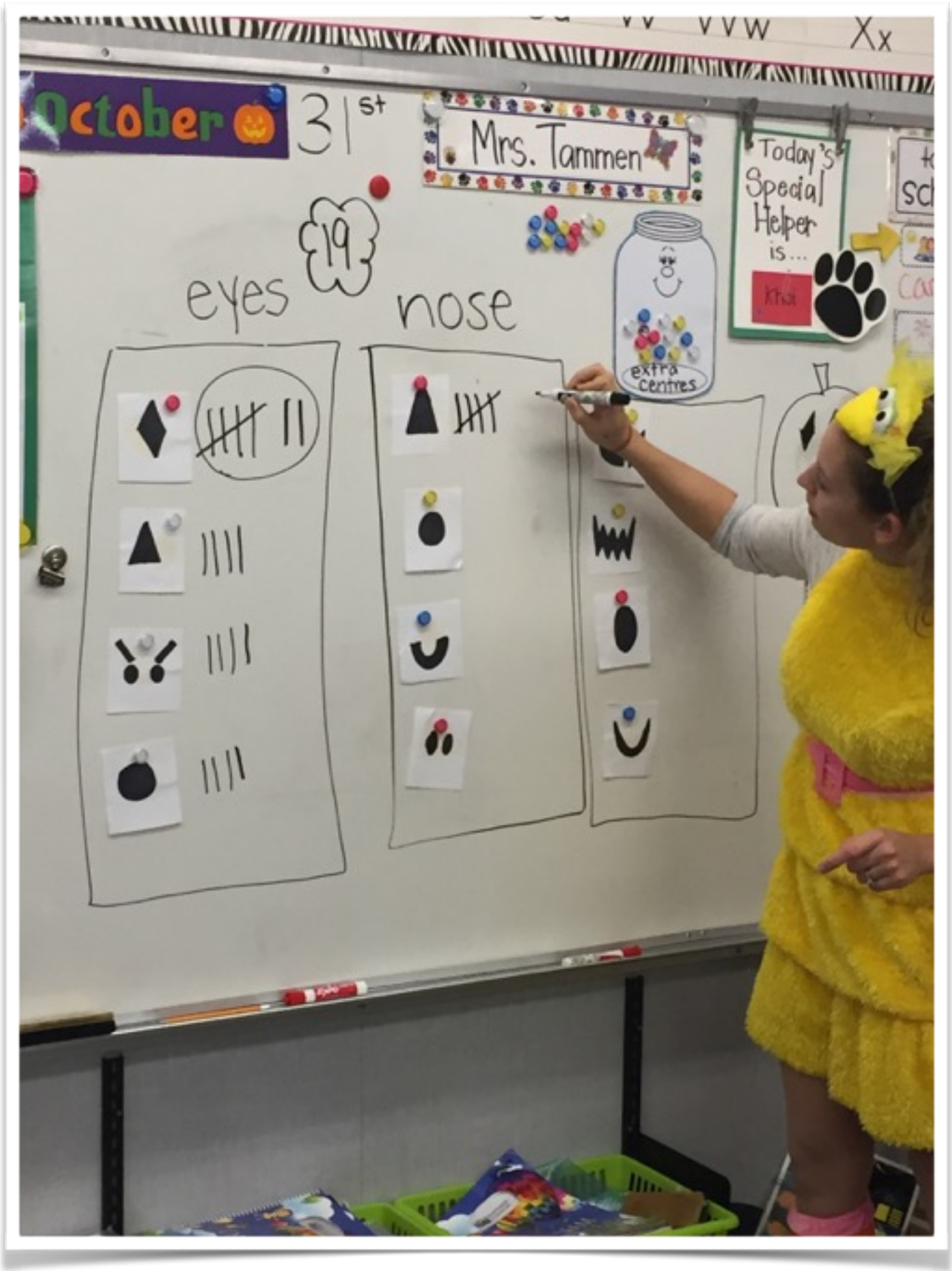
T

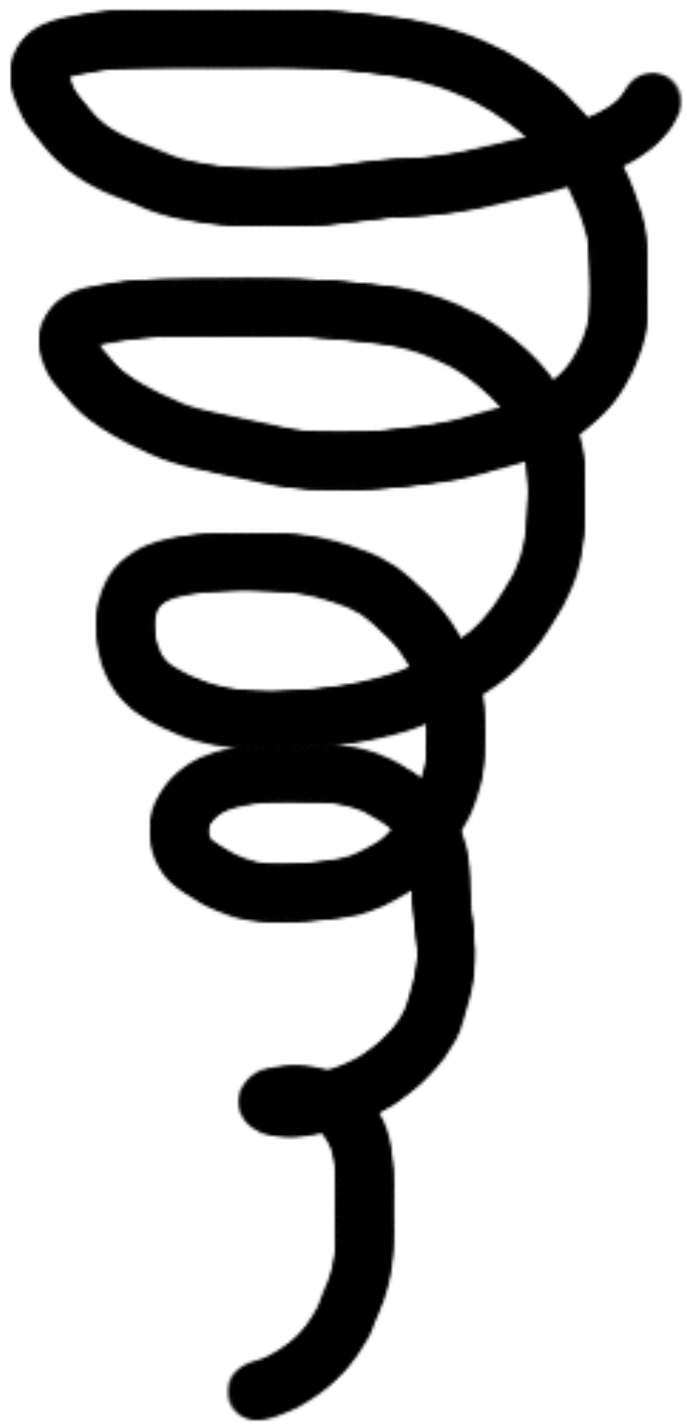
Why do only two students see themselves as Watercolour artists?

C

Tell a friend three things you notice and two questions you have.

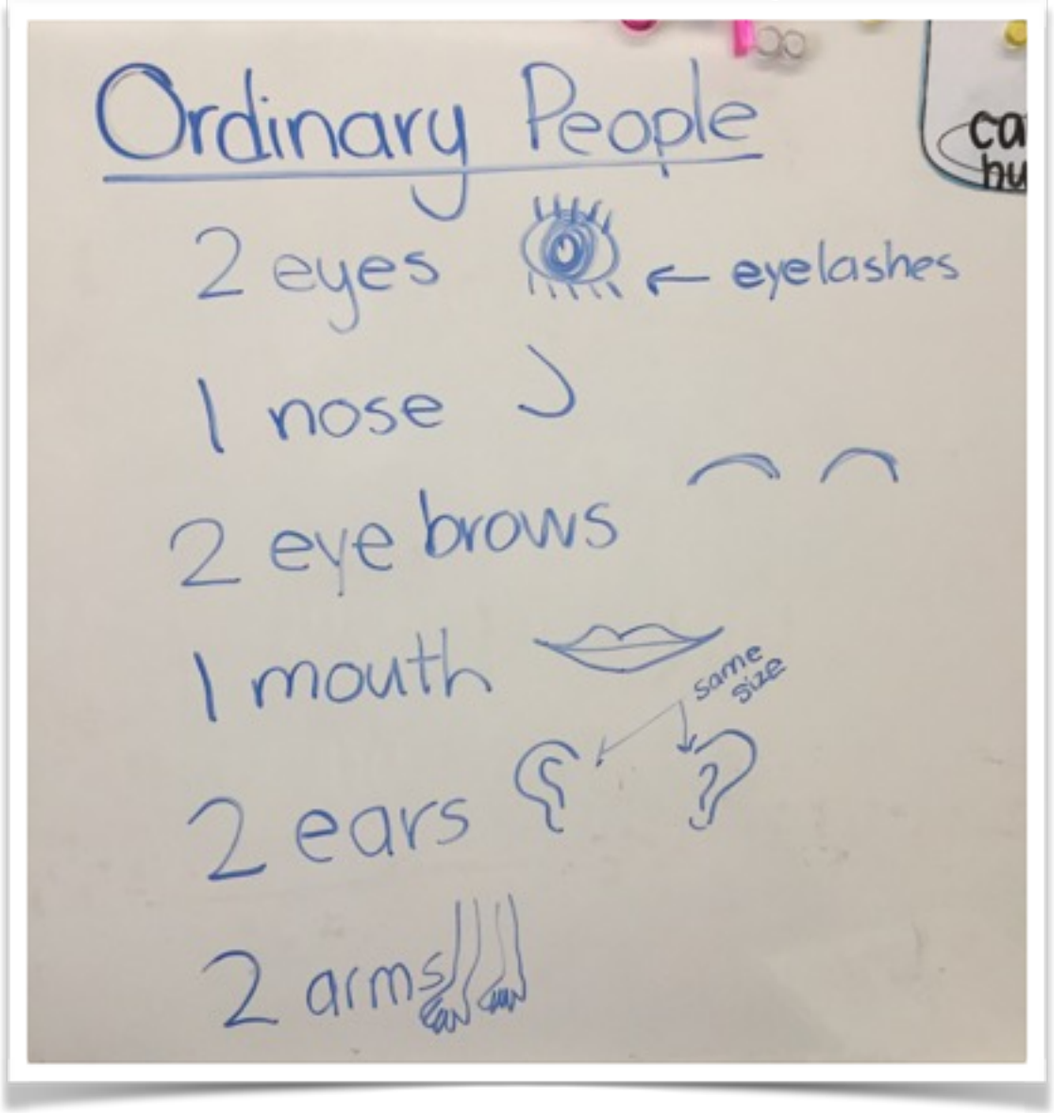
Literacy + Math = Lots of Learning!

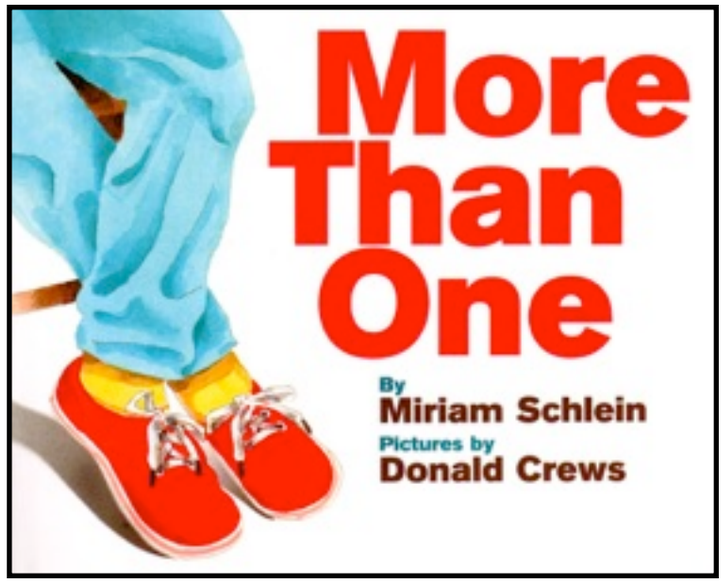




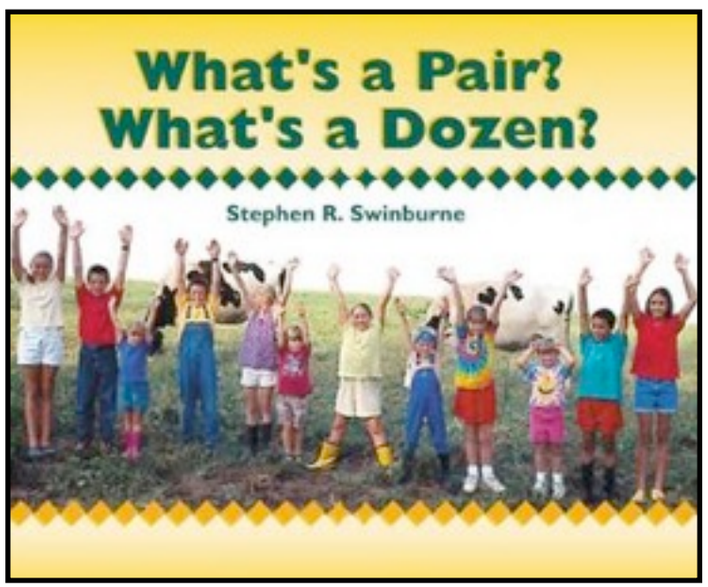
Jenn Tammen, Grade Two
Hjorth Road

Can you describe yourself mathematically?

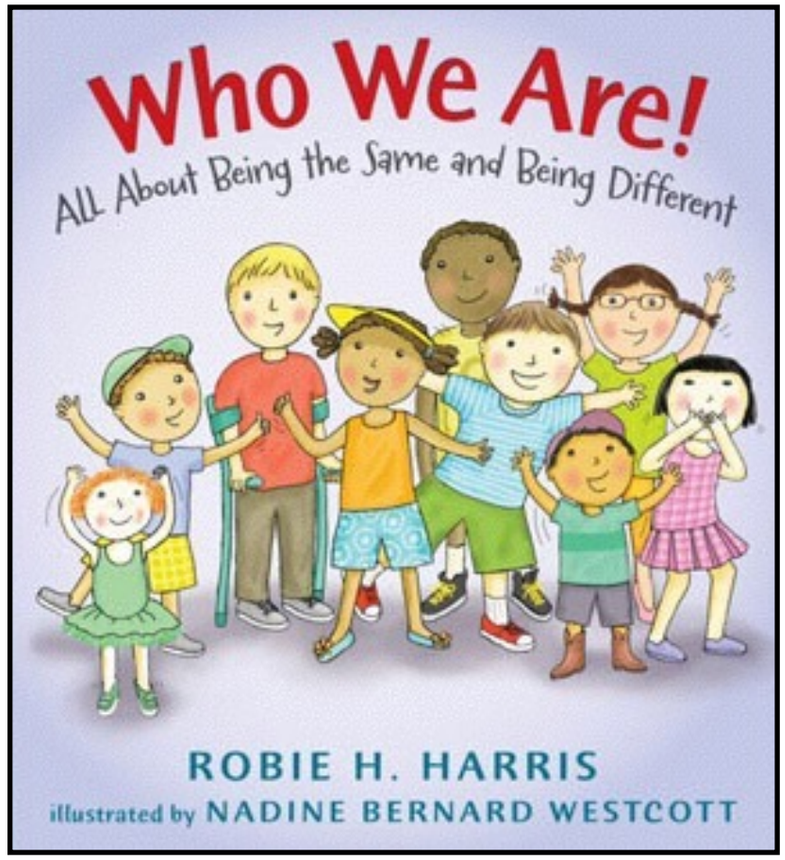




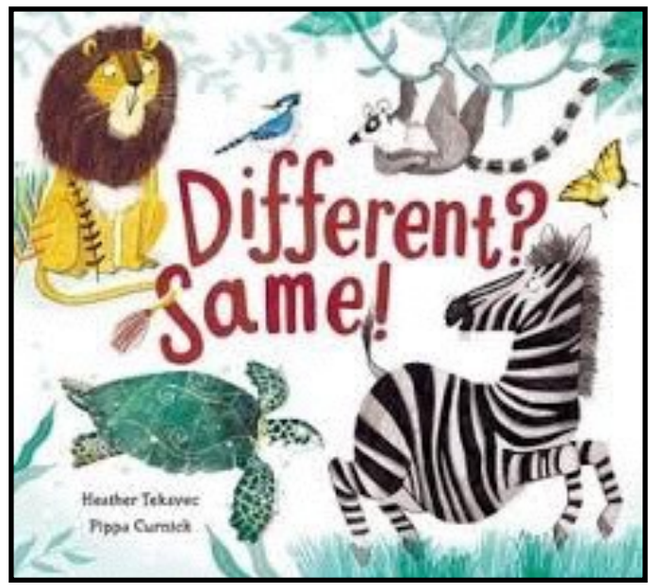
Every student is a **“Mathematics Language Learner”**



Does one always mean one?
When is one, two?
Do you have one pair of something?



Objects have *attributes* that can be described, measured, and compared.

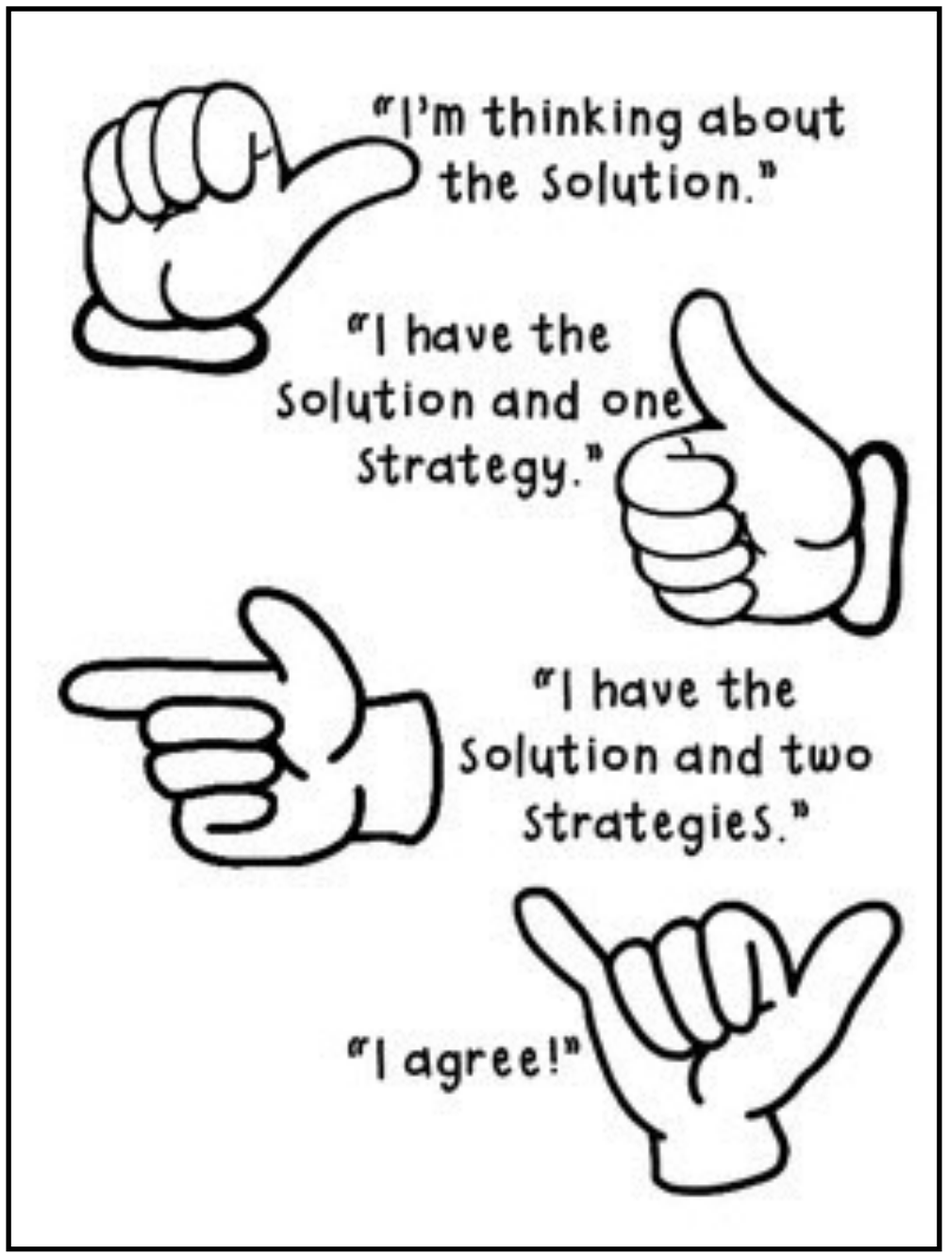


Numeracy Learning Intentions
I can identify and describe the attributes of others.
I can compare the attributes of others and explain these.
I can reason, conjecture, and justify why some attributes stand out form others and make them WONDERFUL!

Which One Doesn't Belong?

- What do you notice?
- What makes all the the items alike?
- What makes them different?
- Which one doesn't belong?
- Can you share your reasoning to justify your answer?

Which One Doesn't Belong?



Which One Doesn't Belong?

