

# Dimensions

of Early Childhood

Volume 49 • Number 2



Early Mathematics within Rich Story and Conversation


STEM in Early Childhood: Establishing a Culture of Inquiry with Young Children

Building Bridges between Home and School

Creando un puente entre el hogar y la escuela

Using Children's Literature to Embed Character Education in Primary Classrooms

SECA

The background of the entire image is a photograph of a bright, modern lobby. The space is characterized by large, multi-paned windows that allow natural light to flood the area. Several tall palm trees in large, light-colored pots are scattered throughout the space. In the background, a staircase with a curved railing is visible. The floor is made of large, light-colored tiles that reflect the light from the windows. The overall atmosphere is clean, bright, and professional.

**The Southern  
Early Childhood Association  
and  
The South Carolina  
Early Childhood Association**

**are partnering for a  
joint conference  
in Myrtle Beach, SC!**

**Save the Date...  
February 3-5, 2022  
We'd  for you to join us!**

**Southern  
Early Childhood  
Association**

**Editor:** Wilma Robles-Melendez, PhD  
*Dimensions of Early Childhood*

Copyright ©2021, Southern Early Childhood Association (SECA). Permission is not required to excerpt or make copies of articles in *Dimensions of Early Childhood* if they are distributed at no cost. Contact the Copyright Clearance Center at (978) 750-8400 or [www.copyright.com](http://www.copyright.com) for permission for academic photocopying (course packets, study guides, etc.). Indexes for *Dimensions of Early Childhood* are posted on the SECA web site at [www.seca.info](http://www.seca.info). Additional copies of *Dimensions of Early Childhood* may be purchased from the SECA office by calling 501-221-1648. *Dimensions of Early Childhood* (ISSN1068- 6177) is SECA's journal. SECA does not accept responsibility for statements of facts or opinion that appear in *Dimensions of Early Childhood*.

Authors are encouraged to download a copy of SECA's manuscript guidelines at <https://www.seca.info/dimensions>.

SECA serves the interests of early childhood educators concerned with child development, including university researchers and teacher educators; early childhood, kindergarten, and primary grade teachers; and early childhood program administrators and proprietors. The association has affiliates in 14 Southern states. Non-affiliate memberships are available to anyone living outside the 14 affiliate states. For information about joining SECA, contact the executive offices at 501-221-1648. Members receive a one-year digital subscription to *Dimensions of Early Childhood*.

**Southern Early Childhood Association**  
PO Box 8109  
Jacksonville, AR 72078  
501-221-1648  
[info@seca.info](mailto:info@seca.info)  
[www.seca.info](http://www.seca.info)



---

# In this Issue

Volume 49  
Number 2

---

- 6** **Early Mathematics within Rich Story and Conversation**  
Funda Gonulates and Jaesook Gilbert
  
- 15** **STEM in Early Childhood: Establishing a Culture of Inquiry with Young Children**  
Shari Farris and Cammy Purper
  
- 21** **Building Bridges between Home and School**  
Anna Hall and Qianyi Gao
  
- 25** **Creando un puente entre el hogar y la escuela**  
Anna Hall and Qianyi Gao
  
- 29** **Using Children's Literature to Embed Character Education in Primary Classrooms**  
Melissa Parks and Mary Ellen Oslick

## MILESTONES

A Resource Devoted to Infants & Toddlers

- 34** **Meet the Expert:**  
**Gina Keene, Language Pathologist**  
Kenya Wolff

## Departments

President's Message/Mensaje de la Presidenta . . . . .	4
Editor's Message /Mensaje de la Editora . . . . .	4
Children's Book Review . . . . .	35

---

## Curriculum to Help Children Love Learning

Debbie Ferguson

As we begin to experience warmer weather, celebrate nature, and plan our vacations, I think about how much I love the beach. It's my happy place...my place to relax and practice self-care. During my last trip as I peered aimlessly into the beauty of the ocean, I noticed how the waves were relentless and just kept coming regardless of the wind or other factors in the environment. I began comparing the constant waves of the ocean to the characteristics of a child. The determination of a child that just never stops, the constant questions, the learning from any and all things they overhear, touch, feel or experience, which emulates the way a child learns. Just like the ocean as the waves wash over and over, they are shaped, molded, and help create the beauty of each grain of sand, piece of driftwood or shell. Just as our children, each one beautifully different, defined by their experiences and magnificent.