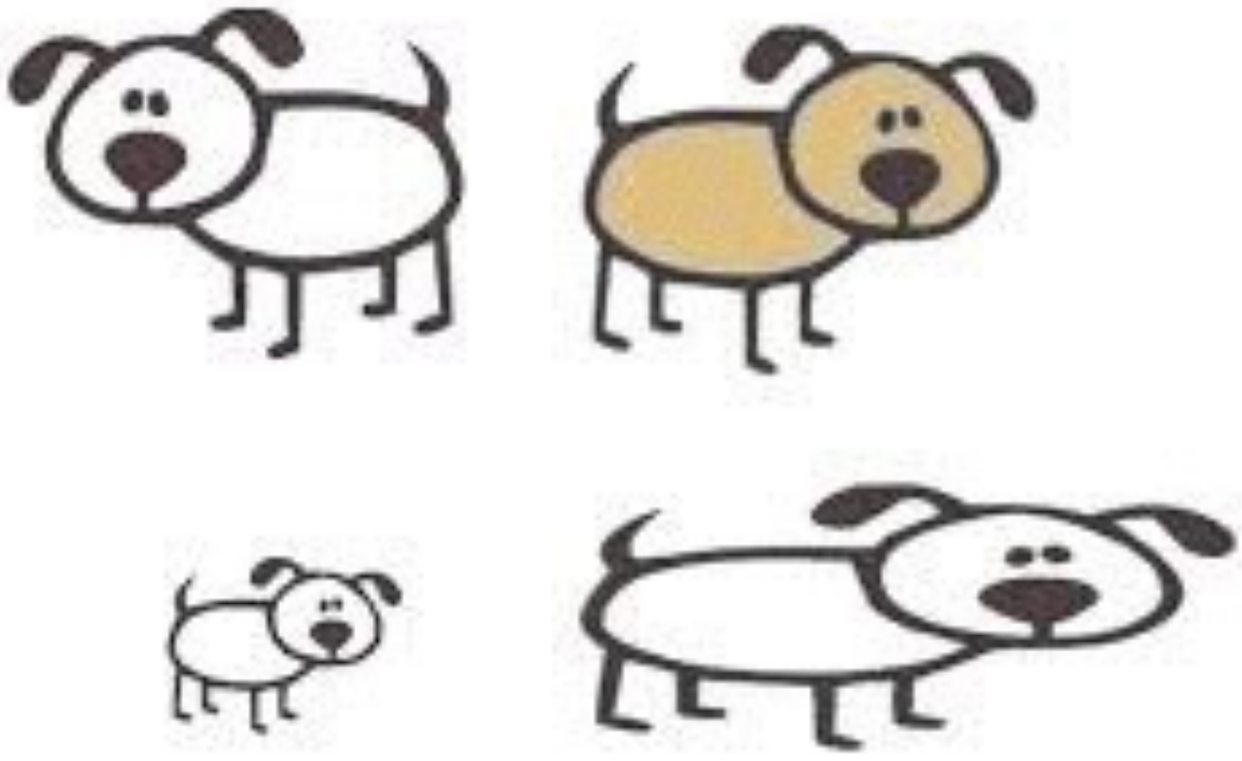
What could our learning intentions be?

I want my students to gain a **(KNOW)**ledge of:

- Attributes
- Mathematical language
- Spatial Awareness
- Number Sense

I want my students to be able to: **(DOING)**

- Reasoning
- Communicating conjectures
- Explain and Justify
- Engaging in Problem Solving



“Which one doesn’t belong?”

Can we foster both curricular competencies and mathematical understanding with WODB?

How is WODB inclusive?

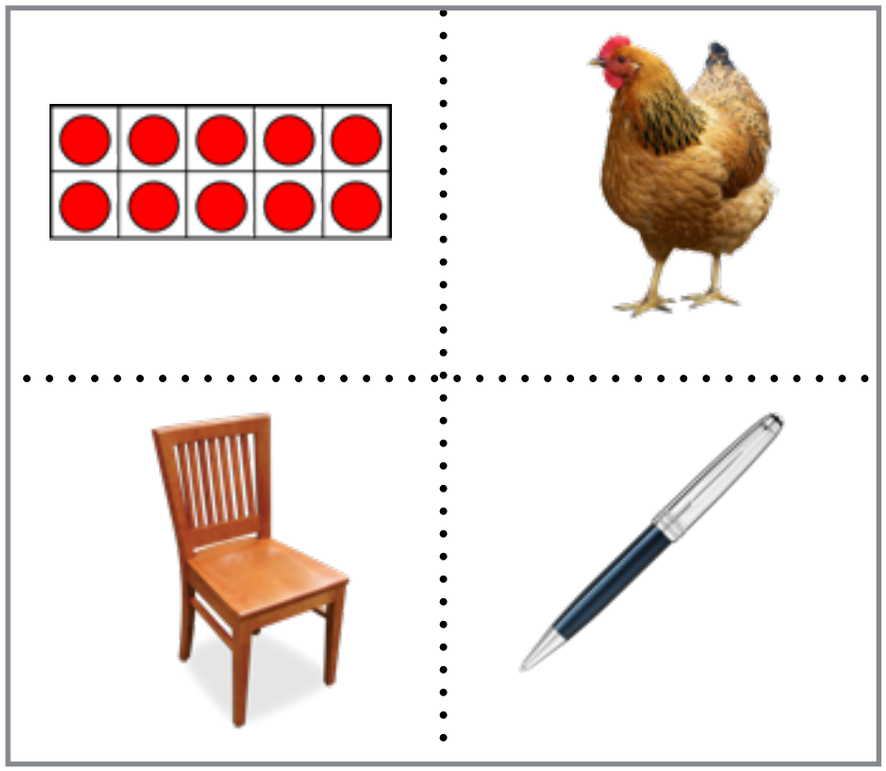
How might we use WODB to engage students?

Which One Doesn't Belong?

Christopher Danielson

www.wodb.ca

WODB



S	X
Y	Z

Literacy examples:
Rhyme - Syllables - Categories - Letters - Words

“What WONDERS do you see?”

Handmade by Vienna - http://ccbypetites.weebly.com/

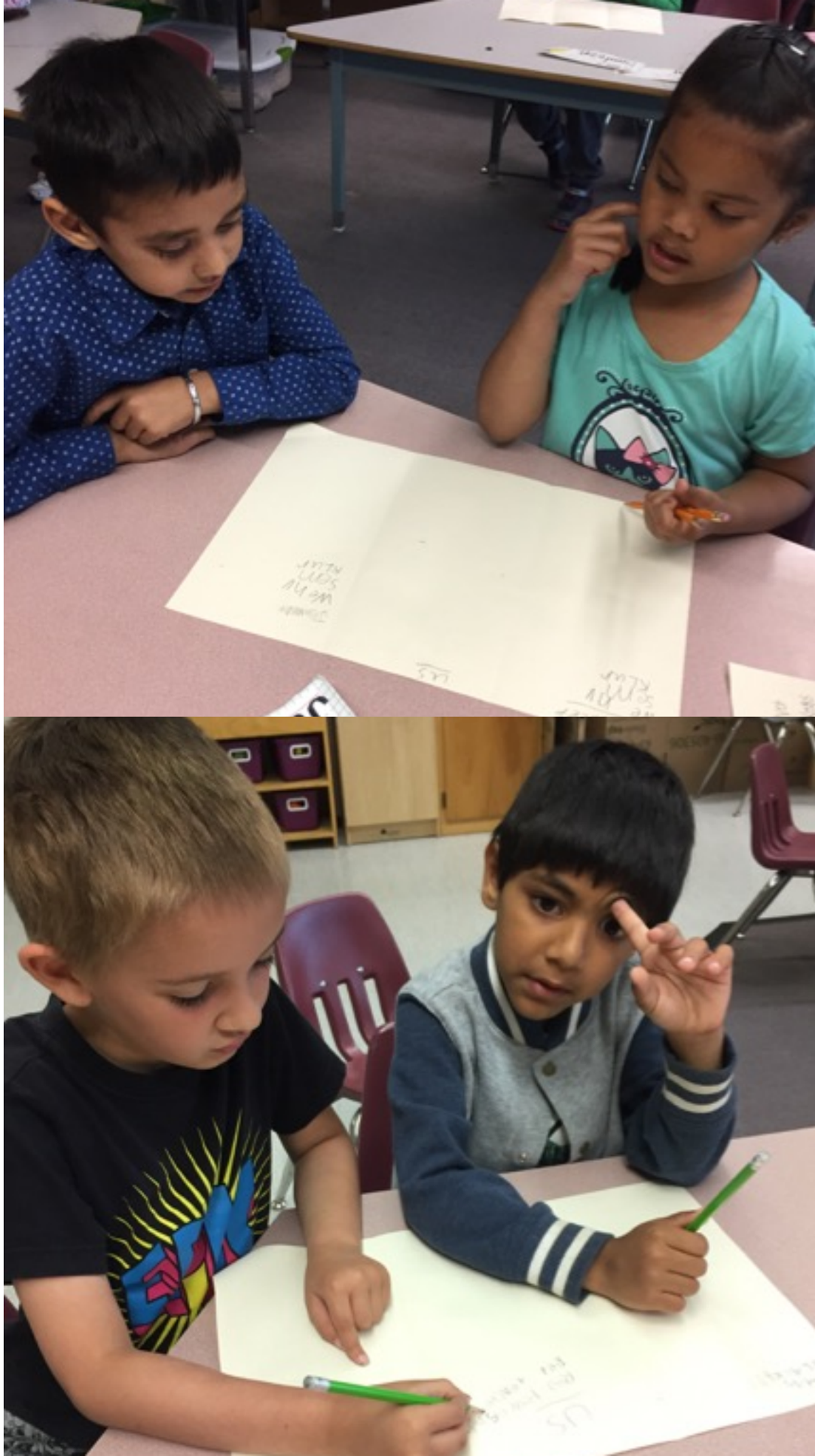
Grade Ones at Hjorth Elementary School

“What WONDERS do you see?”

Literacy Learning Intentions
I can think critically and creatively to describe similarities/differences and describe them orally or through writing.
I understand that my personal story is unique and can be shared.
I can express my identity through pictures and/or words (narrative texts either written or digital).

“How are you the same?
How are you unique?”

Through talk, drawing or writing



Identity is a huge part of the learning process!

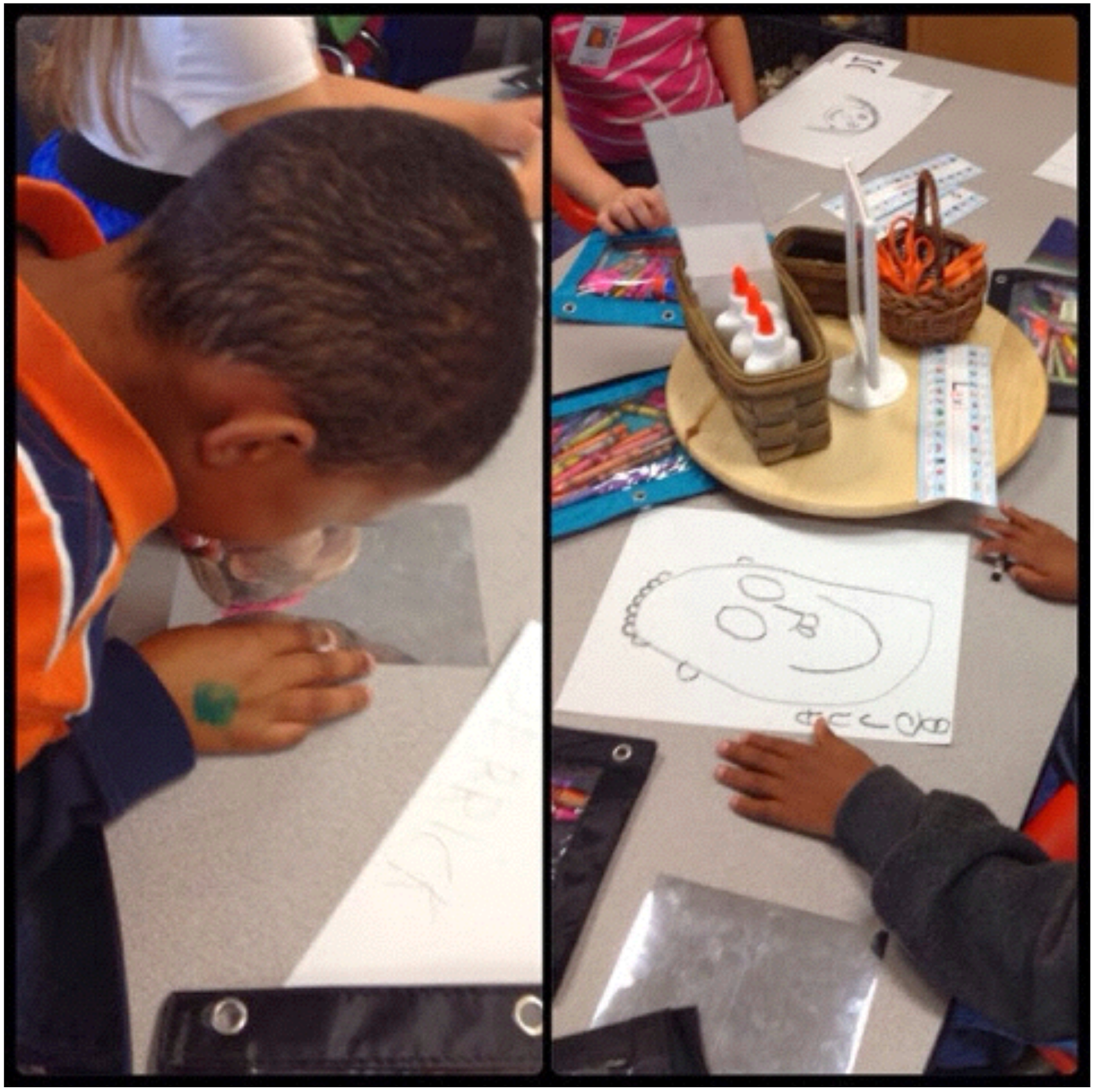
Knowing your gifts are valued, your culture and language are valued

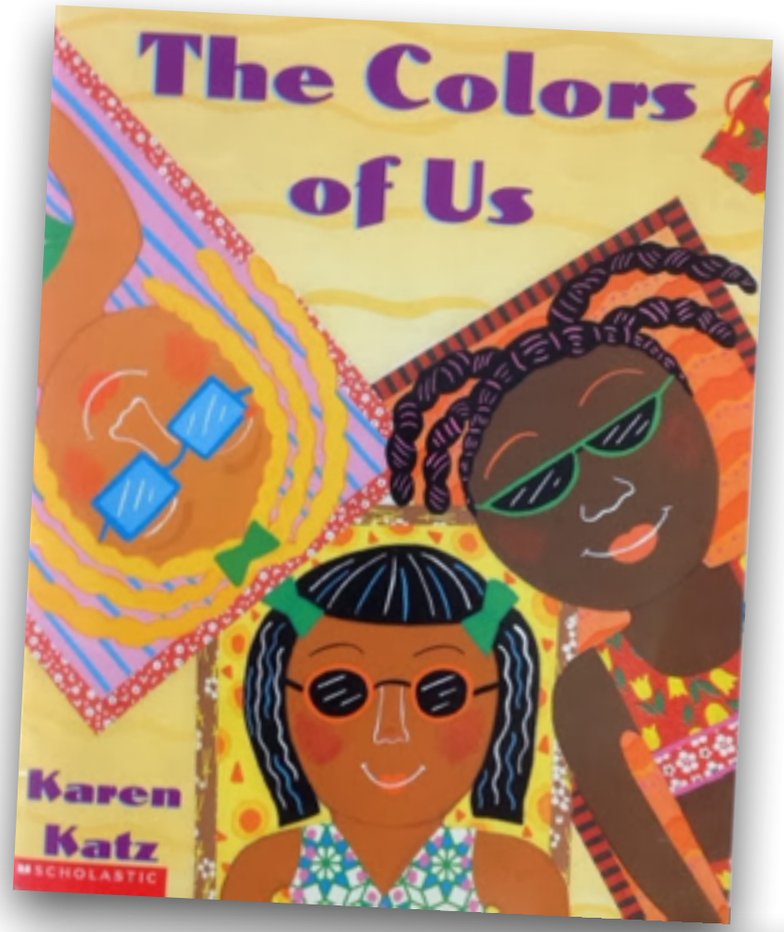
PS

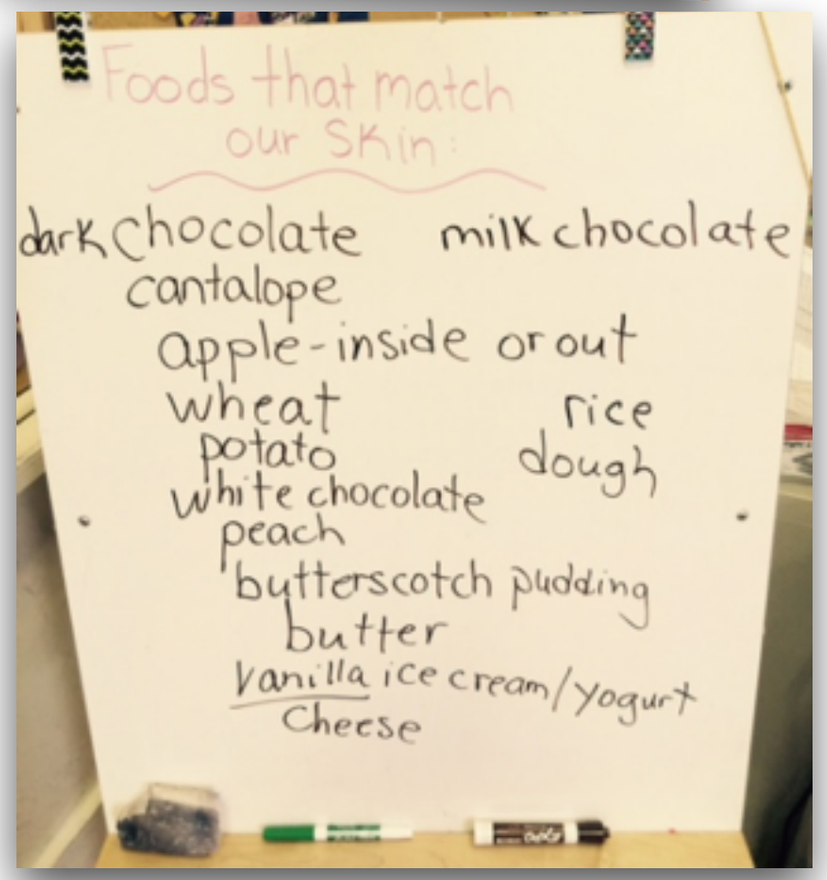
- Relates to **motivation**: everyone can contribute prior knowledge about themselves, their experiences, their family

- Create a community through sharing experiences and learning about each other

-Hearing each others' stories encourages students to exercise tolerance, kindness and respect for each others' "wonders" throughout the year.




The Colors of Us
Karen Katz
SCHOLASTIC


Foods that match our Skin:
dark chocolate
milk chocolate
cantalope
apple - inside or out
wheat
rice
potato
dough
white chocolate
peach
butterscotch pudding
butter
vanilla ice cream/yogurt
Cheese

We all have different goals!

we learned that our differences make us special

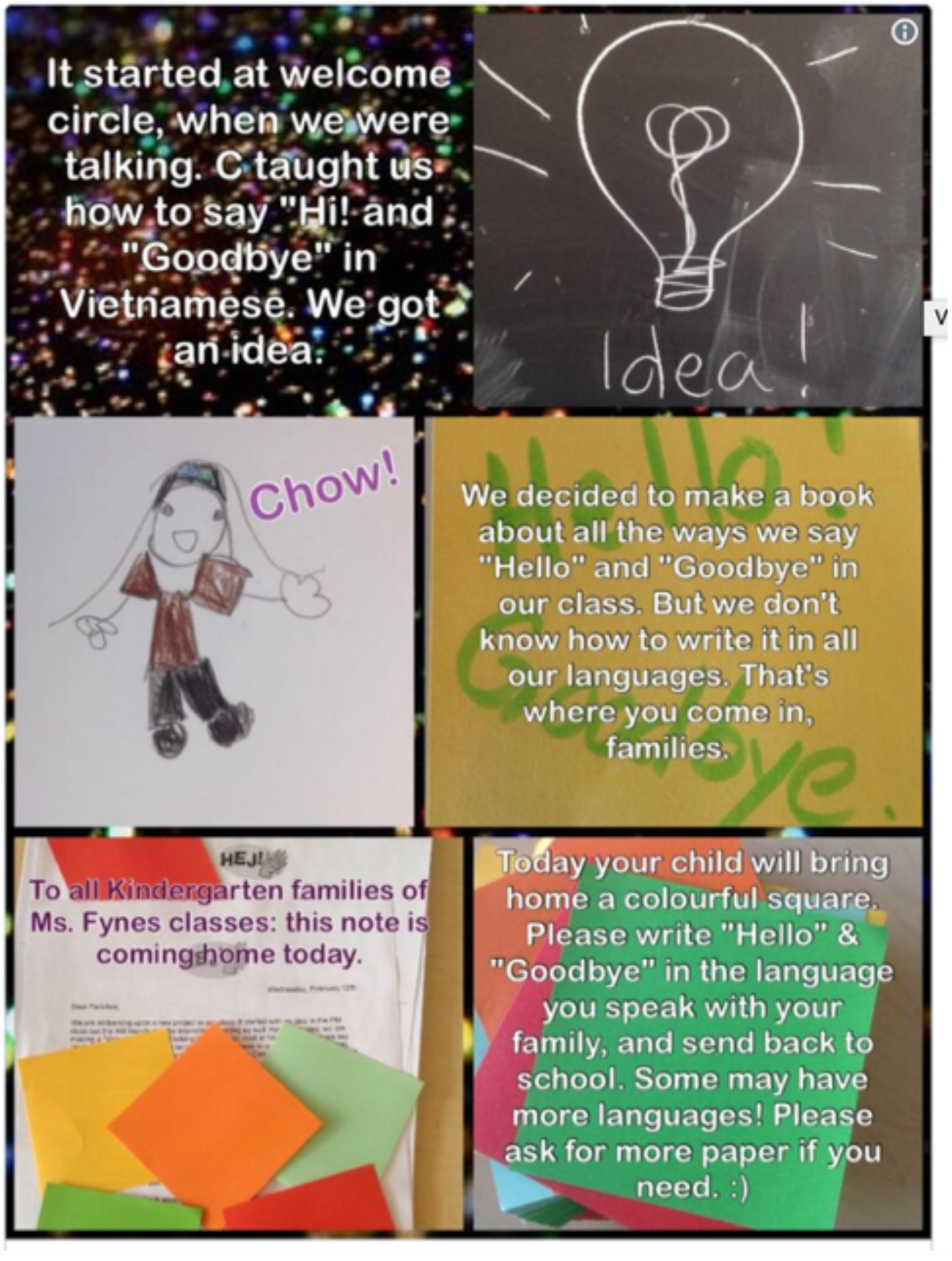

What I Like About Me!