This issue of *Dimensions* focuses on curriculum, and I find it fascinating how much learning happens in the moment, right where you are. There are many opportunities for all ages when you are engaged in a conversation or taking a walk-in nature. We need to stop trying so hard to "teach" our children and take the time to notice the quality of learning that's happening around us. In this issue you will find some amazing ways to help our children love learning. I hope you enjoy each and every moment as you breathe, take time, and enjoy the children you serve.

Ahora que comenzamos a tener un poco de calor, que celebramos la naturaleza y comenzamos a planificar nuestras vacaciones, pienso en lo mucho que disfruto de la playa. Es mi lugar feliz ... mi lugar de relajamiento y de practicar el autocuidado. Durante mi último viaje viendo la belleza del océano, notaba la persistencia de las olas que seguían llegando a pesar del viento y otros factores en el ambiente. Fue cuando comencé a comparar la constancia de las olas con las características de un niño. La incesable determinación que tiene un niño, sus constantes preguntas, lo que aprenden de cualquier y de todas las cosas que escuchan, tocan, sienten, o experimentan que refleja como ellos aprenden. Es igual que el océano según las olas tocan la orilla una y otra vez, toman forma moldeadas y creando la belleza que hay en cada grano de arena, caracoles, o maderas. Igual que nuestros niños, cada uno hermosamente diferente, definido por sus experiencias y maravilla.

Esta edición de *Dimensions* es sobre currículo y es fascinante ver cuánto aprendizaje ocurre en este momento. Hay tantas oportunidades para todas las edades al conversar o pasear "pasear." Debemos dejar de pensar con tanto esfuerzo en "enseñar" y en cambio veamos la calidad de todo lo que hay para aprender alrededor nuestro. En este número encontrarán muchas maravillosas maneras para ayudar a que los niños amen el aprender. Espero que disfruten cada momento según respiran, toman tiempo y disfrutan con los niños.

## A New Beginning /Un Nuevo Comienzo

Wilma Robles-Melendez, PhD

Summer is here and this time, it brings hope for brighter days. We all feel and welcome the sunny breeze announcing news things to come. After over a year since the world learned about the pandemic, news about cautiously returning to our routines arrive with the warmer days. Looking back, we know that it has been a time of changes and adjustments for everyone. Undoubtedly, an exceedingly difficult time we will never forget. It has also been a time where the dedicated efforts of early childhood educators have shined brightly overcoming unsurmountable challenges. But the spirit of early childhood educators, teachers, directors, and all the professionals who share their efforts for children, has led us to forward. No obstacle has deterred early childhood educators from doing what is right for a child. The stories and examples of what our early educators have been able to accomplish are a testimony to their professional dedication and an inspiration to us all.

With new beginnings, this issue of *Dimensions* takes you to consider practices to enhance classroom teaching and learning experiences. We hope that you will enjoy these classroom ideas and suggestions and building collaborations with families. Have a great summer!

Con el verano llega la esperanza de mejores tiempos. Todos sentimos y damos la bienvenida a la brisa calurosa que anuncia nuevas cosas por llegar. Después de poco más de un año desde que el mundo conoció de la pandemia con cautela las noticias anuncian el regreso a nuestras rutinas. Al mirar hacia atrás, sabemos que para todos ha sido un tiempo de muchos cambios y ajustes. Sin duda, momentos difíciles que no olvidaremos. Ha sido también un tiempo donde los esfuerzos y la dedicación de los educadores de nivel infantil han brillado por la manera en que han vencido obstáculos y retos. Y es que el espíritu de los profesionales de la educación infantil- maestros, directores y todos los profesionales que comparten esfuerzos por los niños- nos ha llevado hacia adelante. No ha habido obstáculo que pudiera disuadir los esfuerzos de los educadores de la educación temprana para hacer todo lo necesario para los niños. Sus historias y ejemplos de lo que han logrado son un testimonio de su dedicación y una inspiración para todos.

Con este nuevo comienzo, esta edición de *Dimensions* presenta prácticas para enriquecer las experiencias de enseñanza y aprendizaje. Esperamos que disfruten ideas y sugerencias para actividades en el aula y con las familias. Para todos, ¡muy feliz verano!



# Dimensions of Early Childhood

CALLING FOR MANUSCRIPTS!

Special Issue 2022

Manuscripts are due:  
**August 15, 2021**

## Big learning, bigger fun... Building a Foundation for the Future!

**Guest Editors:** Dina Costa Treff, Kenya Wolff and Karen Walker

Send your manuscript to **editor@seca.info** • Wilma Robles-Melendez, PhD

Everyone has fun memories about playful activities. They are some of our most memorable experiences and those that bolstered our knowledge. Intentionally planned, fun learning activities are enjoyable ways to learn as children play. They are instrumental in supporting development and learning as an essential experience for all children, serving as the foundation for learning and development throughout the early childhood years and beyond (Van Hoorn et al., 2015; Ginsburg, 2007). Play is a critical brain building experience (Frost et al., 2012) and it is a common experience to children across cultures and ethnicities (Edwards, 2000). The special issue is aimed at addressing play and fun experiences and the many ways they contribute to support children's learning and development (Birth-age 8). We are seeking manuscripts that focus on the role of play, of playful experiences, and how they support early childhood learning and development.

Possible topics include the following as well as other related ones:

Play theories and classroom applications	Play and children's socialization
Brain development and play	Parent and child relationships through play
Play and children with exceptionalities	Cultural influences on children's play
Friendship building and play	Technology and play
Learning through playful and fun experiences	Cognition and play
Play practices with infants and toddlers	Traditional play activities
Trauma and play activities	Play spaces and environments

### References:

- Edwards, C. (2000). Children's Play in Cross-Cultural Perspective: A New Look at the Six Cultures Study. *Cross Cultural Research, 34*(4), 318-338.
- Frost, J., Wortham, S., & Reifel, S. (2012). *Play and child development*. (6th ed.). Pearson.
- Ginsburg, K. (2007). The importance of play in promoting healthy child development and maintaining strong parent-child bonds. *Pediatrics, 119*(1), 182-191.
- Van Hoorn, J., Nourot, P., Scales, B., & Alward, K. (2015). *Play at the center of the curriculum*. (6th ed.). Pearson.

# Early Mathematics within Rich Story and Conversation

Funda Gonulates and Jaesook Gilbert



mathematics naturally if they like or “love” mathematics because they enjoy mathematics and choose to spend more time on mathematics related activities (Jansen et al., 2016). Additionally, higher scores on the 2015 National Assessment of Educational Progress (NAEP) assessment were achieved by students who enjoyed and had interest in that subject area according to the Nation’s Report Card for 2015 (Institute of Education Sciences [IES], 2015). The correlation between interest and test score, as reported in IES 2015 Nation’s Report Card, was strongest for mathematics.

Mathematics is abstract for young children. One way to help children develop better understanding of core early mathematical concepts is by providing concrete learning experiences, thereby making mathematics more accessible to them. Additionally, children will choose to spend more time on subjects or activities they enjoy, which in turn leads to further motivation to learn more about that subject. Thus, the challenge for preschool or kindergarten teachers is fostering children’s “love” for mathematics. This article will focus on how to provide preschool and kindergarten age children opportunities for giggles or wonderment in mathematics related activities. Suggestions for how to create an engaging, authentic context where children can actively participate and interact using interesting story and intentionally facilitated classroom discourse are discussed in this article.

## In the Classroom

Imagine a classroom with young learners, ages 4 or 5. Children are seated in a circle and engaged in a choral counting activity: 1, 2, 3, 4, ... Teacher is pointing to each numeral on the board as children are counting. Does this scenario look familiar to you? It is a common practice in many classes with young children, and it has its own promises. However, it does not have any giggles or wonder in it. Children will be motivated to learn more

Young children learn within the flow of daily activities. Young children, especially during Piaget’s (1952/1977) pre-operational stage, learn or construct knowledge as they actively participate in activities. The abstract nature of content, especially in mathematics, can lead to slower progress in children developing sophisticated understanding of core concepts. One way to make abstract mathematics content more concrete, hence more accessible, for children is to create an engaging, authentic context where children can actively participate and make learning meaningful for teachers and for students. Jung and Conderman (2013) cite intentional teaching as one of the prerequisites for authentic mathematics instruction and learning as well as for children’s positive viewing of mathematics. An excellent teacher, as defined by Copple and Bredekamp (2009), carefully thinks through what, how, and why to facilitate children’s love for and enjoyment of learning.