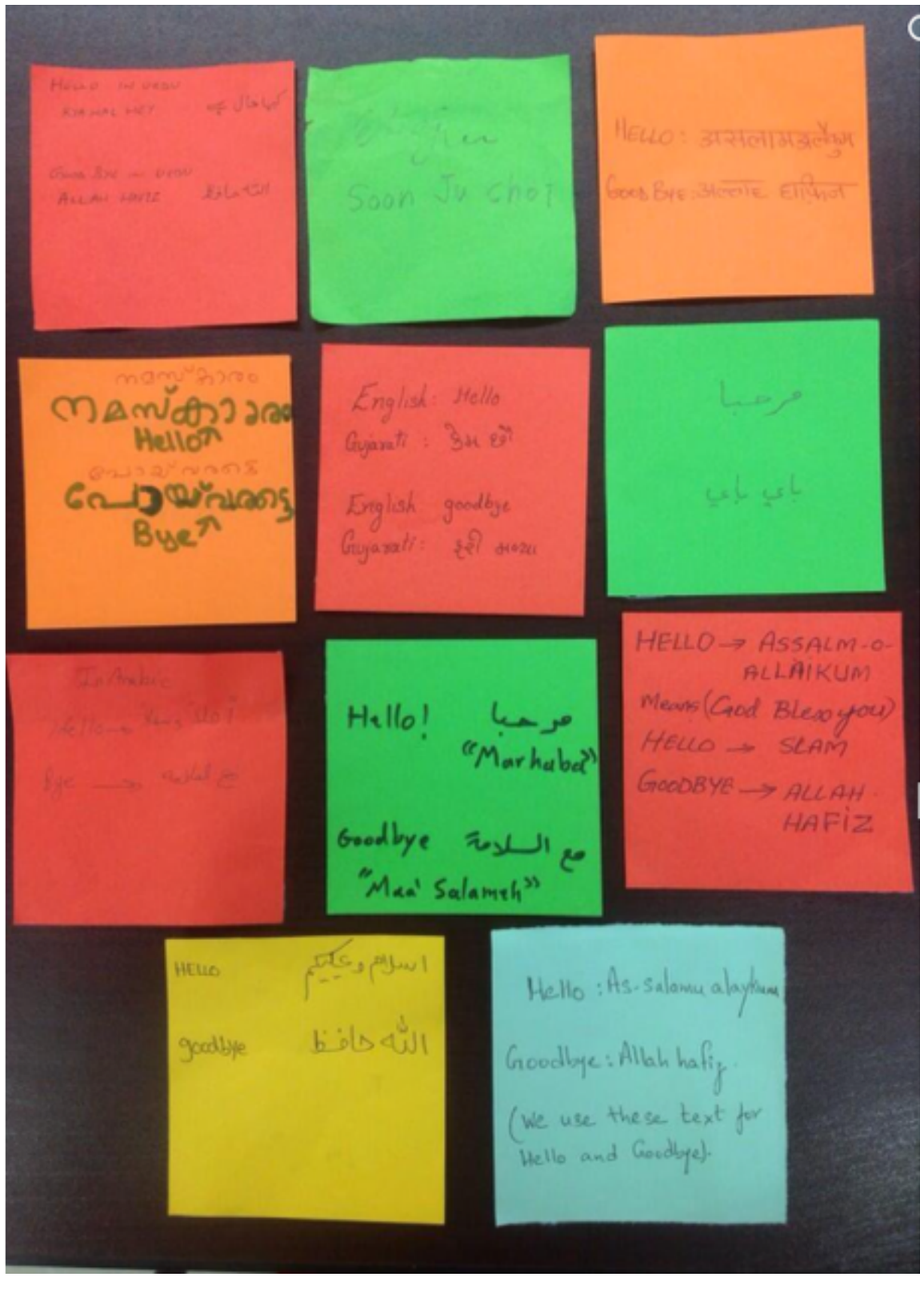
Dual Language books

"Promoting literacy development in the [ELL] student's first language will facilitate the acquisition of literacy in English. Accessing prior knowledge through the use of their first language provides the framework for new learning."

Thornwood Public School - Dual Languages Project -

thiskindylife.blogspot.ca





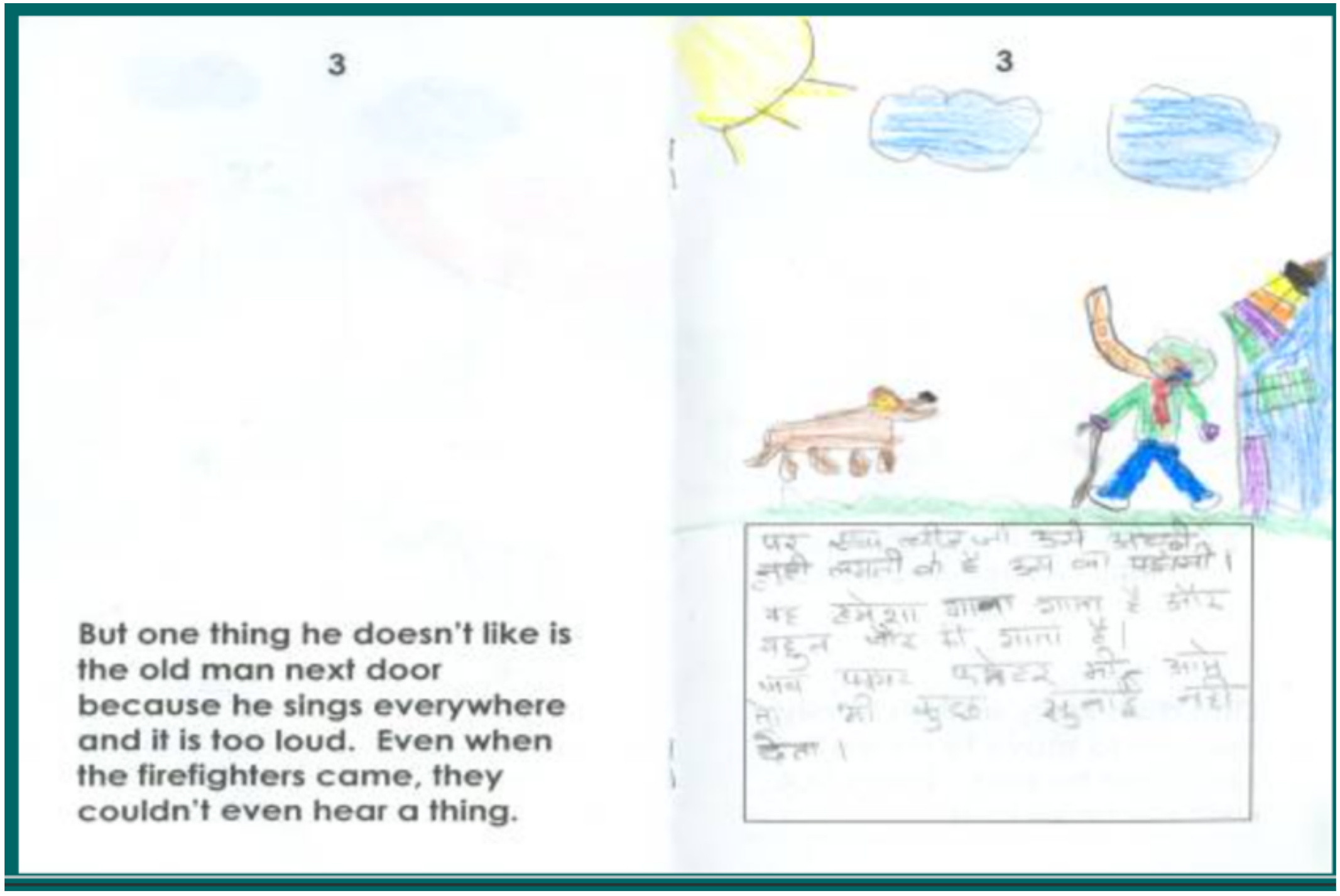
“How do you say hello?” Class Digital Book

Authentic audience: families viewed online

How could you create a multilingual numeracy book?

Opportunities for everyone to share their identity stories

Students who are becoming bilingual is an asset!



scribjab.com

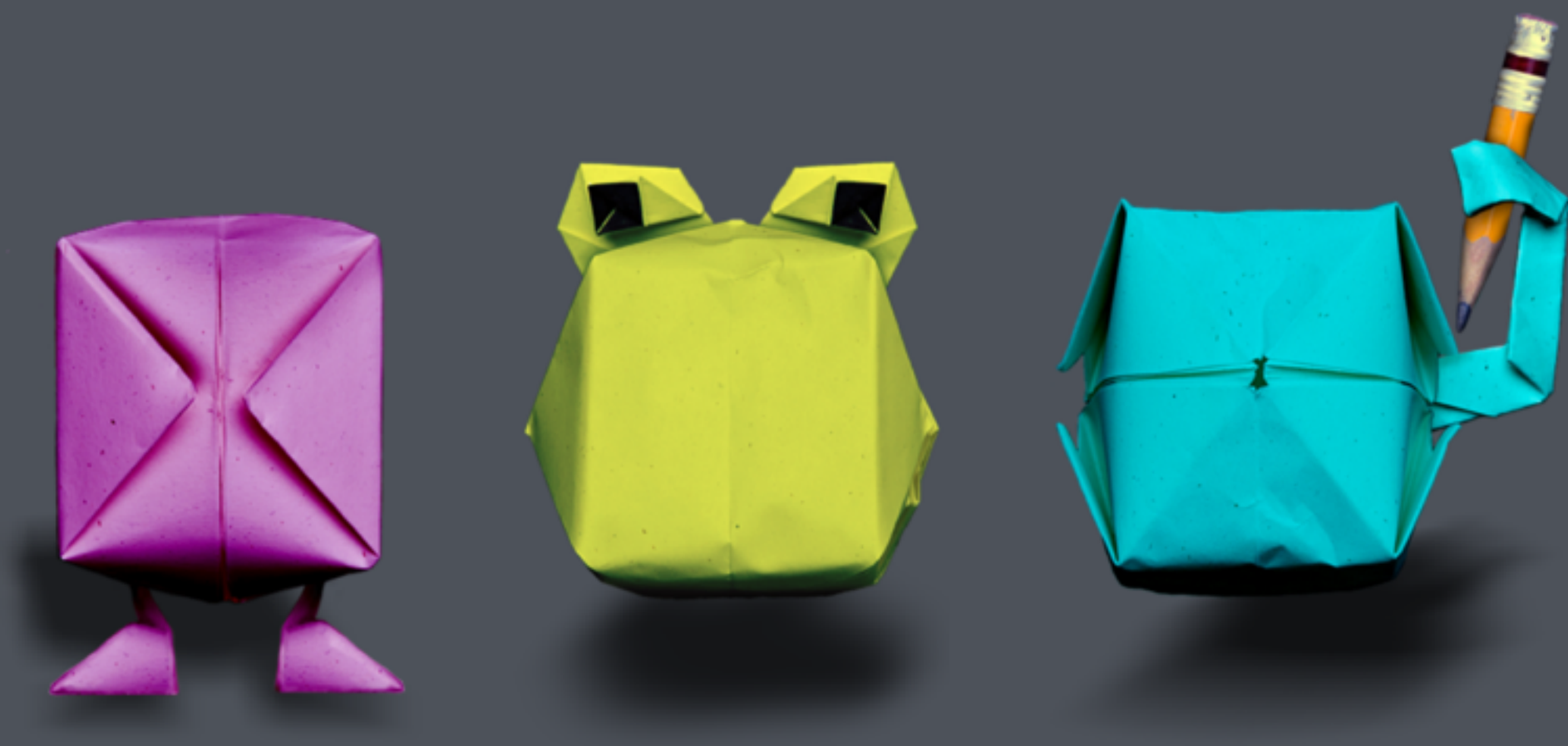
SCRIBJAB

SFU SIMON FRASER UNIVERSITY ENGAGING THE WORLD

Canadian Heritage Patrimoine canadien

Canada

Decoda LITERACY SOLUTIONS



English | Français

ScribJab is a multilingual tool to create and share digital stories in 2 different languages.

ScribJab est un outil multilingue pour créer et partager des histoires numériques dans 2 langues différentes.

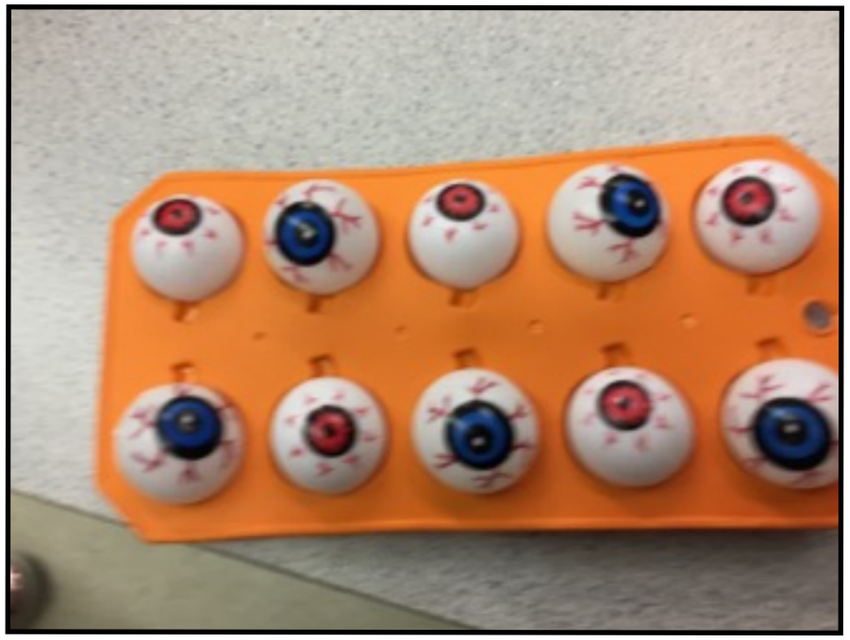
English

Pink heart is very nice to every one. She loves art and every body called her Pinky Winky.

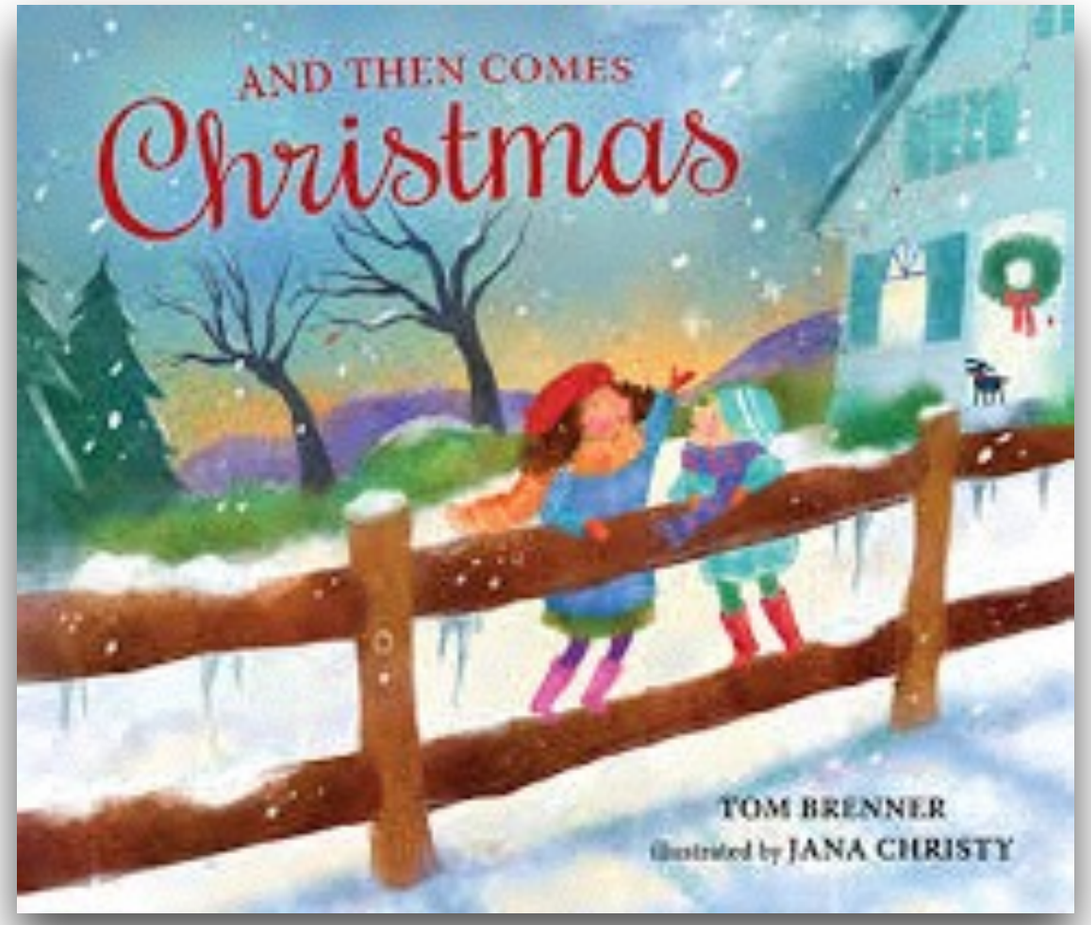
Hindi

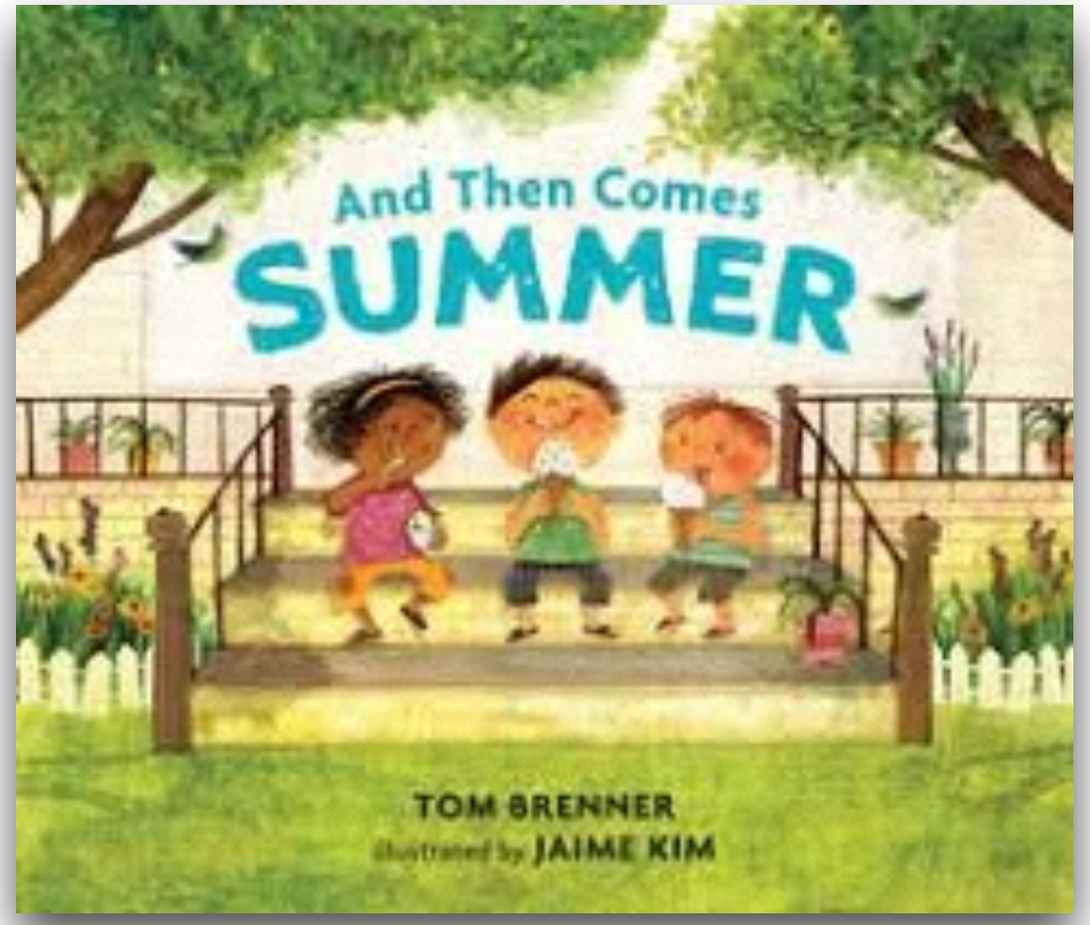
गुलाबी दिल सबके साथ अच्छि है। उसको कला पसन्द है और सब उसको पिंन्की विंकी बुलते है ।

Booktalk!



“Can you create patterns similar to the one in the story?” “Can you write a story with a similar pattern?”





As your students move ahead in their learning… how might you use a similar story to extend their learning?


BREAK
TIME

Play time

STORY WORKSHOP:

Can you tell a story with the materials on your table?

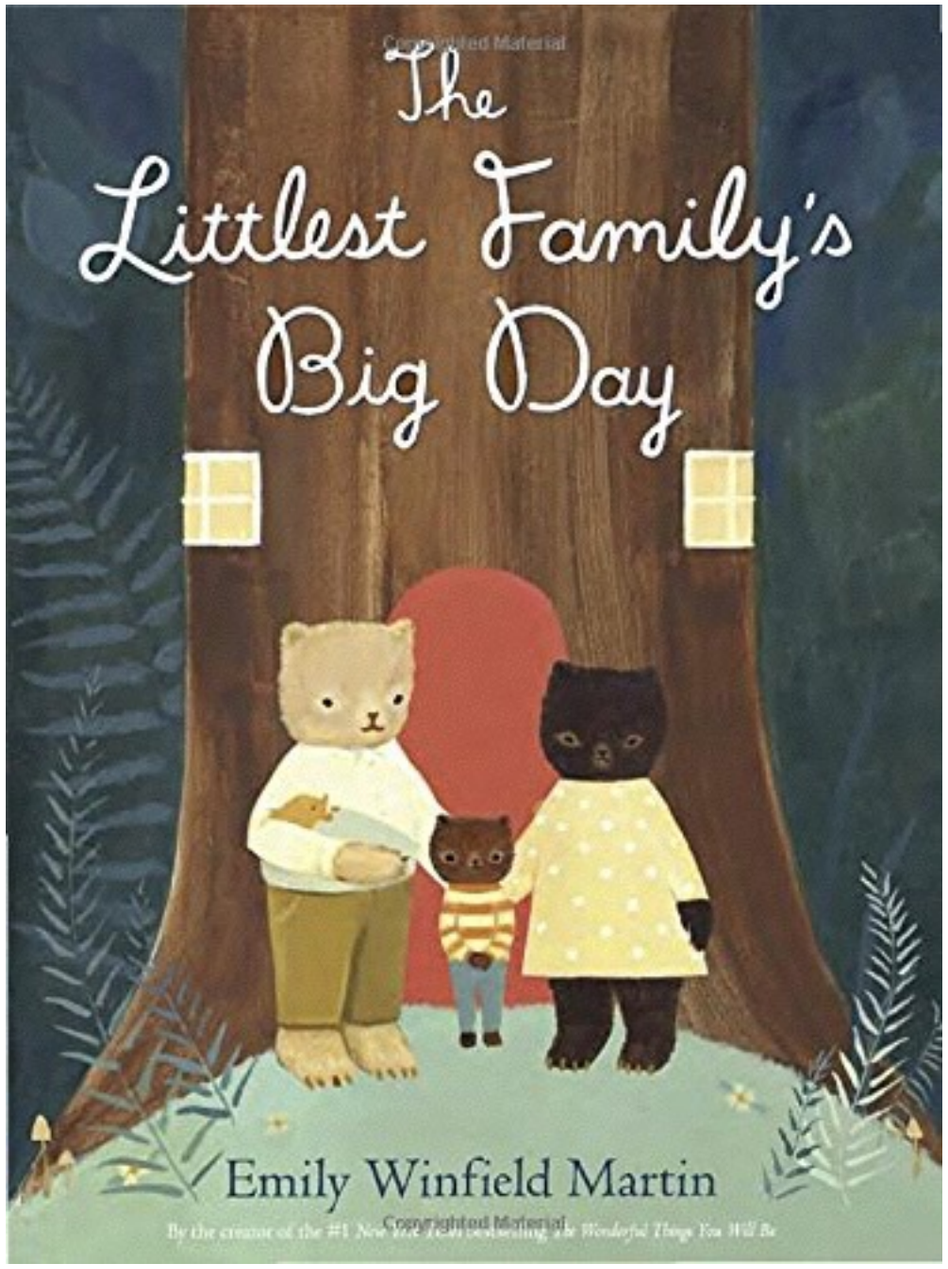
What learning intentions come to mind for Literacy and/or Numeracy?

The Littlest Family's Big Day

by Emily Winfield Martin

A family of tiny bears has moved into their new home. But now it is time for them to explore their new neighbourhood. They find many welcoming creatures but becoming lost after a rainstorm. The bears are reduced by huge owl who flies them home. Embedded is the message "But when you are Lost, is the best time to Found".

It is fully of stunning artwork with touches of magic… don't miss the cute little details!



Story Workshop:

NOT just Literacy, but also in Mathematics

"Preparation begins with our image of children. It begins with our belief and knowledge and trust in the incredible capacities of children - all of them."

- Susan Harris Mackay

Kristen Pennington's
Grades K/1
Hjorth Road Elementary

Provocations

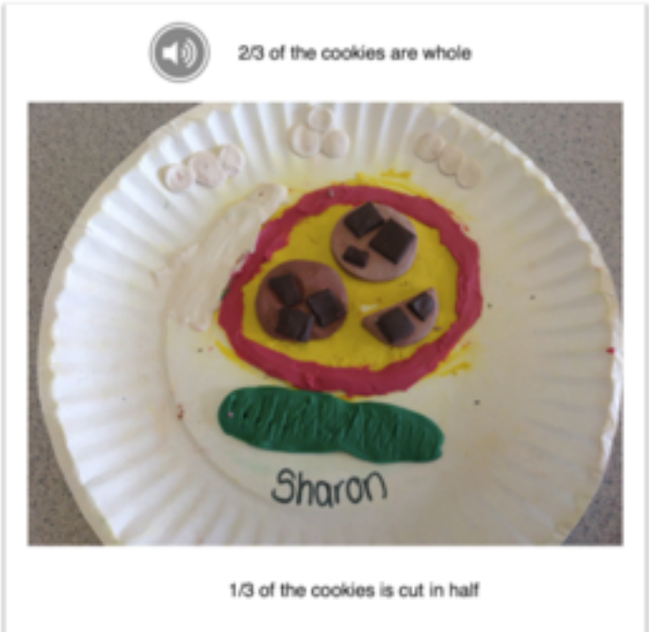
- It is a question that provokes thoughts, discussions, questions and inspires imagination and creativity.

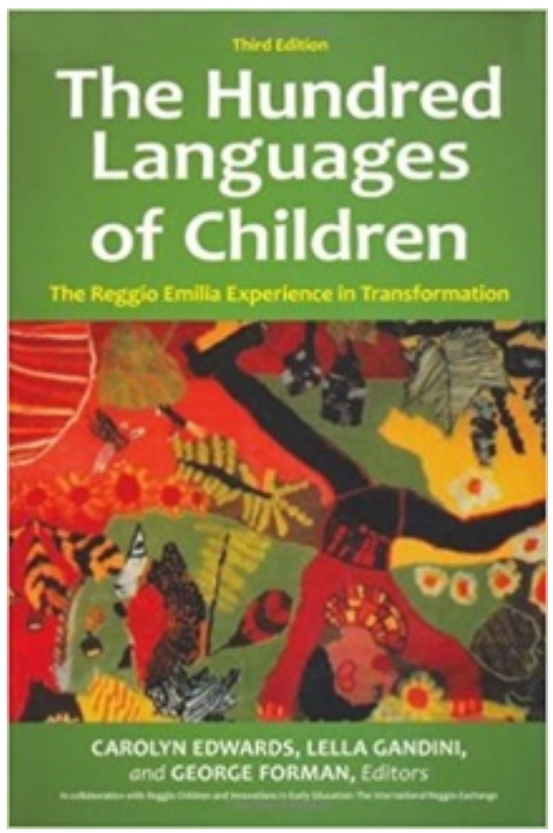
- The intention is to provide an open-ended invitation for a child to explore and express themselves.

An invitation to use ice, felt animals, or painting as a provocation…

An invitation to use loose parts, plastercine, story rocks, the outdoors, book baskets as a provocation…

Representing stories through…





Story Workshop invites children to…

- speak and listen
- collaborate with others
- use creative thinking
- try new vocabulary
- use story language
- engage in oral storytelling processes
- rehearse and develop stories before writing
- manipulate materials to generate creative ideas

I get ideas when I play.

My ideas are fun for me and make me happy.

I get ideas when I use my senses to explore.

Story Workshop Connections to the Core Competencies:

Strongly connects to the Core Competencies: Communication

- To share and develop ideas
- To explore topics in their stories that are of interest to them
- To work through their theories and understandings
- To work together to create a story
- To tell about their experiences
- To reflect on their learning during story workshop

Story Workshop Connections to the Core Competencies:

Creative:

- deeply collaborative
- children come into the classroom with “funds of knowledge”
- their stories have value to them

Critical:

- when they are involved in decision making they are in essence problem solving, analyzing, inquiring into theory -- ex: how does this stack?
- creating and carrying out plans
- synthesizing information
- knowledge has the capacity to be transferred into aspects of local or global issue discussions
- Testing theories

Story Workshop Connections to the Core Competencies:

Personal and Social

Positive Personal and Cultural Identity

Children bring experiences and cultural contexts to their play and their stories.

See traces of their understanding of identity through relationship with materials.

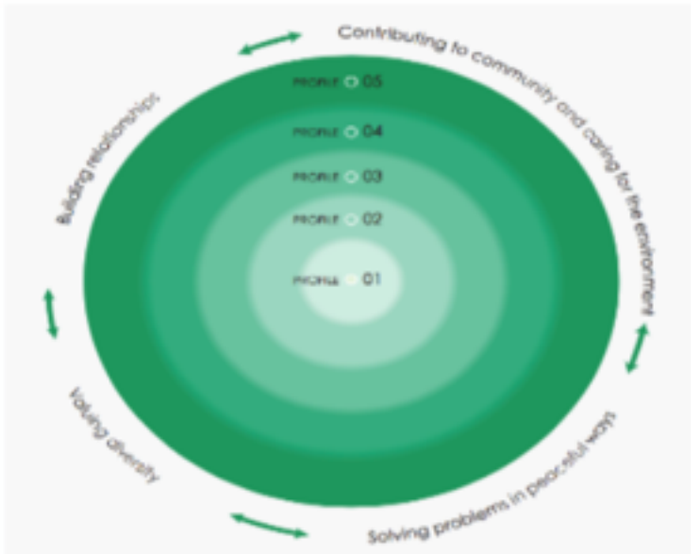
Personal Awareness and Responsibility

Listen closely - we see determination on their faces.

They share their own stories and with pride.

They persevere with challenges.

Social Responsibility



Story workshop is highly collaborative.
Children create and share stories with others.

Through play with materials may explore environmental issues, how to take care of selves, others and the world.

Language and *story* can be a source of creativity and joy.

Through listening and speaking,
we connect with others and share our world.

Literacy Learning Intentions
I know that I have stories to tell. I can explore language through speaking & listening.
I can retell a story from memory, and can connect to new stories.
I can get ideas from materials to create stories and share them orally.

Oral Language Development

Young children need writing to help them learn about reading, they need reading to help them learn about writing; and they need oral language to help them learn about both.

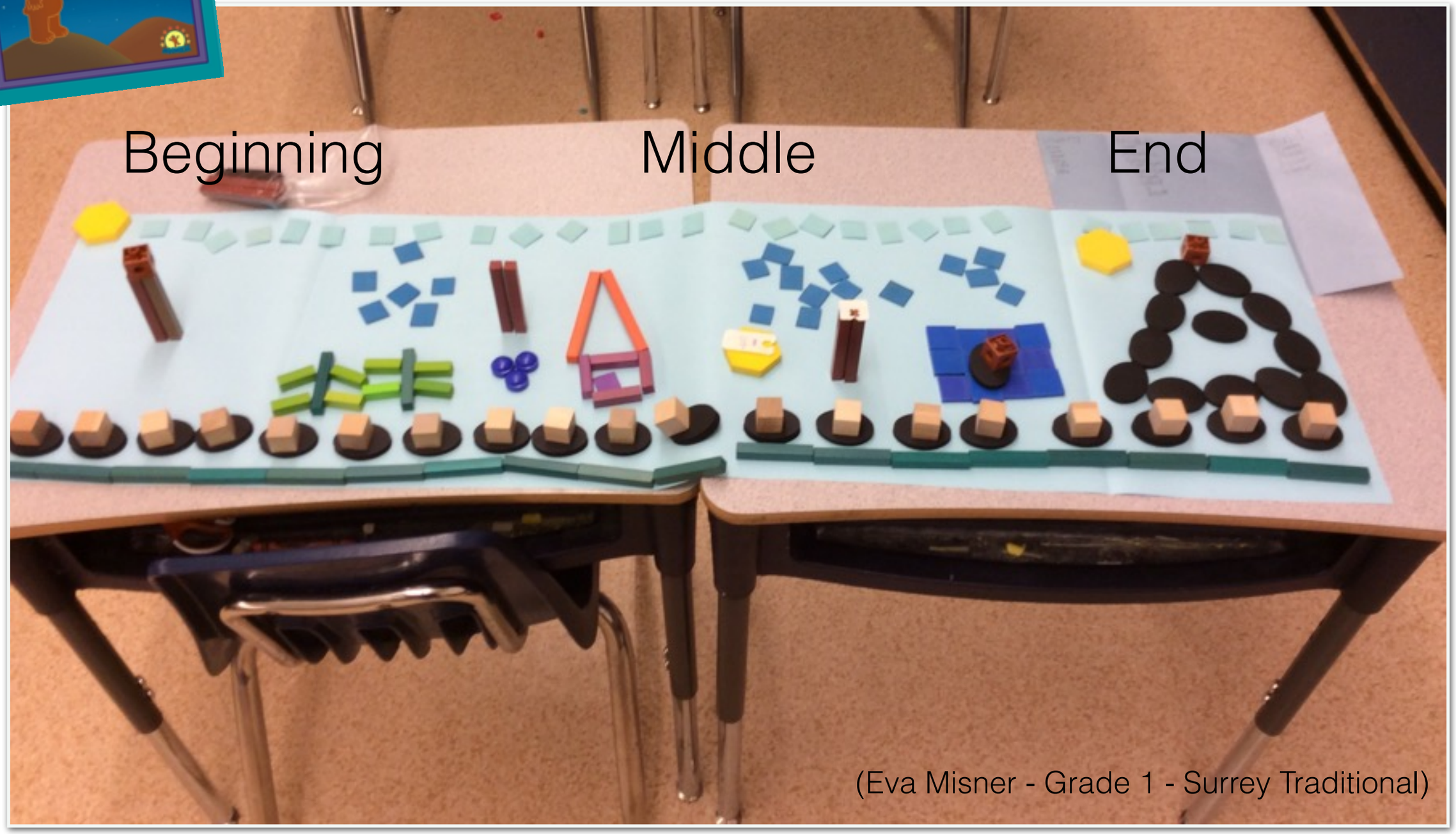
Vocabulary
Listening & Speaking
Expressing ideas
Questions
Talking about texts/Storytelling

Story Baskets

How do they know each other?
What adventure could they have?

How could your animals meet?
What could they do together?
What adventure might they have?

How can retelling using materials support all learners?



Comprehension and understanding

Flannel Board Stories

Visual - sight, spacial perception

Tactile - touch & senses, hands-on manipulation of character and settings

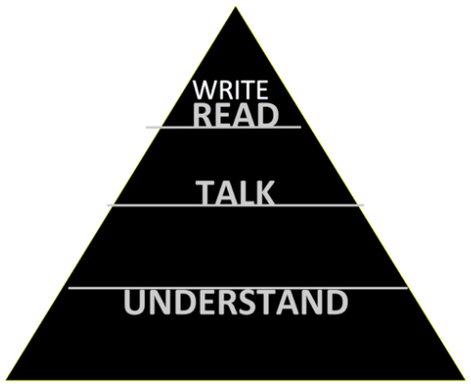
Creativity - Imagination, make-believe, drama, storytelling

Language - Speaking and listening, solidifying and rehearsing vocabulary from the story

Learning Intentions for ALL, SOME, and a FEW

Everyone must have an entry point!

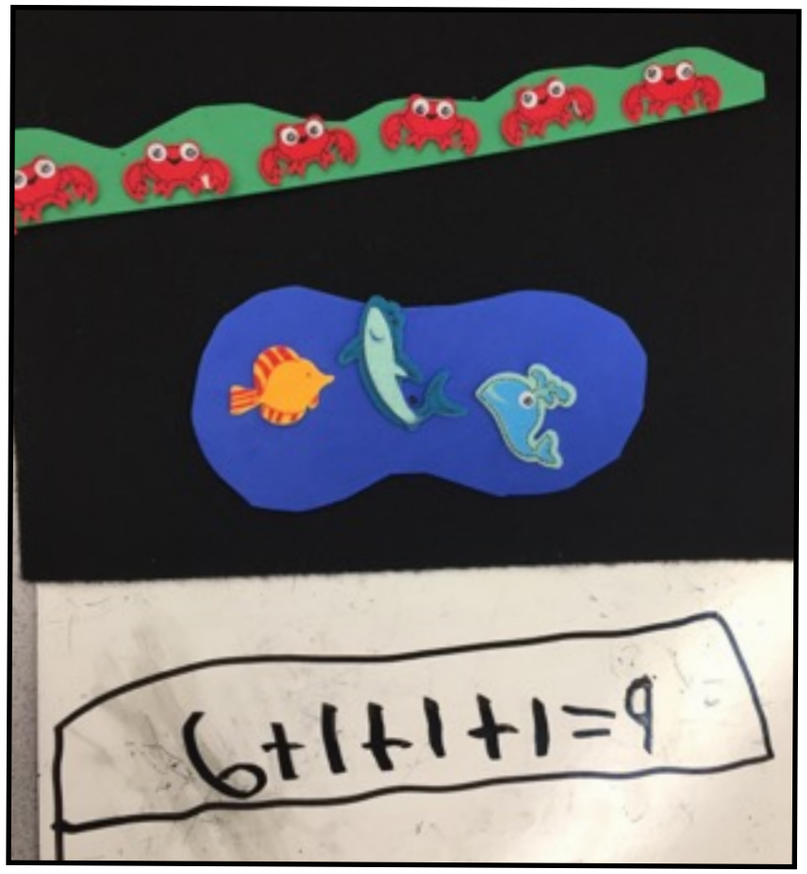
Langley Child Care Resource & Referral Centre
(treasure trove for flannel board stories!)
20577 Fraser Hwy, Langley BC
CASH ONLY (604)533-4425
Dianne Verhulst is the contact person



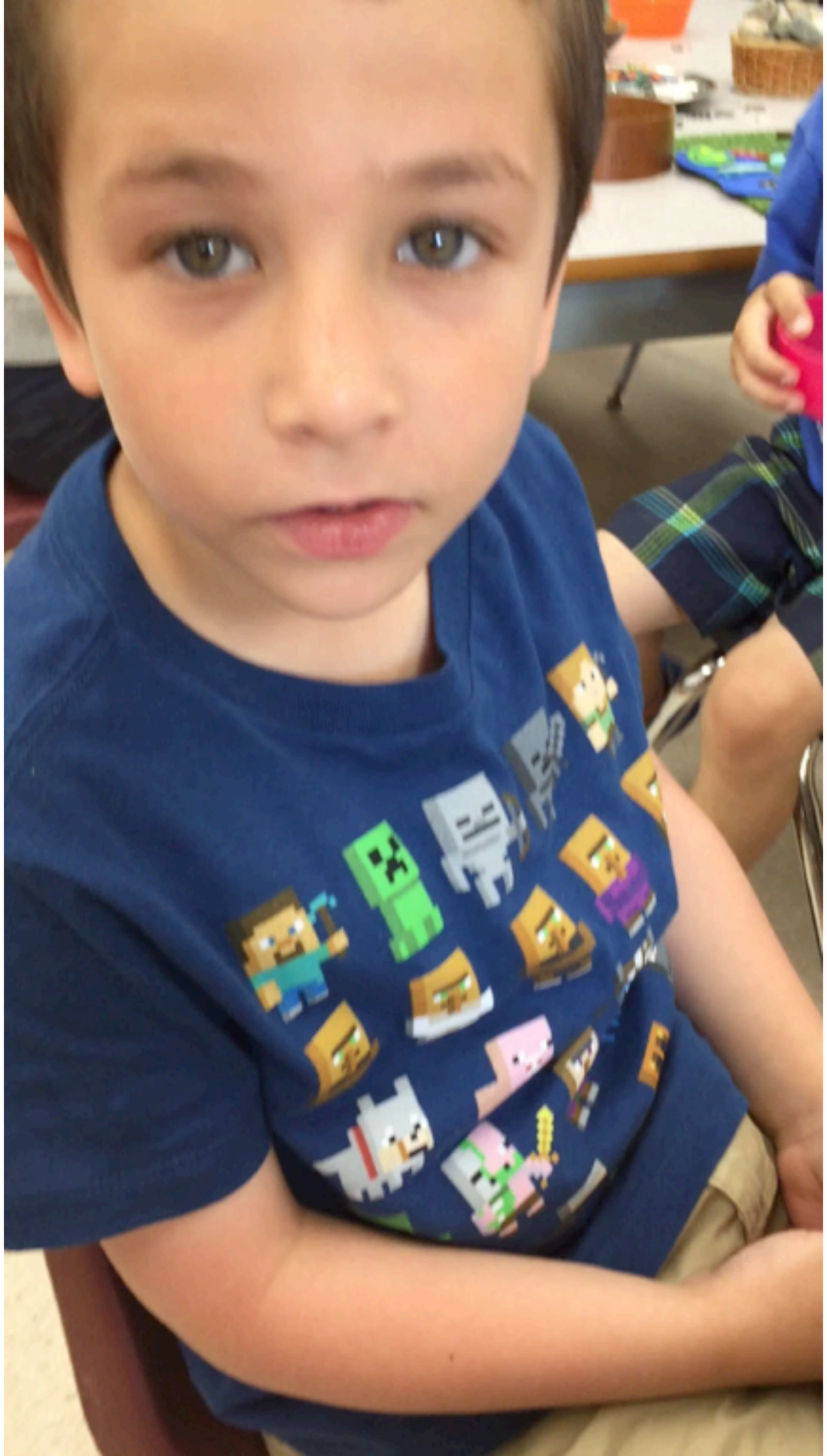
Oral storytelling naturally leads to writing.

"There is a very reciprocal, interdependent relationship between their play and the writing. Their play sparked their writing, which in turn supported the quality of their play, which then positively affected their writing, and so on."

(Matt Glover,
"Engaging Young Writers", 2009)

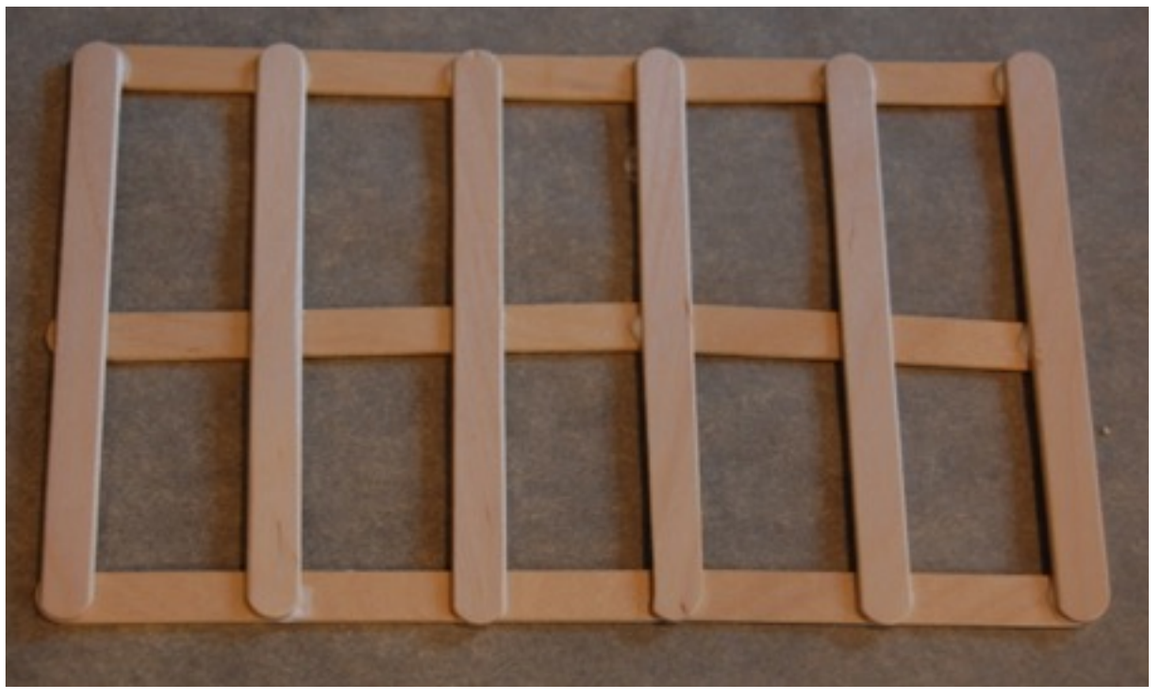


Numeracy Learning Intentions
I can communicate my mathematical understandings concretely and orally.
I can communicate my mathematical understandings pictorially (representation).
I can communicate my mathematical understanding symbollicaly.