Contextualizing learning in mathematics can help children create meaning for abstract mathematics concepts. It can also allow children to bring their everyday experiences into the act of learning mathematics. Contextualizing mathematics might mean creating story contexts as children engage in mathematical activities or it may mean bringing story contexts, such as using picture books, to structure learning of mathematics. A study of 155 kindergarten students in the United States whose teachers

incorporated story contexts with experimental group students demonstrated moderate effects of story contexts in improving students' mathematics learning (Casey et al., 2008). Van den Heuvel-Panhuizen et al. (2016) found that "a three-month picture book reading program, during which the teacher read two picture books that contain mathematics-related content in class each week, had a positive effect on kindergartners' mathematics performance" (p. 338) in their study with 18 kindergarten classes in the Netherlands. Therefore, integration of an interesting story context and intentionally facilitated classroom discourse with preschool or kindergarten age students will help advance learning of mathematical concepts at a deeper level as children giggle and wonder through their experiences.

## Rich Story Contexts

Stories with rich plots provide entry point to fictional or real-life situations. Good story transports readers to the world or circumstance of focus in the book. A good story helps readers make sense of what is real and what is not. A good story helps readers explore, analyze, predict, and organize information. A good story also helps readers learn more about the self, others, as well as various topics. In short, a good story can stretch children's imagination, foster understanding of more abstract concepts, and make learning exciting.

What young children would view as a good story would depend on their respective interests. For example, a child who is fascinated with a dinosaur will hunger for anything that has to do with dinosaurs. Children's interest is the first criterion to consider when selecting children's books (Schickedanz & Collins, 2013). Other criteria for selecting appropriate and palatable books for children include the complexity level of plots, richness of language, quality illustrations, and authentic representation of diversity (Schickedanz & Collins, 2013; Uscianowski et al., 2017).

Some topics like favorite food items, birthdays, or family customs like going to visit grandparents are common themes that most children can identify with, have much to comment about, and have personal experiences of. Children also enjoy books that tell stories about common childhood experiences like learning to share, how to make friends, and adjusting to a new sibling. Children are eager to add their own perspectives to what is being expressed in the story plot when the stories are relevant and authentic to their own lives. These books with rich story contexts offer wonderful opportunities for lively, extended conversations among children and teachers.

A good story book can have rich mathematics content or not. Books that are available within a preschool and kindergarten classroom can be mathematized during book read-alouds (Hintz & Smith, 2013). Almeda (2017) and Uscianowski (2017) assert non-math as well as math books are beneficial to children, depending on the teacher's purpose for book reading. If a teacher's purpose is to increase children's problem-solving skills, a book that has explicit math content or another book without math content will suffice. If a teacher's purpose is to have children practice number sequence, a book with number content would

provide opportunities to count with children during reading. Let's take a look at a non-math book example as a case of creating rich and engaging ways of mathematizing everyday activities. We chose "Red Panda's Candy Apples" by Ruth Paul.

The book, *Red Panda's Candy Apples* by Ruth Paul, is a story about getting along with others. The book begins with the main character, Red Panda who loves candy apples, attempting to sell six candy apples that he made. The author points out repeatedly throughout the story how much Red Panda loves candy apples and is experiencing difficulty as he is selling his candy apples. Red Panda's customers, in order, are Rabbit, Hedgehog, Mouse, Duckling, and Bushbaby. Only one apple remained when both Duckling and Bushbaby wanted to buy one candy apple for self. Red Panda suggests sharing one remaining candy apple to Duckling and Bushbaby, but they did not want to and began to fight over that one remaining candy apple. In the tussle, the Bushbaby ends up crying and the coin jar falls over. While Red Panda was picking up the strewn coins, Duckling offers the candy apple that caused the fight to Bushbaby. This is when Red Panda goes to his basket and gets the one candy apple that he had been saving for himself and was willing to sell that candy apple, thus, allowing Duckling and Bushbaby to have a candy apple each.



*Red Panda's Candy Apples* is an appropriate book to read in preschool and kindergarten classrooms because the book's focus of learning how to get along is a topic that is familiar to all children at this age. Other components of the book like candy apple being a favorite to Red Panda and to other animals, the customers, leading to a fight over one candy apple due to the desire to eat all, not just half, as well as the experience of buying favorite food resonate with young children. This book's illustrations enhance, rather than overpower, the text and the interesting but not too complicated story plot. Young children will also identify with Red Panda and enjoy the story. From a teacher's perspective, "Red Panda's Candy Apples" book would be a great book to use for Social Studies and Literacy. What if a teacher was to select "Red Panda's Candy Apples" book for mathematics learning, would this book be appropriate?

## Fostering Mathematics Learning Through Rich Story Context

Though not explicitly written to teach mathematics, *Red Panda's Candy Apples* provides many mathematical opportunities within its rich story context. Numbers, although not explicitly written in sequence, are represented in clear illustrations through drawings of different number of candy apples as well as coins. Math operations (e.g., subtraction of candy apples or adding coins to the money jar) are implied in the plot with many characters but within the simple message of everyone wanting a candy

apple. Mathematical terms (e.g., first, second, bigger than, half) are interwoven in the text as the story develops through the interaction of characters in the story, various customers, and Red Panda. This story of learning to get along through the story of Red Panda selling candy apples provides many opportunities for the teacher to engage children through extended conversations, open-ended questions and posing problems.

Thinking ahead about various mathematical questions about the story that can be asked during the book reading with the children is a must with both math and non-math books, but especially for non-math books (Almeda, 2017; Hintz & Smith, 2013). A teacher can pose a concrete mathematical question by asking children to first describe what is illustrated on the page (e.g., How many candy apples are on the table?), and having them share their ideas of what will happen on the next page after the first customer buys one candy apple. Second, children can count the number of candy apples on the table on the next page to check their guess. A teacher can probe children's thinking further by posing open-ended questions about what is happening on a page and asking children to describe their reasoning for their responses to open-ended questions (e.g., How did you know there would be more coins in the jar when there is one less candy apple?). Therefore, the answer to the question of whether a non-math book can be a useful book for mathematics learning is a definite yes.

### Intentional reading

For *Red Panda's Candy Apples* book to be used for children's mathematical learning, this book needs to be intentionally read numerous times. This would allow children to build a high level of familiarity with the context of the story or plot. The first reading needs to provide children time to simply listen to and enjoy the story. The children will need to hear about the plot of Red Panda learning to share something you love with others as well as visually see the pictures of candy apples on the table, Red Panda's friends who are his customers, coins in the coin jar, etc. Children will also be exposed to new vocabulary (e.g., customer, crackle, biggest, celebrate) as they become intimately aware of Red Panda and his journey in selling candy apple story. The focus of the second reading is to foster children's further interaction with the story context. The teacher can review the plot through the use of the "wh" questions (what, where, when), as well as apply the story context to children's own lives. The teacher could ask children to share their own experiences of times when they had difficult time sharing something they love and/or when they argued or got in a conflict because they wanted all of something they love. The third reading could focus on children and teacher engaging in a productive mathematical conversation. The teacher would create an intentionally facilitated classroom discourse using the story as main context. Further elaborations on how to have a productive classroom mathematics discourse will be explained next.

### Productive classroom mathematics discourse

Classroom mathematics discourse or conversation can be rich if teachers intentionally think about the contextual situations. Contextual situations can include elements from children's everyday

experiences such as number of tables or chairs in their classroom or some fictional elements represented in the story books. These contexts or elements from fictional or realistic settings can help children develop a strong number sense and may provide meaning and purpose in carrying out addition and subtraction when they are ready.

First, children need to become familiar with the contextual situation. This familiarization of the context will help children with the development of a shared understanding as well as the desire to know more about the context. If this contextual situation is from a story book, rich mathematical conversations can occur when children have had sufficient opportunity to "experience" the story. With the *Red Panda's Candy Apples* story example as our contextual situation, the very first mathematical discourse question is "What do you see and how many?" This first question must be left intentionally open to allow children the option of quantifying any objects they see on each page. Below is an example of potential conversation that can happen in a preschool classroom after the posing of the open-ended first mathematical discourse question with the *Red Panda's Candy Apples* story:

*Child 1: I see one rabbit.*

*Teacher: Is there only one rabbit?*

*Child 2: I see birds.*

*Teacher: How many birds do you see?*

*Child 2: I see two birds.*

*Teacher: Do you all see two birds? Can you show me 2 with your fingers?... Can you show me two with your fingers in a different way?... How do we know that is 2?... What else do you see?*

*Child 3: I see candy apples. There are 6 of them.*

*Teacher: How do you know there are six?*

*Child 3: I counted them quickly in my head.*

*Teacher: Is there anyone who sees 6 candy apples in a different way?*

*Child 4: I sees 3 and 3 and that makes 6.*

*Teacher: Can someone help us understand what your friend said?*

The teacher's questions, in the above exchange, included different ways of thinking about the same quantities. The teacher helped children explain their thinking through use of questions (e.g., *How do you know there are six?*) as well as asking other ways of thinking about the same question (e.g., *Is there anyone who sees 6 candy apples in a different way?*). Within productive mathematical conversations, providing children opportunity to explain their thinking process matters more than whether children provided the correct or incorrect answer.