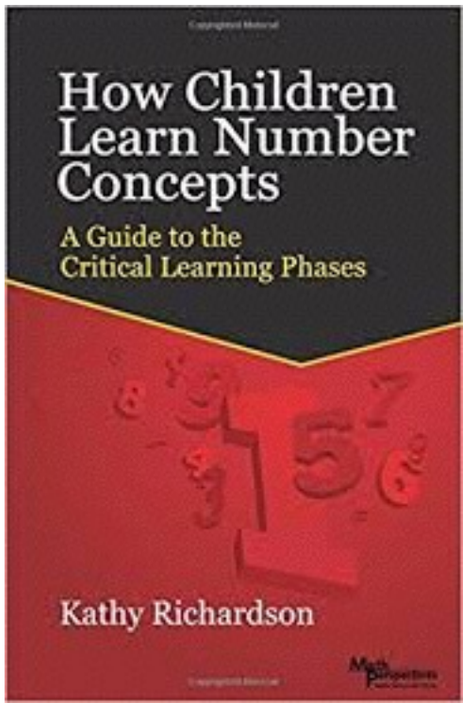


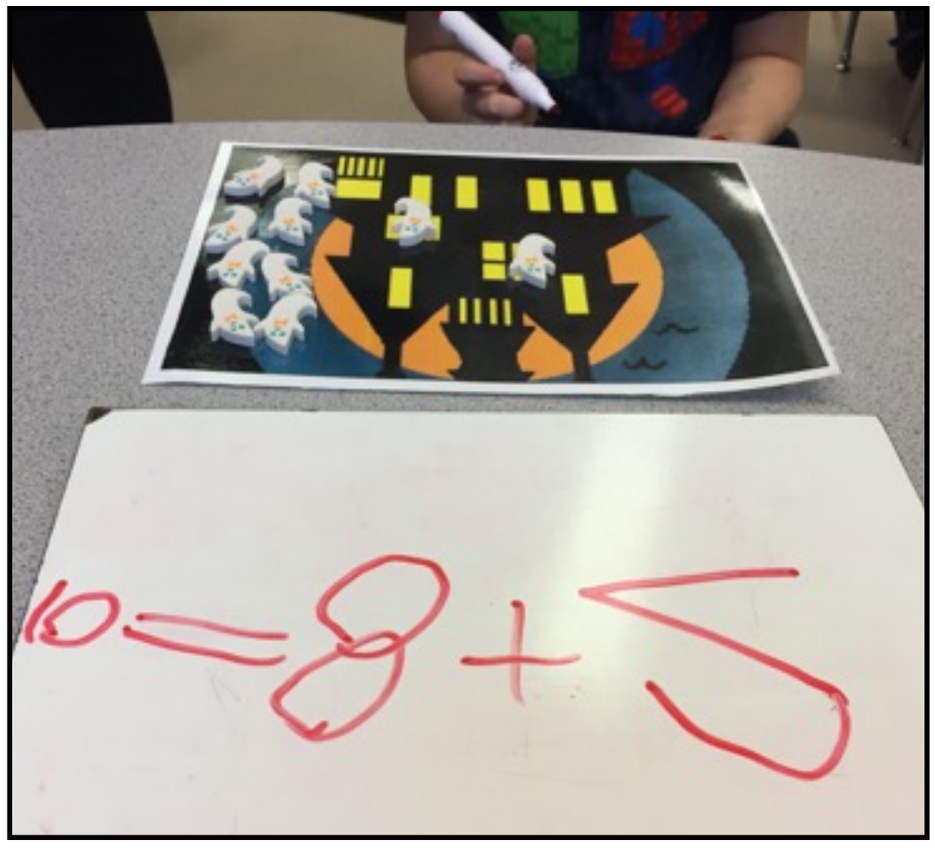
So,clearly she had more than 13 items.

What would be your next step? What might you suggest?



Developmental progression of understanding.





Learning Intentions for ALL, SOME, and a FEW

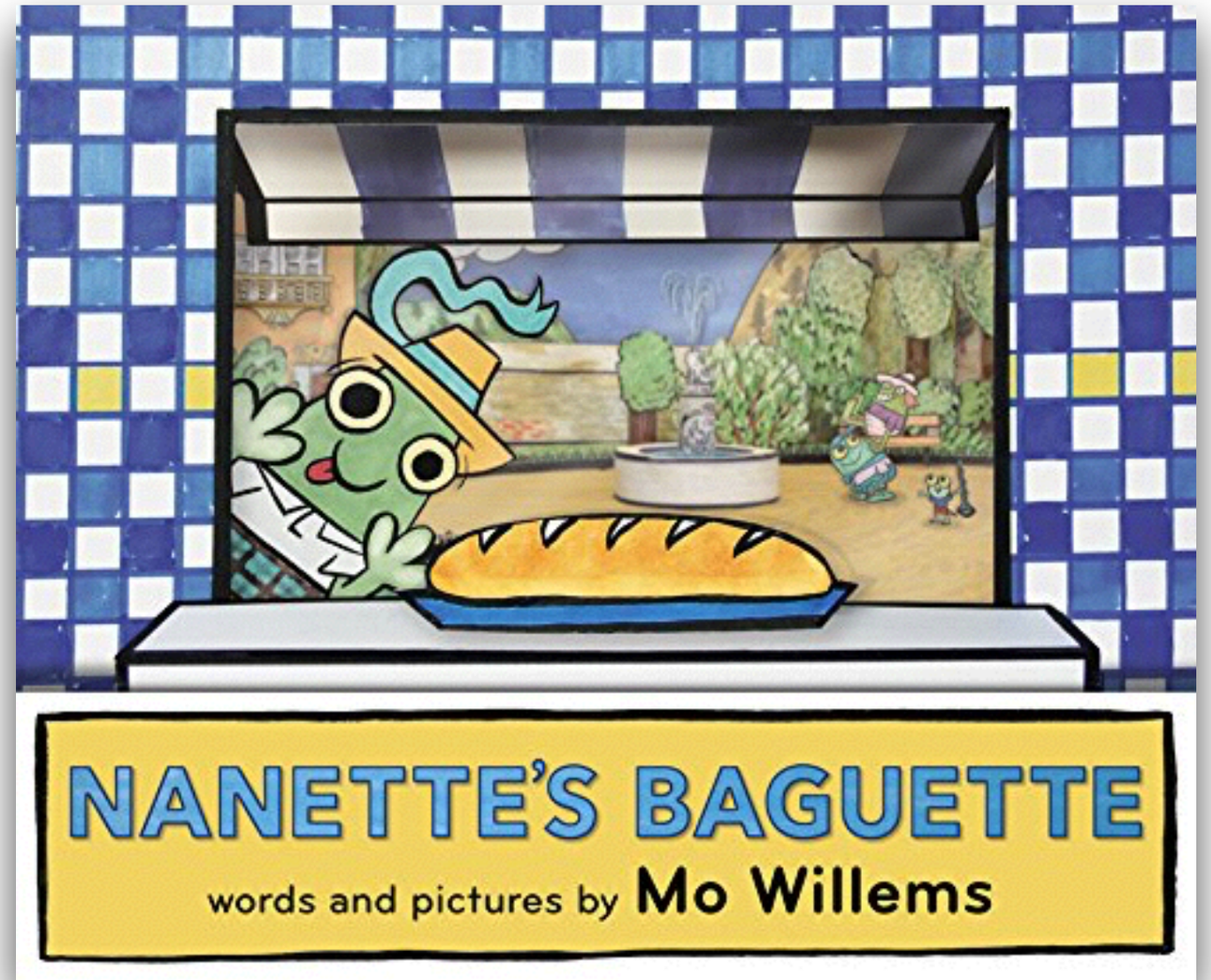
Everyone must have an entry point!

Nanette's Baguette

by Mo Willems

Nanette's mother entrusts her to get the baguette from the bakery for the first time. But can Nanette resist sampling the delicious smelling baguette before she reaches home?

Ambitiously written using a variety of /-et/ words, Mo Willems offers an entertaining story that kids love!



Literacy Learning Intentions
I can hear and play with the sounds of language & words. (Phonological & Phonemic Awareness)
I can identify rhyming words, and can generate words with similar sounds.
I can use descriptive words to describe my senses of touch, smell, sight, sound & taste.
I can develop oral language and new vocabulary through play.

Literacy Learning Intentions
I can make predictions based on visual information (pictures)
I can discuss my theories and listen to the ideas of others.
I can adjust my theories based on new information.

Picture Carousel

Small groups - Observe and talk - Rotate pictures
Create theories/predictions based on evidence

What does this picture make you think about?
What do you wonder?

Does this picture fit your predictions/theories?
How might the pictures be connected in the story?

What do you wonder?

How have their predictions evolved?
Are they curious?

Enjoy finding the details and answering your wonderings while you read the book!

Themes to explore:

RESPONSIBILITY

"What does it mean to be responsible?"
"What are you responsible for?"

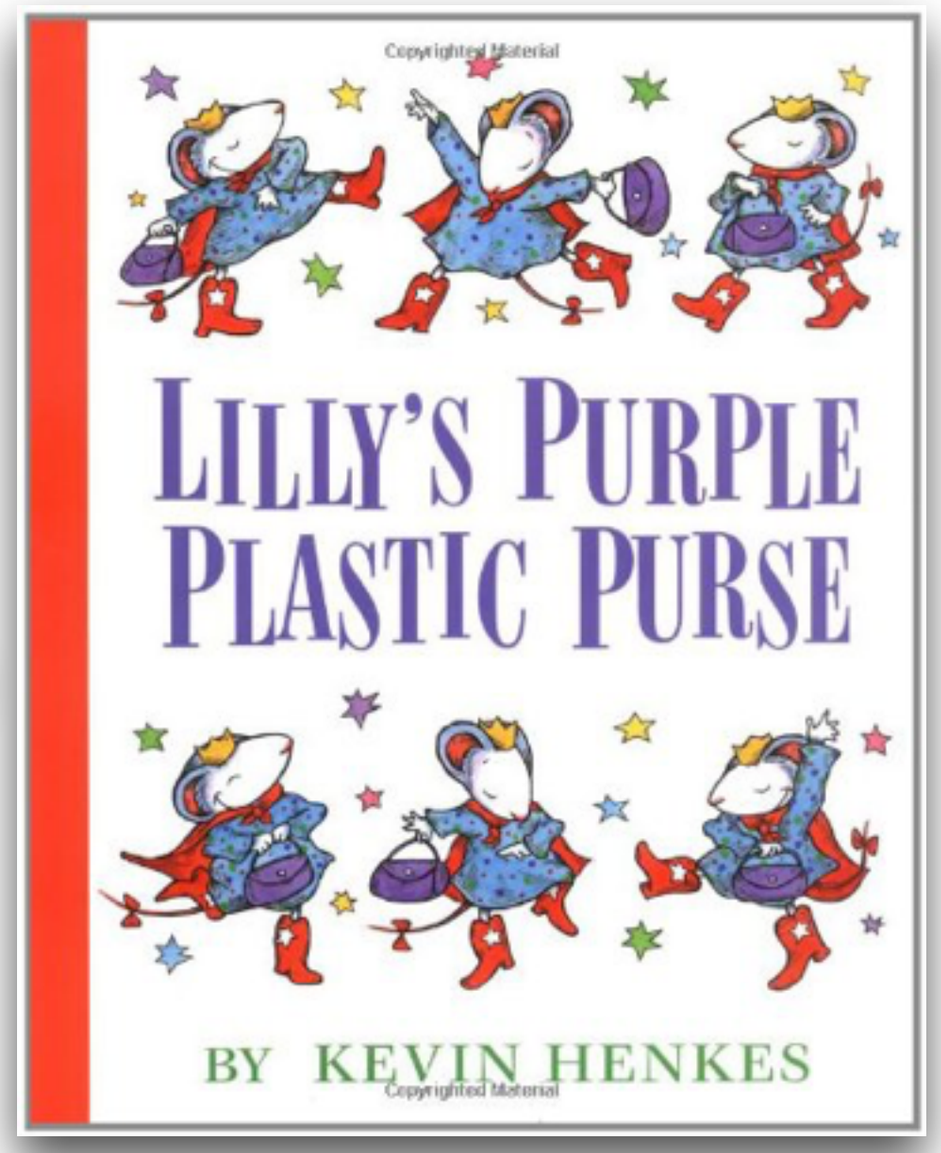
MAKING MISTAKES

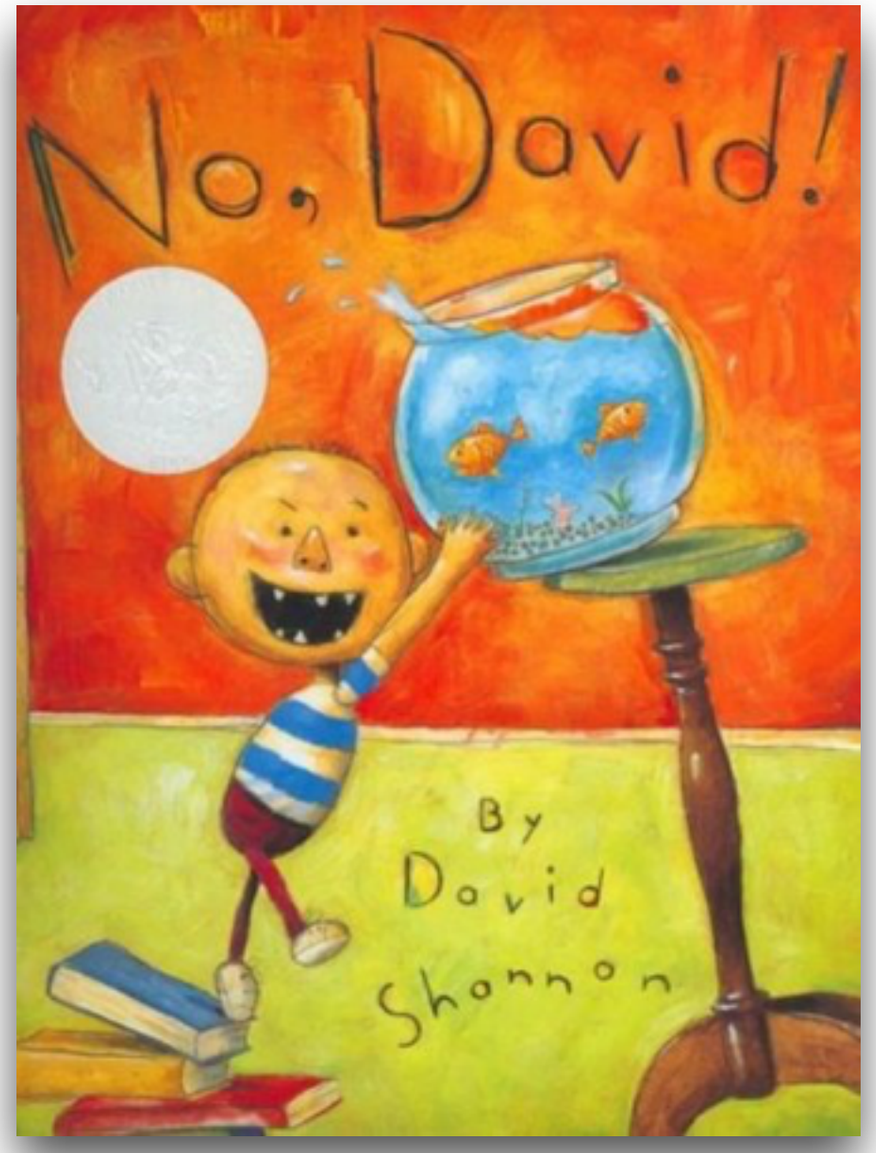
Mistakes happen. They can help me learn. They make me better!

FORGIVENESS

Examine Nanette's mother's reaction.
"What does forgiveness mean?"
"How does it feel to be forgiven?"

Connect to stories with similar themes:





Oral Storytelling of similar experiences:

https://www.youtube.com/watch?v=7BxQLITdOOc

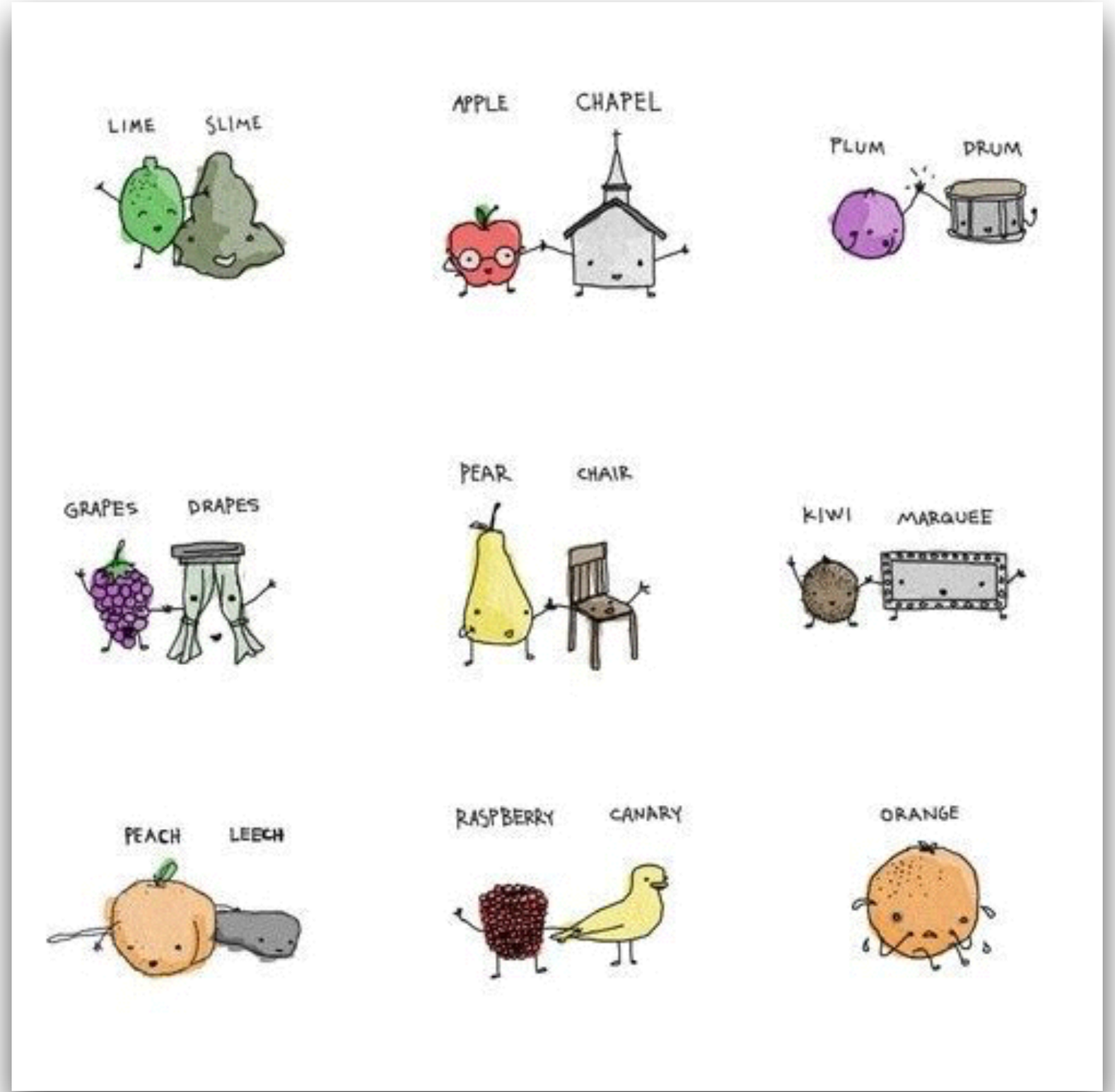
“What food can you not resist?”