### Story problems

Another component of mathematical discourse is having children think about each page of the storybook as a story problem. Teachers can pose story problems through use of what is about to happen in the story or what had just happened questions. Questions that ask children about what is about to happen in the story (e.g., *"How many red candy apples and coins will Red Panda have after the rabbit bought one candy apple?"*) propel the children to count the number of candy apples left and count



the number of coins in the money jar. Story problem questions about what just happened in the story (e.g., “Red panda had some candy apples on the table. The white rabbit got one and now he has 4 candy apples. How many red candy apples did red panda have before rabbit bought one?”) can lead to rich mathematical explorations with children.

The story problem question about what just happened requires children to figure out an unknown number that is part of acting the problem out. It is different from the usual cases where you act out to determine the unknown at the end. Research indicates children will have a more difficult time with this type of story problem question because children need a starting number to count backward or forward (Carpenter et al., 2015). The context of the story, however, can help children make sense of the “unknown start” story problems. Children can explore different strategies to problem solve the “unknown start” question, “The red panda had some candy apples on the table. The white rabbit got one and now he has 4 candy apples. How many red candy apples did red panda have before rabbit bought one?” by using visual clues represented on each page. The children can look at the prior pages of the book to visually see what has happened with the candied apples and the characters in the story problem did. The purpose of this exploration is not about finding an answer, but it is about sense making. Creating and using visuals or some physical representation of the scenario described in the story problem are all very productive approaches in solving these kinds of problems. The mathematical representation of this problem will look like “ $? - 1 = 4$ ”. This is a very hard question for a preschooler and even hard for a first grader. However, this problem is not as abstract within the context of a story because the children can better understand the role of context in quantifying objects. The example verbal question, “The red panda had some candy apples on the table. The white rabbit got one and now he has 4 candy apples. How many red candy apples did red panda have before rabbit bought one?” is not as abstract as when the question is represented symbolically in a mathematical equation and consists of typical questions a preschool or kindergarten teacher could ask when having extended conversation about the Red Panda’s Candy Apples story.

### Using role play

Another activity for facilitating productive mathematical conversation is having children engage in role plays. Using the Red Panda’s Candy Apples story, children can act out the story context as the teacher re-reads each page. See below for a description of a scenario where children can interact with the different mathematical contexts of the story through role-play.

*The teacher sets up a table with appropriate number of candy apples and money jar on it. The teacher calls two children, Aaron and Lilliana to act out the page where hedgehog wants to buy a candy apple. Aaron wants to be the red panda and Lilliana happily agrees to be the hedgehog. The teacher first asks all of the children in the classroom, “How many candy apples are now on the table?” then states, “Show me with your fingers”. When everybody has provided an answer with show of fingers, the teacher asks Aaron, aka red panda, the*

*same question, “How many candy apples do you have now, Aaron?” Aaron, then, would state out loud his answer. The teacher would then ask, “and how do you know, Aaron?” Aaron would then count the candy apples on the table according to his strategy to show the teacher how he came up with this answer.*

With each role play, posing the same question to the entire class and to the specific children role playing is critical. This step helps children see and hear variations in how different children are making sense of quantities. Some of the children might still need to count one by one, while others may recognize the quantity without the need to count the items as Aaron could demonstrate: “I know there are 4 candy apples because 2 on this side and 2 on the other side and 2 and 2 makes 4”.

Now back to the scenario and continuing.

*Now, Lilliana will act out what is on the book page by taking some time before finally choosing a big candy apple. After Lilliana makes her choice, Aaron will give the candy apple to Lilliana and state with a sad tone of voice, “That is my favorite one”. Before Lilliana puts the coins in the jar as payment for her chosen candy apple, the teacher will first ask all of the children to show how many coins Red Panda has in his jar after holding up the money jar for everyone to see first. After seeing children’s number of fingers held up, the teacher has a conversation with children about how they knew how many coins were in Red Panda’s jar. After the conversation about children’s mathematical thinking process on how many coins were in Red Panda’s coin jar, Lilliana, then, can put her coins in the jar.*

The role playing of or acting out the story (or context) on different pages help make this story personal to children. They counted up, represented the number(s) with their fingers, and shared different strategies they used when they figured things out. The teacher’s request for children to represent what they see with their fingers is a part of another intentional mathematical discourse. When children used their fingers to show a number instead of saying the number out loud, they used multiple representations by turning their verbal observations to physical representations.

Another way to build on this story context is to have children modify the story presented in this book. The children can decide to have a different item than candy apple, the total number of items, and how many items each of Red Panda’s customers will want. The process of creating a modified or “new” story book will provide children opportunities for multiple representations of quantity. The children will have the opportunity read a number in symbolic form, show the numbers as quantities, and practice ordering numbers as well as backwards counting as children create their own story problems. Thus, intentionally thought-out questions that are open-ended and specifically asking children to share their making sense process of quantities within the story context as well as role-playing provide young children opportunities for rich conversation that provides a venue for exploring mathematical concepts that tend to be abstract.

## Furthering the Case of Red Panda with More Books

Red Panda was chosen to illustrate examples of rich mathematical conversations in a so-called “non-math” book. We showed how we can keep the fun and excitement of the story plot while creating extensive mathematical learning opportunities as well. We had two purposes from the case of using Red Panda. First, we wanted you to reconsider your story reading time and recognize promises of your favorite story books from a slightly different perspective. There might be many opportunities for mathematical conversations. Second, we wanted to share with you some productive mathematical practices you can easily incorporate into your classrooms. Now, we want to expand our work from the case of Red Panda to some other cases which you can implement productive mathematical teaching practices we discussed above. We suggest six more books: *Baby Goes to Market*, *Caps for Sale*, *Press Here*, *Ten Apples Up on Top!*, *Five Creatures*, and *The Mitten*.


These books are chosen, not only because we love reading these books, but we know, from our own experiences, children love the story plot, the characters, and the potential for fun mathematical activities in these books. In **Table 1** and **Table 2**, we provide



the story theme for each book and the key ideas addressed in the story as well as various mathematical opportunities (i.e., key mathematical ideas, mathematical teaching practices, and examples of purposeful questions) teachers can integrate into children’s learning experience.

**Table 1 Key Ideas and Mathematical Opportunities for Select Children Books**

	<i>Baby Goes to Market</i> by Atinuke	<i>Caps for Sale</i> by Esphyr Slobodkina	<i>Press Here</i> by Herve Tullet
<b>Story theme</b>	A mom and a baby go to the market and mom’s shopping basket fills up as they stroll around.	A cap peddler’s encounter with monkeys.	Reader interaction with dots.
<b>Ideas addressed in the story</b>	This book introduces children to an outdoor market in South-west Nigeria and the generosity of vendors.	This book introduces children to an unfamiliar job and a fun incident with monkeys.	Relational thinking (what happens when you tilt the page to the left/right) Imagination (dots getting bigger, smaller or dots moving out page)
<b>Key mathematical ideas</b>	<ul style="list-style-type: none"> <li>Counting various items not presented in a numeric order (Number range 1-6)</li> <li>Same, more, and less</li> <li>One less-One more</li> <li>Cardinality</li> </ul>	<ul style="list-style-type: none"> <li>Counting sequence from 1 to 17</li> <li>Cardinality</li> <li>Describing equal groups (caps in groups of 4)</li> <li>Units and composite units (one cap and four caps in each color)</li> <li>Sorting and comparing</li> <li>Skip counting</li> </ul>	<ul style="list-style-type: none"> <li>One-to-One correspondence (each tap will make a new dot on the page)</li> <li>Counting</li> <li>Cardinality</li> <li>Conservation of numbers (if I shake the dots on the page, is the number still the same or different?)</li> <li>Same, More, and Less</li> <li>Patterns (Red-Yellow-Blue presented in a line)</li> <li>Describing equal groups (5 dots in each color)</li> <li>Number Relations (3 dots on one page 2 yellow and 1 red so <math>2+1=3</math>)</li> </ul>