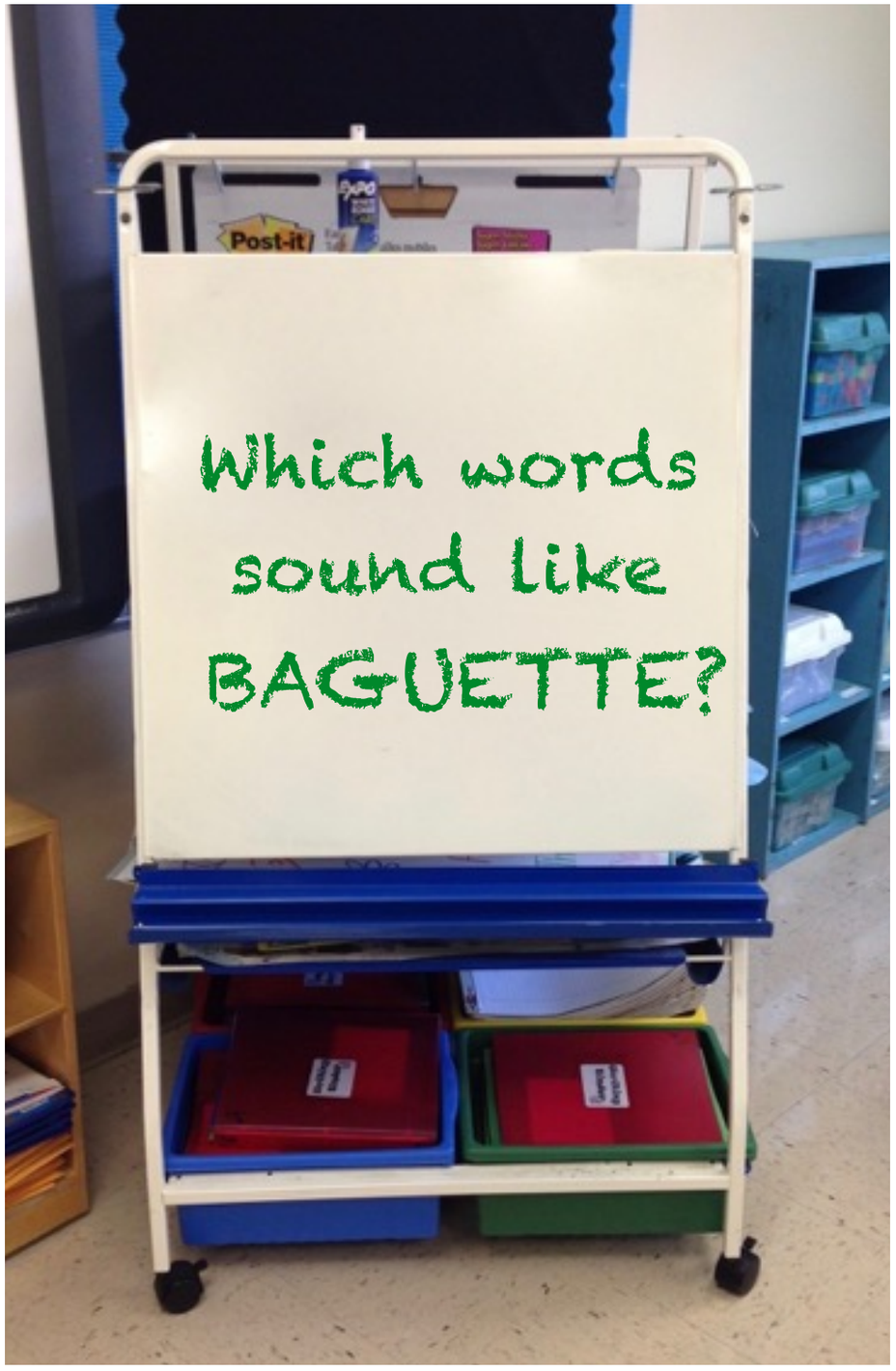
Food Rhymes

"What food words are easy to rhyme?"

"What words are difficult to rhyme?"

"Can you make a rhyme about something in your lunch?"

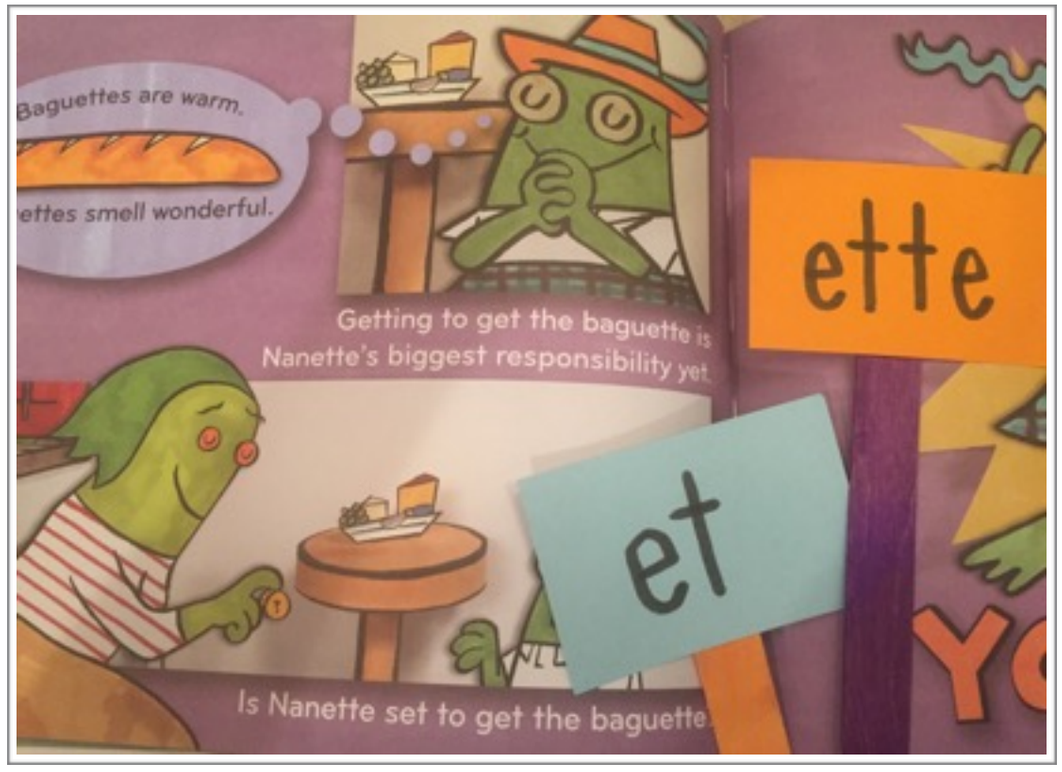




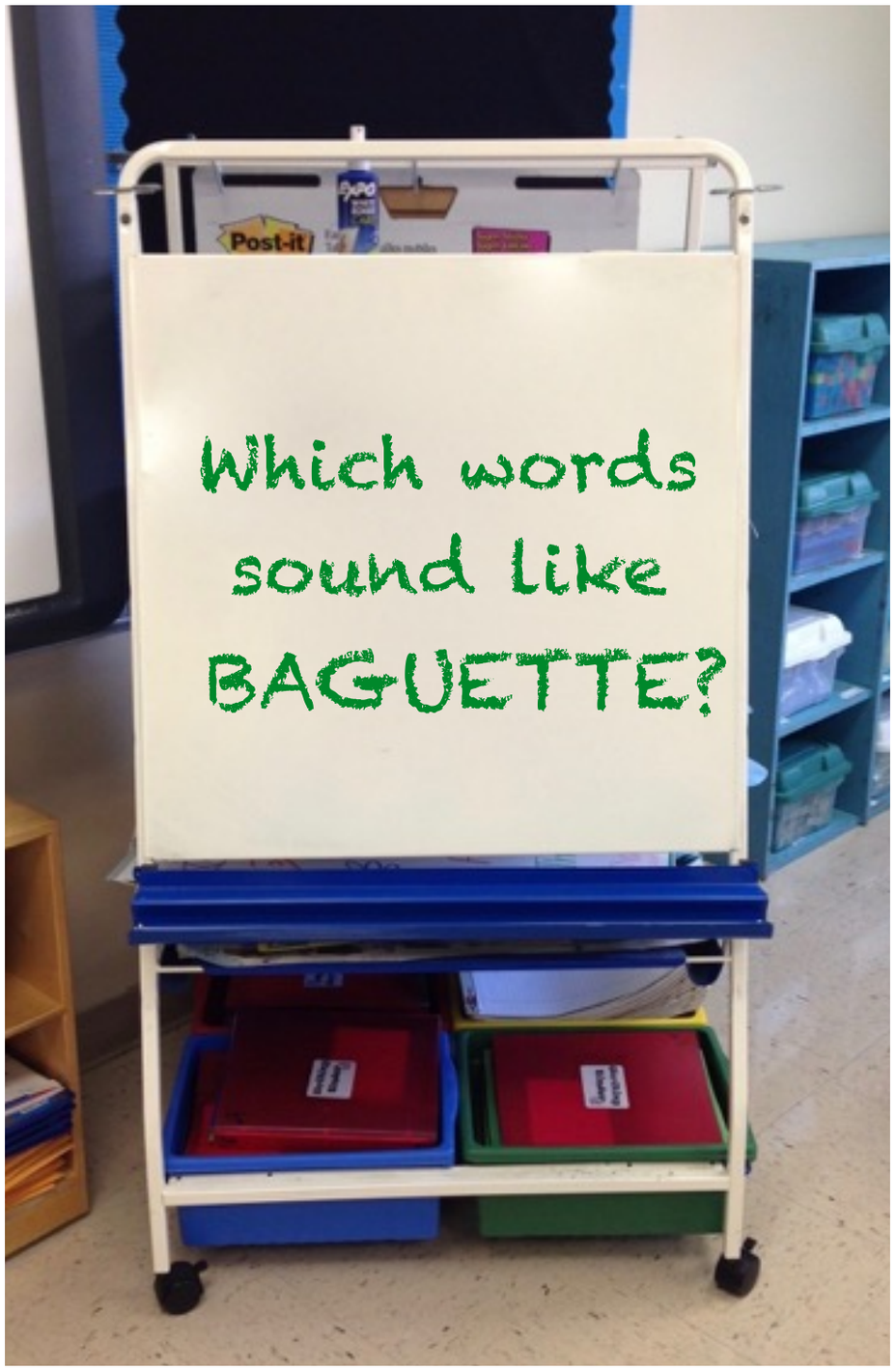
Baguette

Nanette
forget
kitchenette
yet
set
get
bet

"What do you notice?"



Word Families
Segmenting/Blending

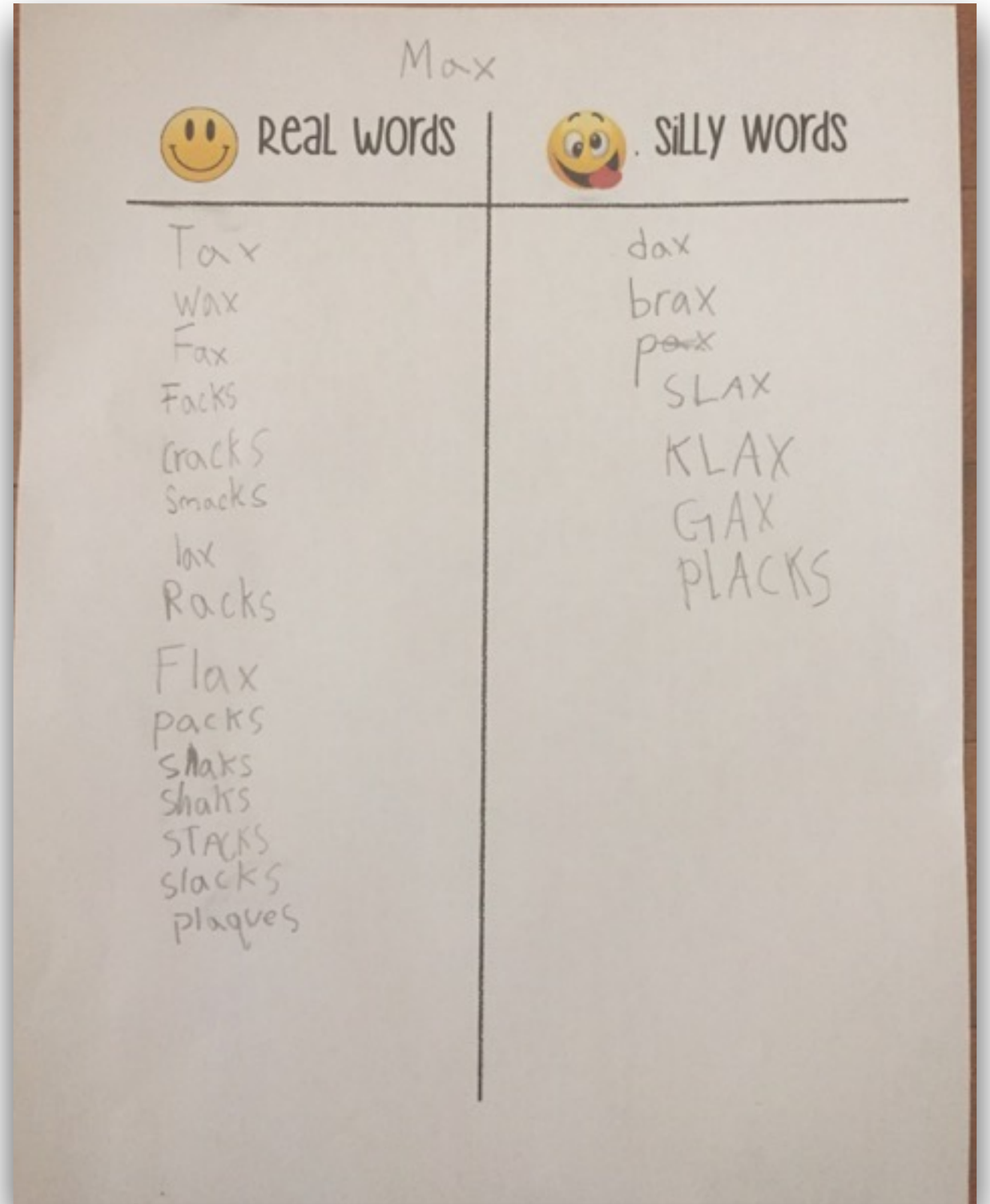


Baguette

Nanette
forget
kitchenette
yet
set
get
bet
Suzette
Tibet
pet
Bret
clarinet
Georgette
Mr. Barnett
quartet
upset
fret
wet
jet
sweats
beset
regret
reset
Juliette

"How could we sort these words?"

Are there any words that rhyme with YOUR name?



Limericks

Once the was a boy named Devon.
who ~~Devon~~ shopped at Seven Eleven.
he wanted some sweets,
But they only had beets.
So hungry and angry was devon.

There Once was a girl named Andrea
who invented a weird fruit named Dandria
But it tasted like moss,
which caused a big loss.
Of the money ~~droom~~ of that dear
girl - Andrea.

Imagine the opportunities to use literacy & numeracy to create a cardboard town similar to the one in the story:

“Realia”

- Provide opportunities to examine real items
- Create background knowledge for the story
- Engage senses to make meaning
- Fun! Create memorable moments

The baguette
is warm.

The baguette
smells wonderful.

(And there sure is a lot of it. . . .)

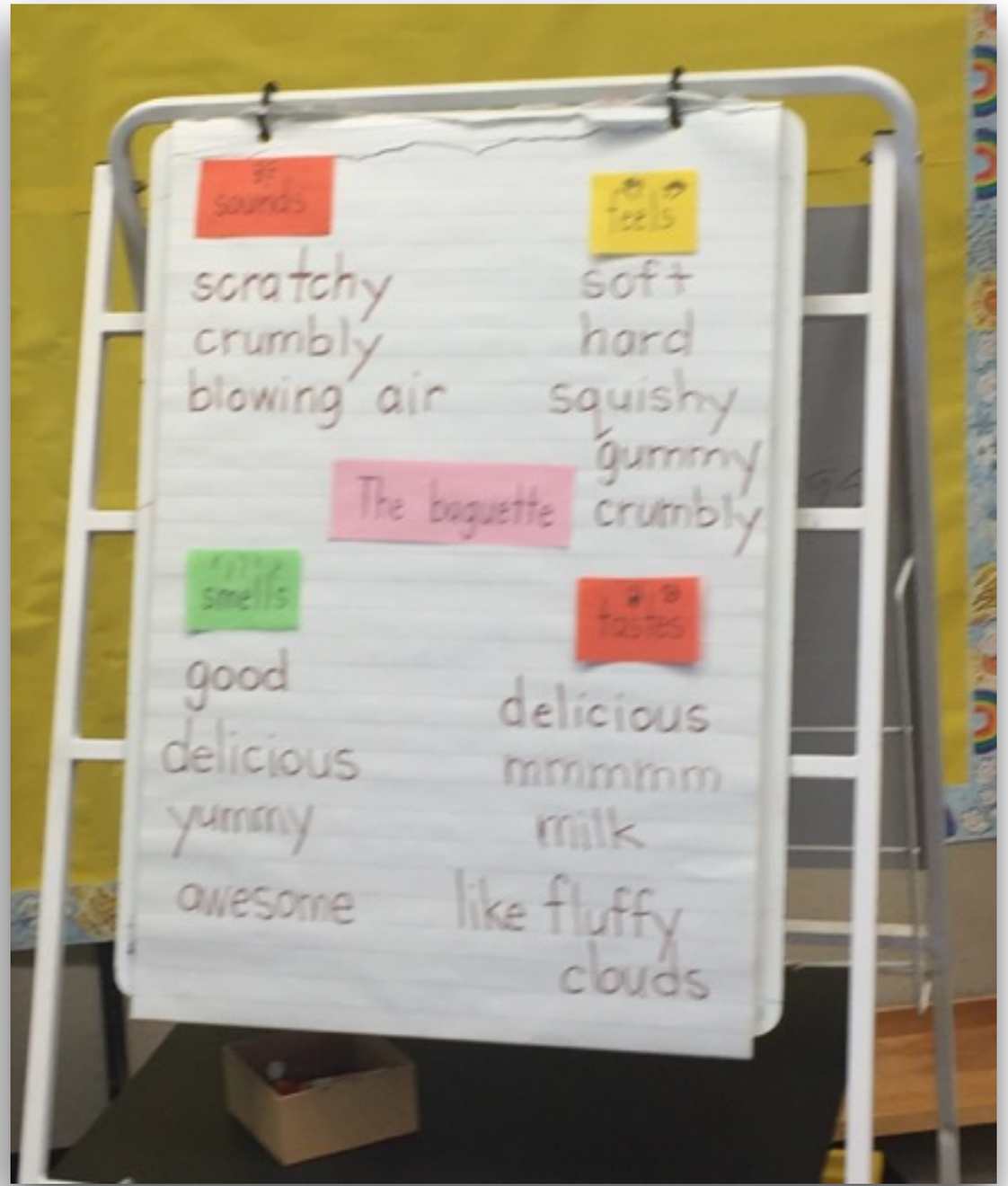
“What does the baguette feel like?”

“What does the baguette sound like?”

“What does the baguette smell like?”

“What does the baguette taste like?”


scratchy
crumbly


scratchy
crumbly
blowing air
soft
hard
squishy
gummmy
The baguette
crumbly
good
delicious
yummy
awesome
delicious
mmmmmm
milk
like fluffy clouds

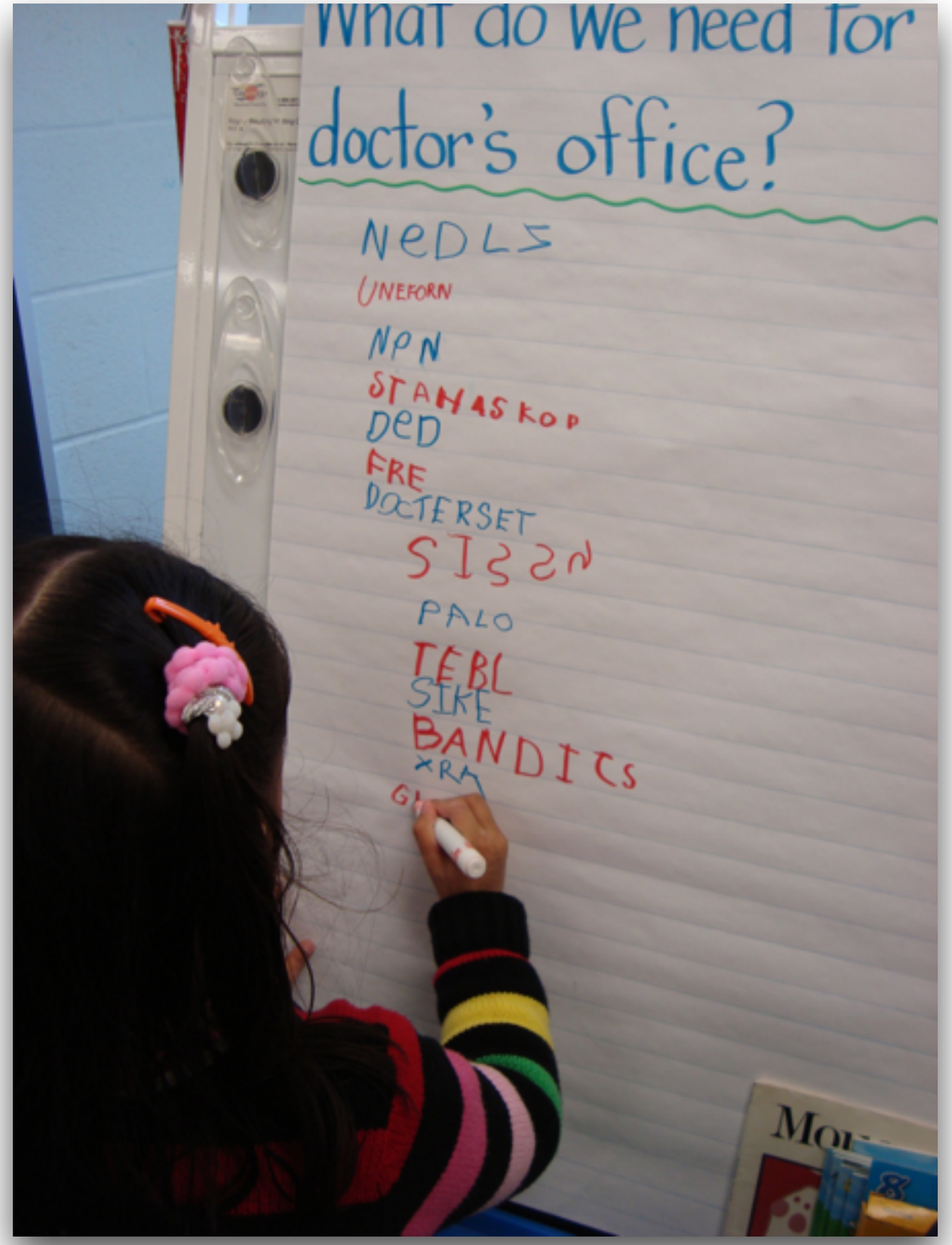
Dramatic play centres

Imaginative Play:

- develops symbolic, abstract thought (precursor to writing)
- contributes to development of narrative abilities (opportunities to dramatize characters, events & settings)
- low-risk space to try out new language or vocabulary

“ Utilizing the power of story through dramatic play and read-alouds, teachers can create rich language environments for children that encourage them to think, talk, play, and write in ways that show deep engagement and understanding.”
(Matt Glover, “Engaging Young Writers”, 2009)

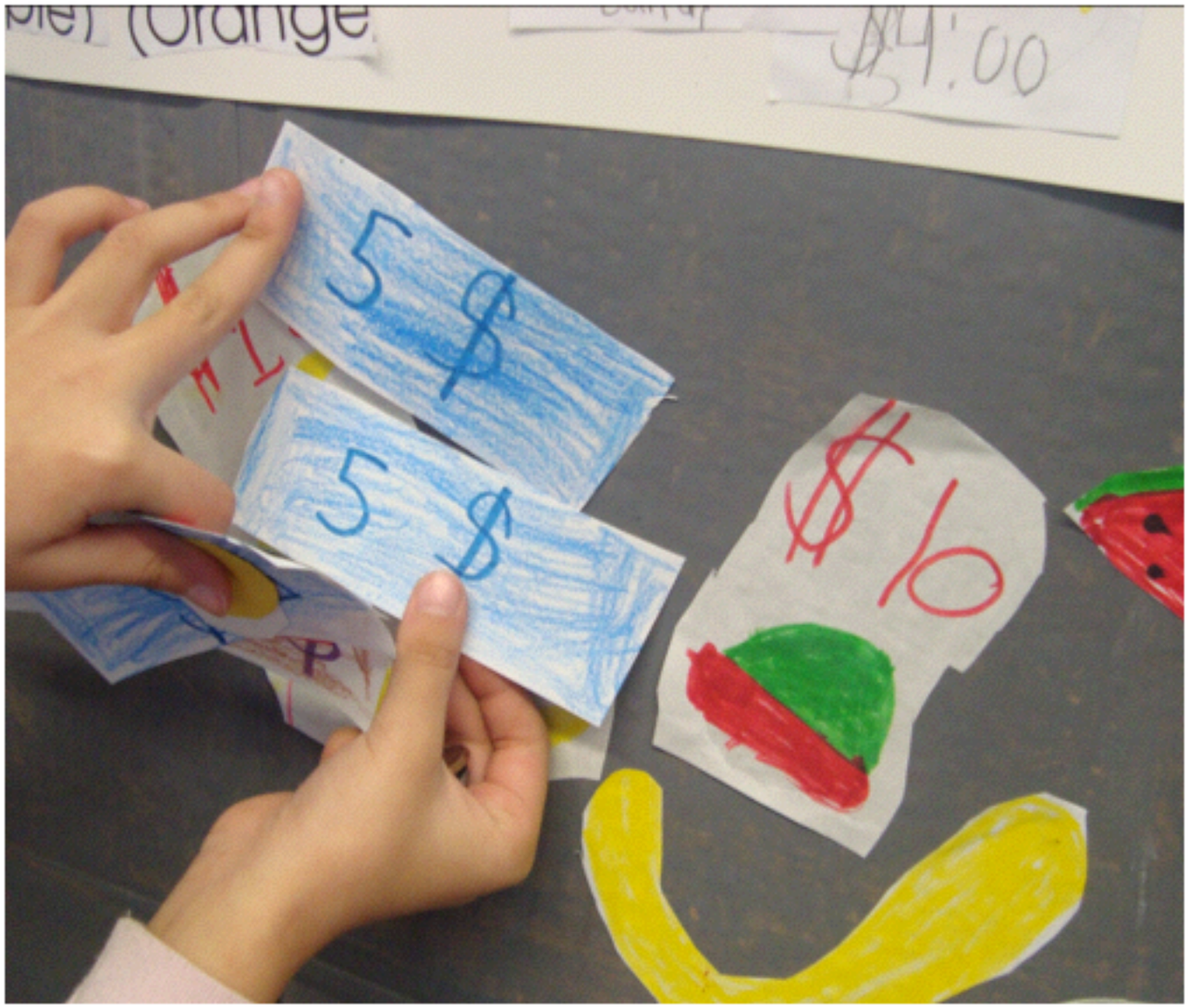
Co-create dramatic play centres



Co-create dramatic play centres

https://crayonswandsandbuildingblocks.wordpress.com

Co-create dramatic play centres

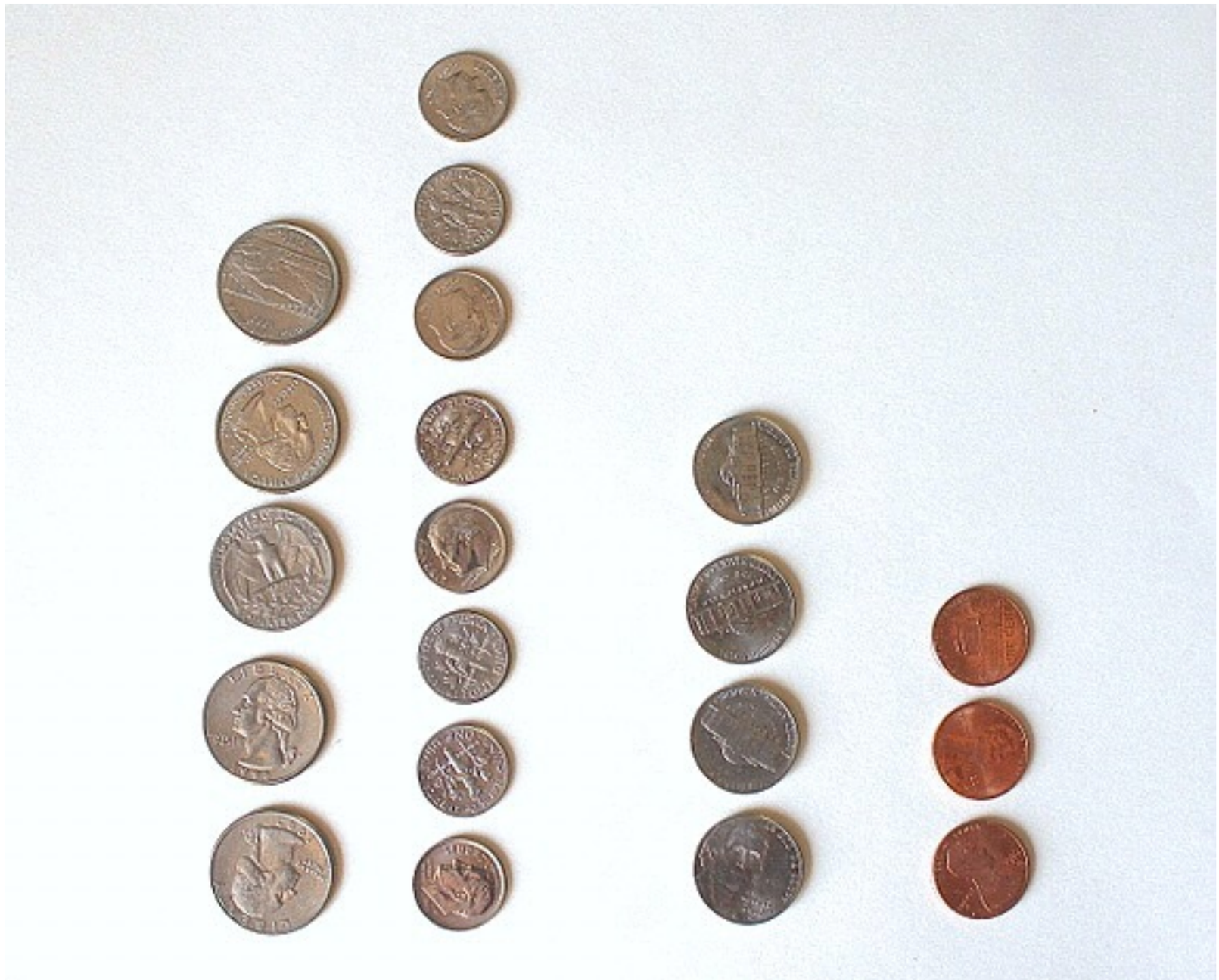


Grade 2's playing in the General Store
(North Ridge Elementary)

Numeracy & literacy opportunities in dramatic play:

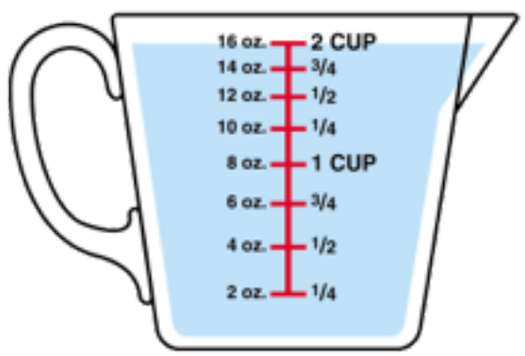
Numeracy Learning Intentions
I can notice the attributes of coins (colour, size, pictures).
I can notice the attributes of coins (colour, size, pictures).
I can role-play financial transactions such as in a bakery or store.
I can use whole numbers to pretend pay for purchase and make change.

Notice and Wonder:



Could we make bread?

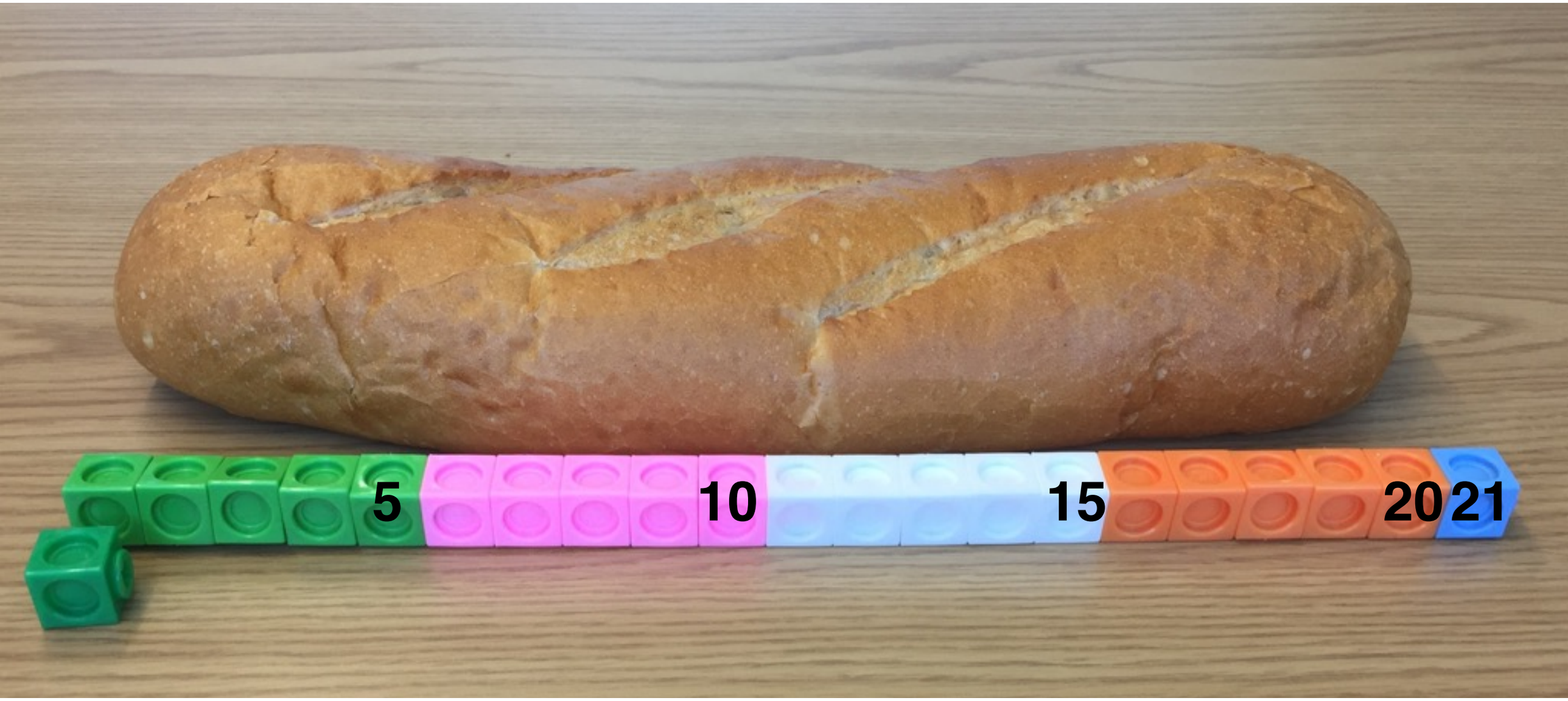
- How do we read a recipe?
- What does it mean to follow a recipe?
- Where do we see math in this activity?
- What happens to the mixtures when we combine them?
- What happens to the mixture when we add heat?



Act One:

Act Two:

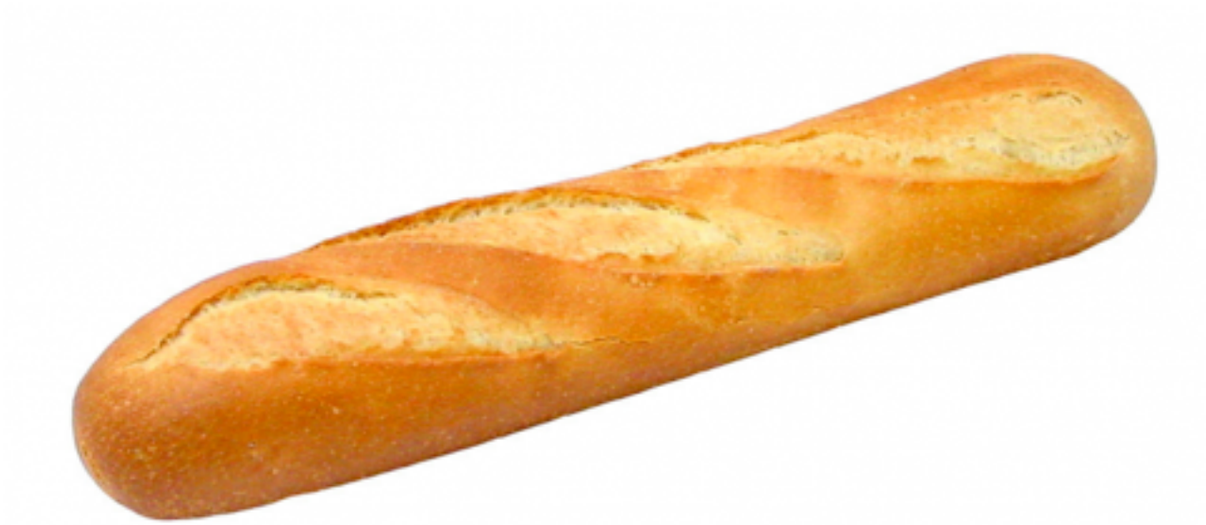
Act Three:

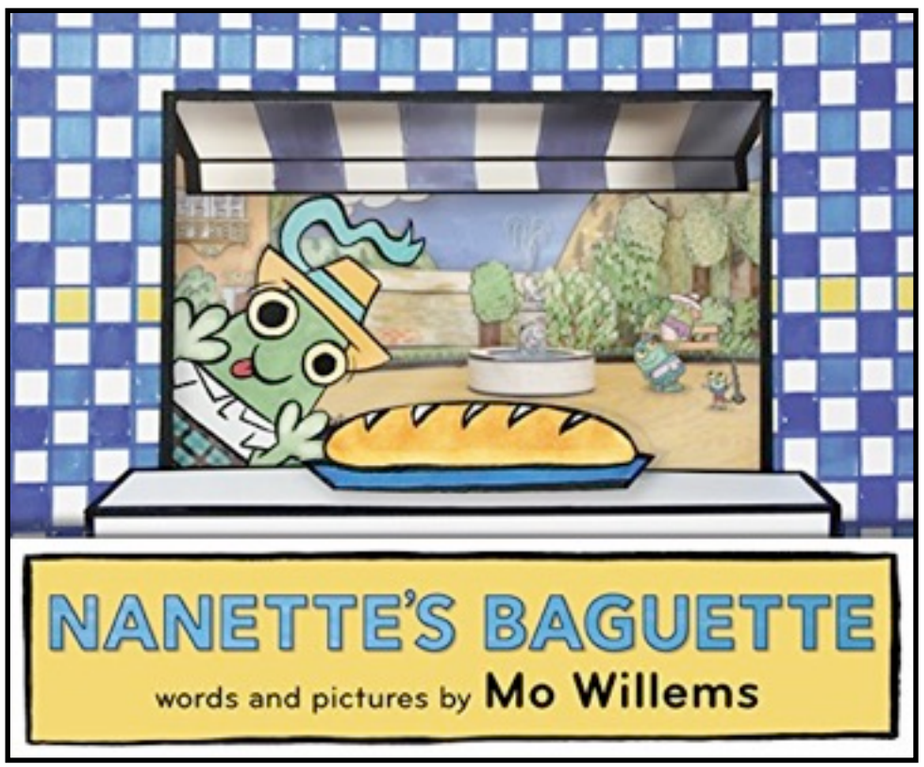


Act Four: (the Sequel)

1. How long is the baguette/pieces in centimetres?

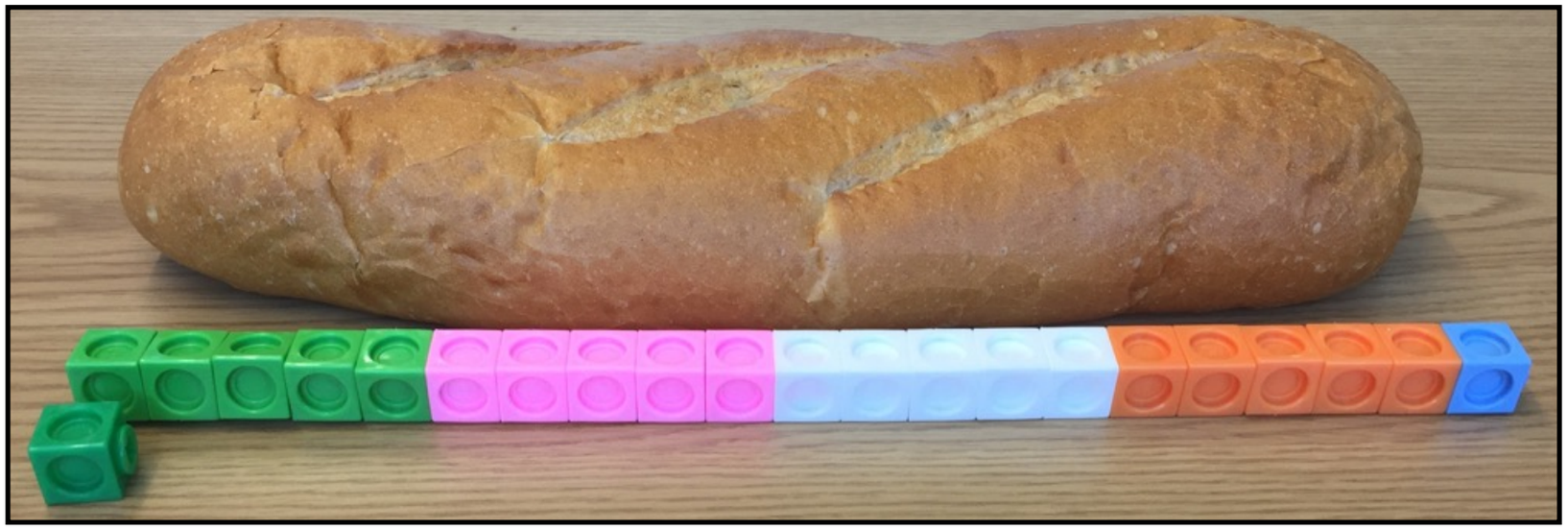
2. Change the unit! How many pattern blocks long is the baguette? (i.e. paper clips, pencils, erasers)

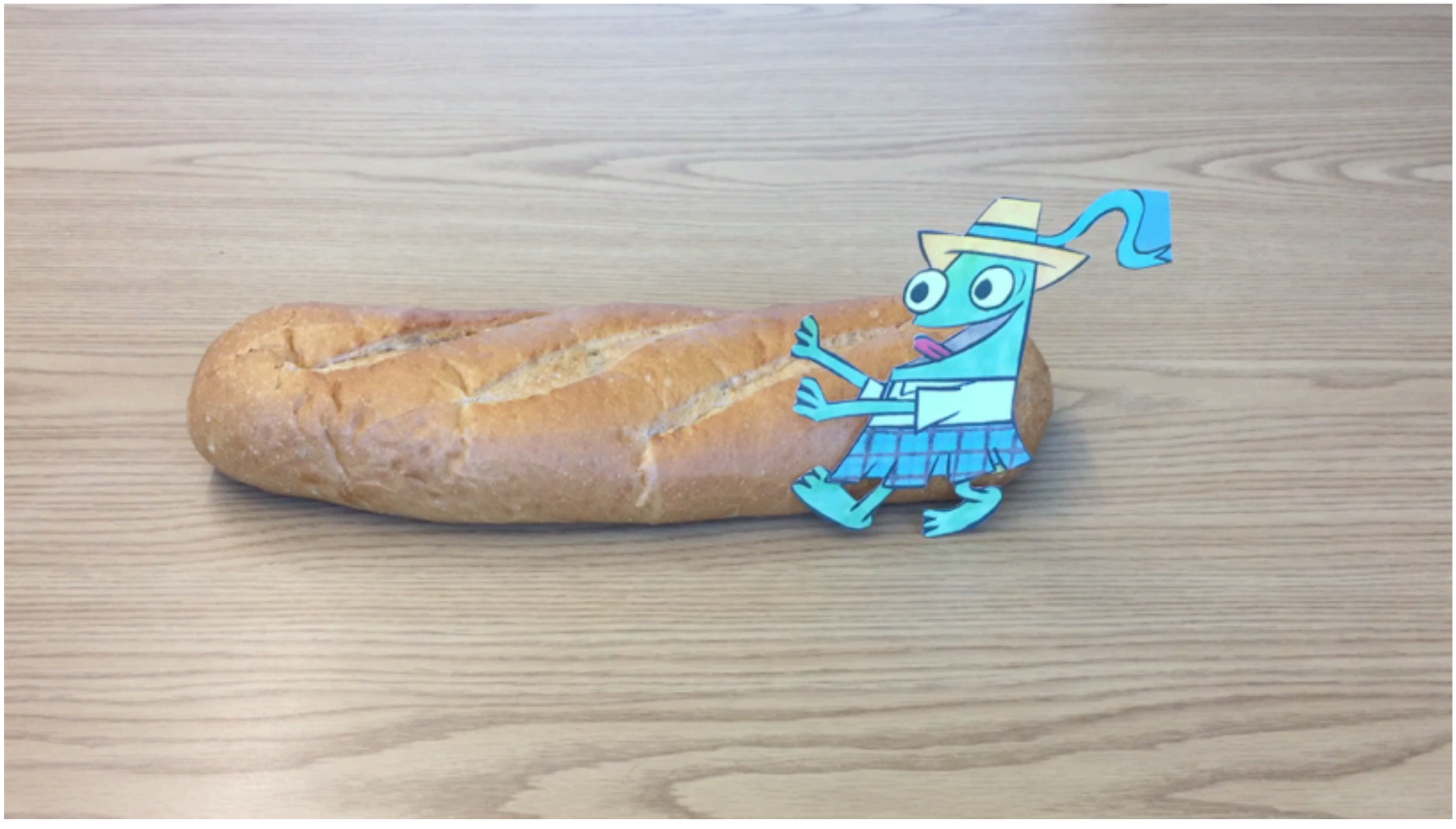




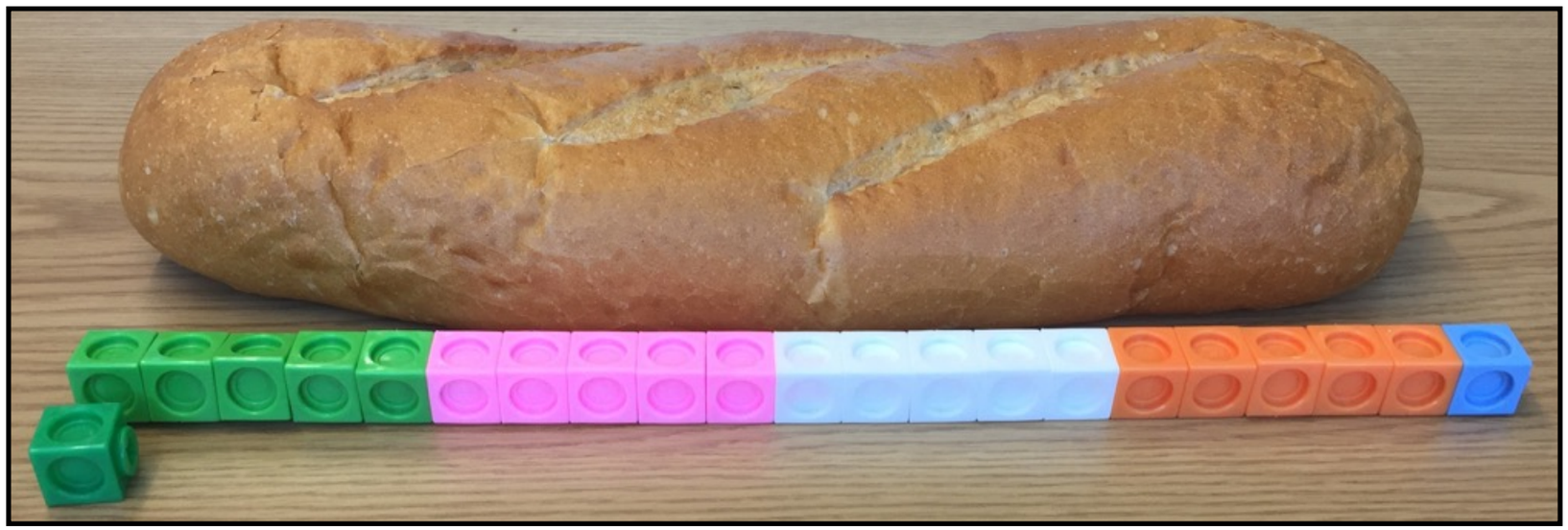
Check out www.gfletchy.com/3-act-lessons/

Act One:

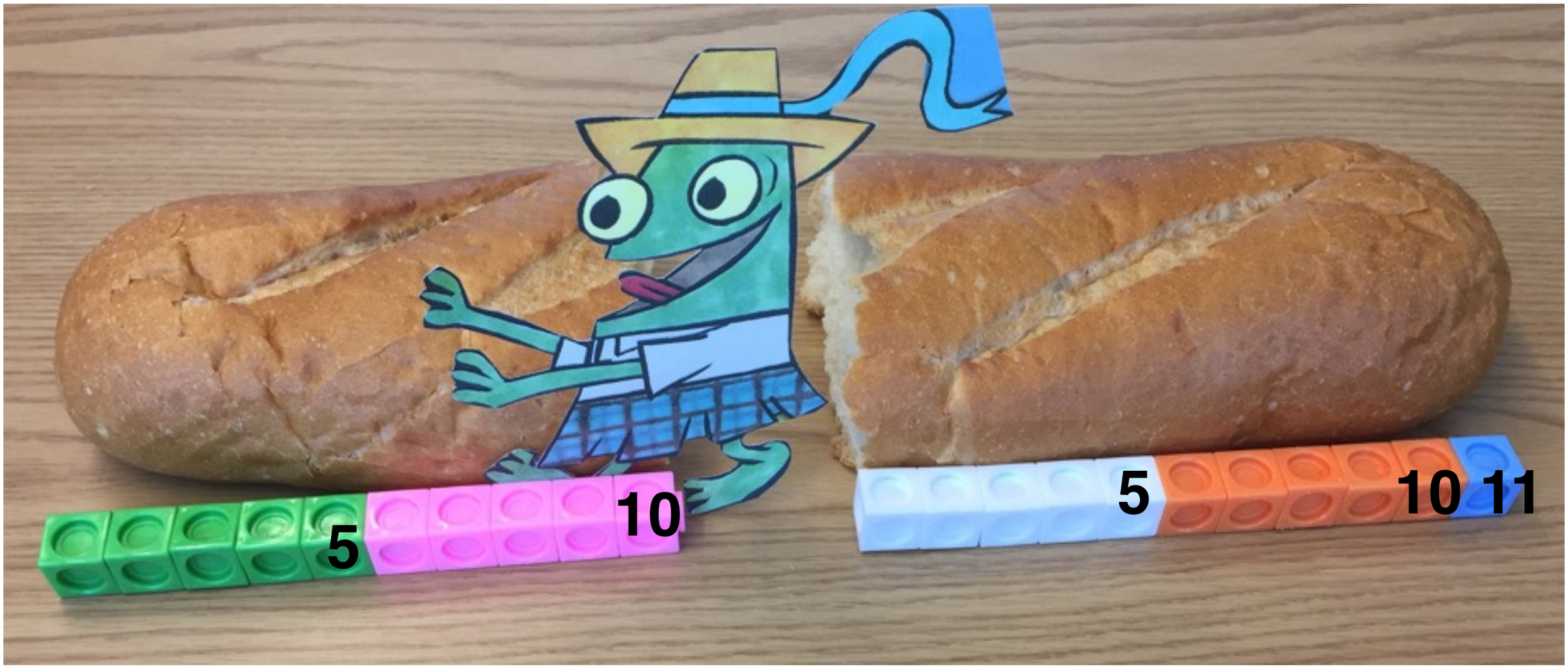




Act Two:



Act Three:



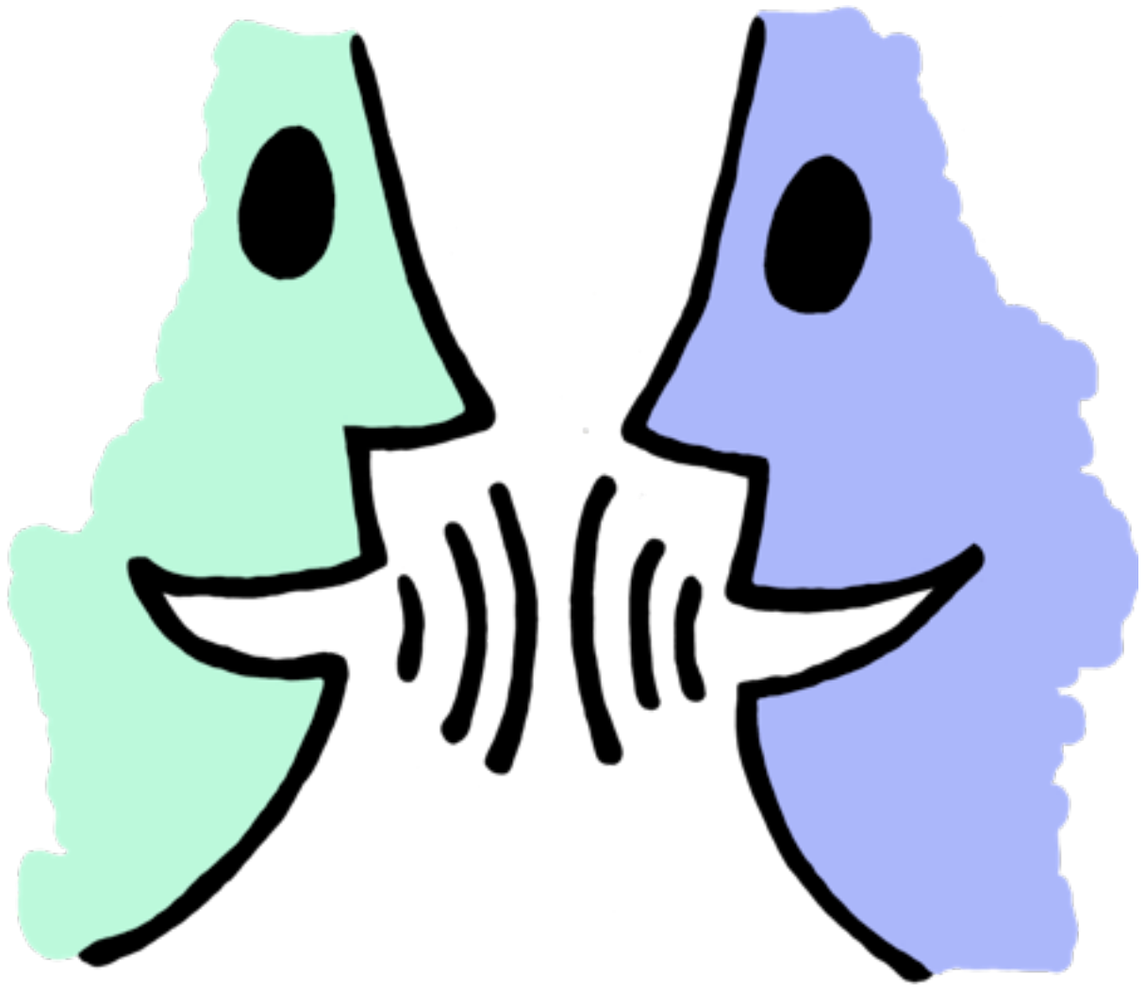
Three Act Task

Act One:
Begin with a captivating visual. The teacher records what the students notice and wonder and a question is determined. The class determines a wide range of appropriate estimates. *Note: Answering a question they generate increases all students' engagement!*

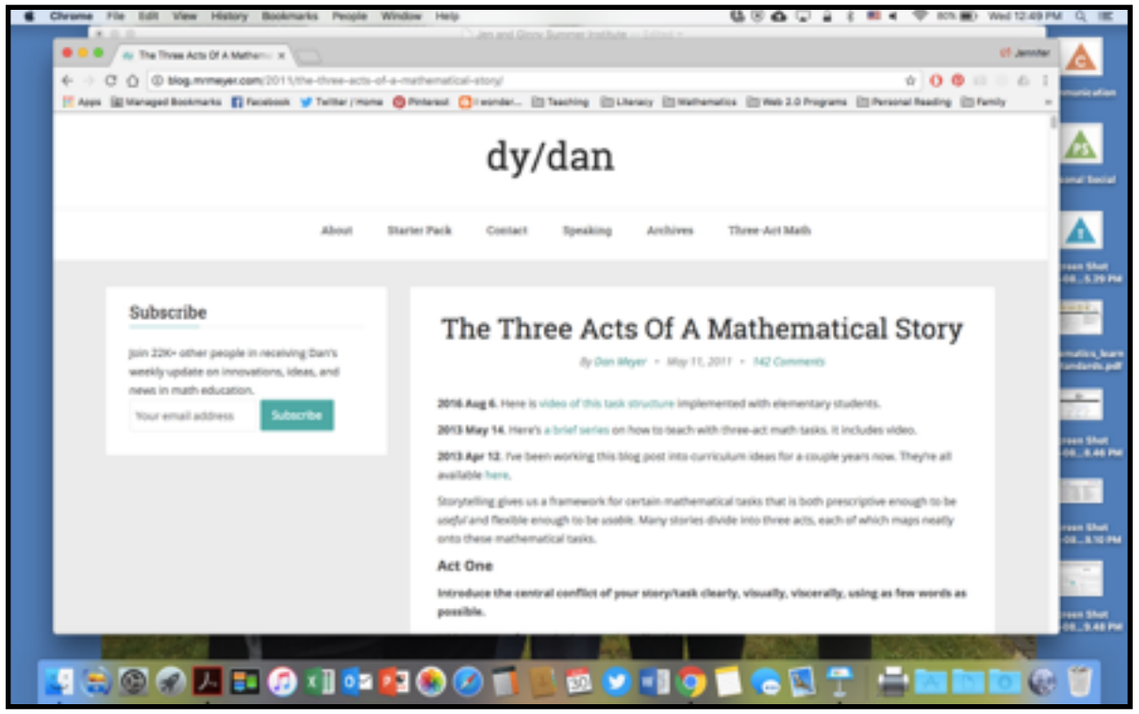
Act Two:
Students determine what information they need to assist them with their question. The students need to feel ownership over solving the question.

Act Three:
The final visual reveals the answer! Students often feel a sense of celebration! If all the original student questions were not answered, they could be used as extensions.

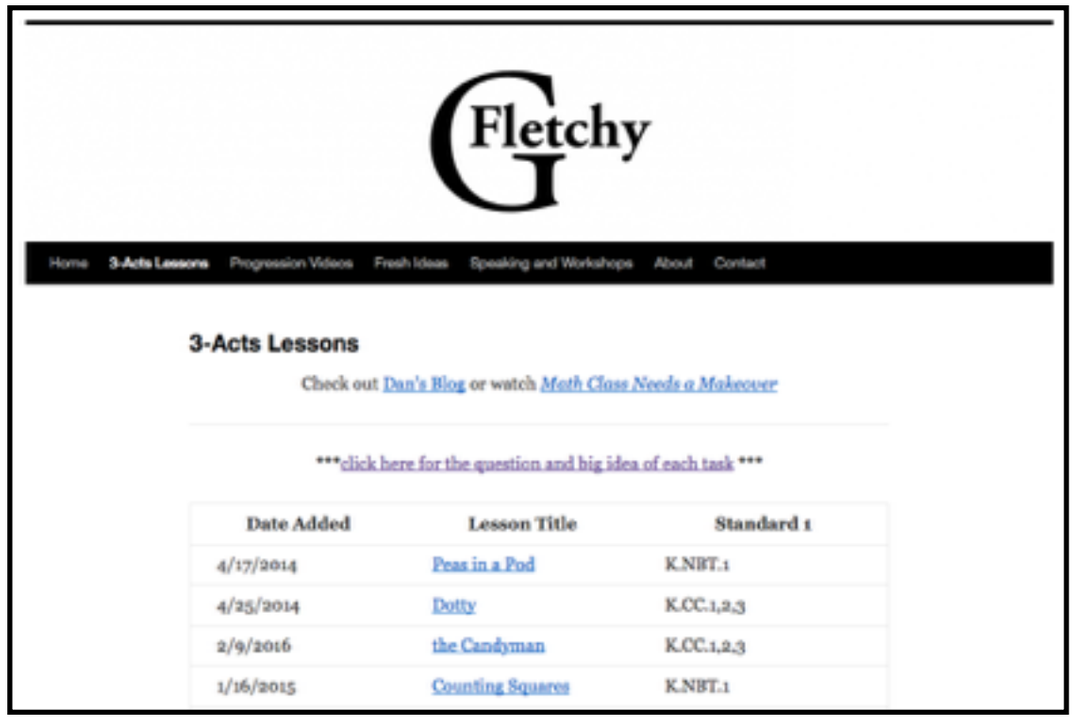
What benefits do you see in using this approach?



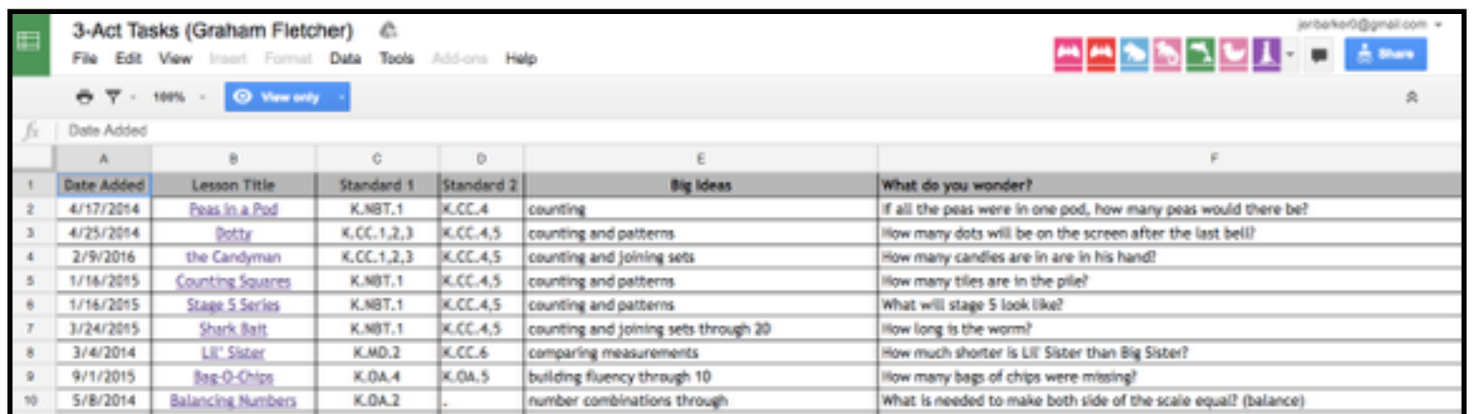
Where can I find more 3 act tasks?



Dan Meyers

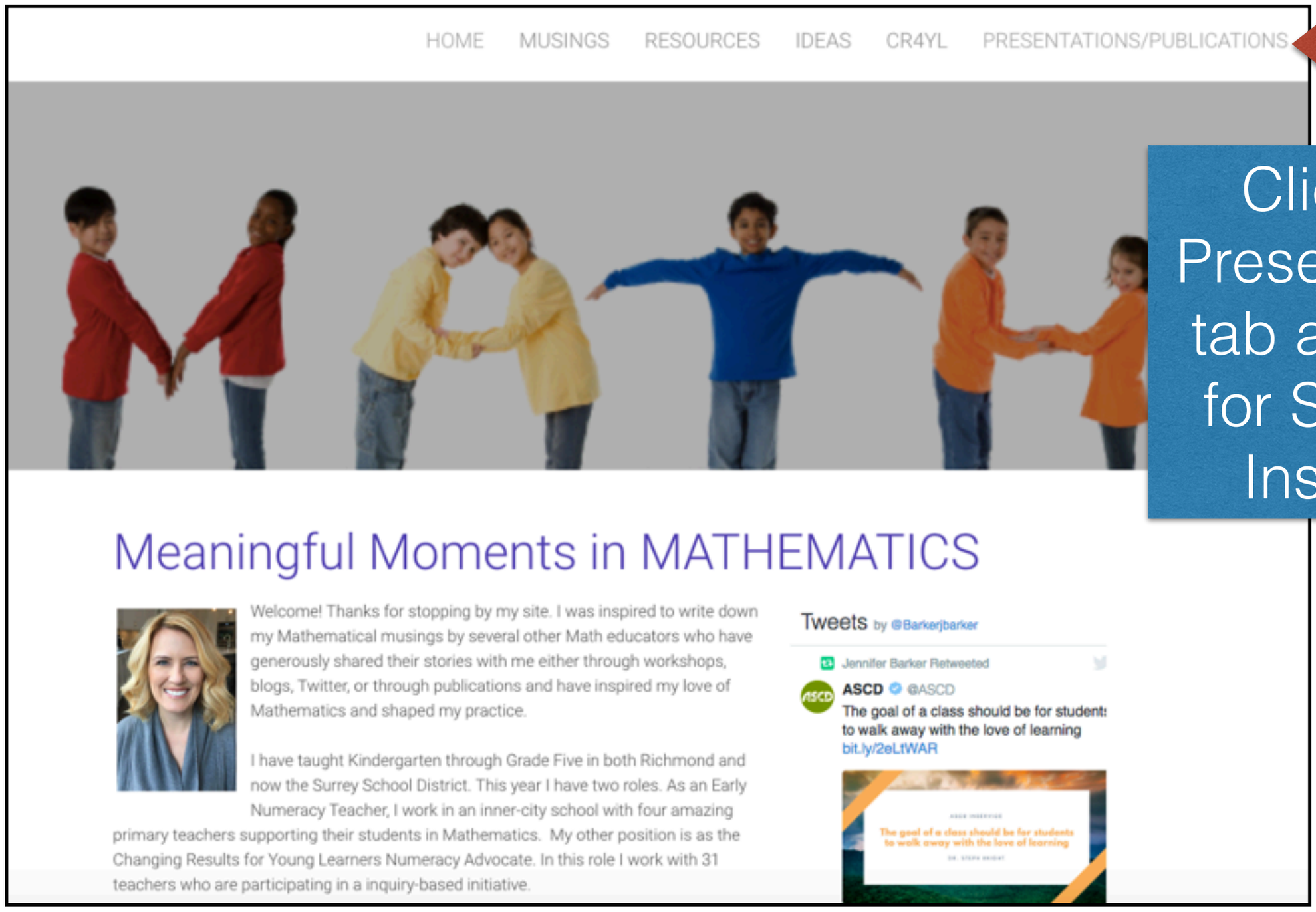


Graham Fletcher



Where can you find PPT, learning intentions, and more ideas?

www.meaningfulmathmoments.com



Click the Presentations tab and look for Summer Institute!

Time to plan and play!

Literacy

Understand:

Do **Know**

Numeracy

Understand:

Do **Know**

Learning Opportunities:

Book:

What content does it address?

Learning Opportunities:

Teachers – not programs – are central to a student's success.

Allington, 2002; Allington & Johnston, 2002; Langer, 2002; Bond & Dykstra 1997

Thank you for committing to make a difference for your kids!