	<b><i>Baby Goes to Market</i></b> by Atinuke	<b><i>Caps for Sale</i></b> by Esphyr Slobodkina	<b><i>Press Here</i></b> by Herve Tullet
<b>Mathematical teaching practices</b>	<ul style="list-style-type: none"> <li>Counting and multiple representations of numbers (e.g., Can you show 4 with your fingers? Can you show me 4 by using apples instead of bananas?)</li> <li>Role playing actions of the baby, mama, and the vendors</li> <li>Posing story problems using pictures in the book (e.g., "Baby had some bananas. The baby has 4 bananas now. How many bananas did the baby have before she ate one?")</li> <li>Asking purposeful questions (see below for example questions)</li> </ul>	<ul style="list-style-type: none"> <li>Counting and multiple representations of numbers (e.g., Illustrate the story and produce a number sentence or show me with your fingers how many red caps does the peddler have?)</li> <li>Acting out the story with different numbers (e.g., "Let's pretend peddler had 2 caps of each color")</li> <li>Posing story problems using the context of the story (e.g., "What if the monkeys took only the blue caps, how many caps would the peddler have left?")</li> <li>Asking purposeful questions (see next row for example questions)</li> </ul>	<ul style="list-style-type: none"> <li>Counting and multiple representations of numbers (e.g., Illustrate the story and produce a number sentence or show me with your fingers how many red dots we have on the page?)</li> <li>Represent the color dots with different numbers (i.e., draw/glue dots – e.g., 1 red, 4 yellow, and 2 blue dots - on paper to determine how many of each color)</li> <li>Represent the dots with another object (e.g., "We are going to wear hats and we will act out like dots from the story. Each time I tap on a shoulder of a child with red hat, another child with red hat will join to the group)</li> <li>Posing story problems using the context of the story (e.g., "There was only 1 blue dot but now there are 5 blue dots. How many dots did I add? What if I tapped the yellow dot 7 times instead of 5 times, how many dots would I have?")</li> <li>Asking purposeful questions (see next row for example questions)</li> </ul>
<b>Purposeful question examples</b>	<ul style="list-style-type: none"> <li>How many ... did ... give to the baby?</li> <li>When baby ate one of. ... how many are left?</li> <li>How many .... in the basket?</li> <li>Are there more ... or ... in their basket?</li> <li>What do the baby and mama had more of in their basket?</li> </ul>	<ul style="list-style-type: none"> <li>How many caps does the peddler have including his own checked cap? How do you know?</li> <li>How many caps does the peddler have not including his own cap? How do you know?</li> <li>How many caps does the peddler have after his nap under the tree? How many are missing?</li> <li>Can you create a visual illustrating peddler and his caps and write a number sentence showing how many caps he has?</li> <li>How many of each color does the peddler have?</li> </ul>	<ul style="list-style-type: none"> <li>Are there more yellow dots or less yellow dots on this page? Explain.</li> <li>How many yellow dots and how many red dots are there? How many dots overall?</li> <li>How many dots of each color are on this page? 5 yellow, 1 red and 1 blue. If there are 5 yellow and 1 red and 1 blue, how many dots overall are on this page?</li> <li>How many dots do you see on this page? How did you know there are 15 total? I see 5 of each color dots so there are 15.</li> <li>Can you show/tell me how you see the 15 dots on this page?</li> </ul> 

**Table 2 More Key Ideas and Mathematical Opportunities Using Select Children Books**

	<b><i>Ten Apples Up on Top!</i></b> by Theodor Geisel (or well known as Dr. Seuss)	<b><i>Five Creatures</i></b> by Emily Jenkins	<b><i>The Mitten</i></b> by Jan Brett
<b>Story theme</b>	A lion, a tiger and a dog try to put as many apples as they can up on their head.	Describing a household of 5 creatures (3 people and 2 cats) by using different descriptors	A lost mitten becoming a warm spot for different wild animals
<b>Ideas addressed in the story</b>	This book provides an imaginary context where animals compete to get as many apples as possible on their head.	This book provides a glimpse into a family of 5 (pets included) by looking at how they are similar and different	This book starts with a realistic context of a grandma knitting a pair of white mittens for her grandson and moves to an imaginary context where animals try to make their way into this mitten to warm up during a cold winter day.
<b>Key mathematical ideas</b>	<ul style="list-style-type: none"> <li>• Forward and backward counting apples in an increasing order (Number range 1-10)</li> <li>• Same, more and less</li> <li>• One less-One more</li> <li>• Cardinality</li> <li>• Combinations of ten</li> </ul>	<ul style="list-style-type: none"> <li>• Counting from 1 to 5.</li> <li>• Different partitions of number 5</li> <li>• Cardinality</li> <li>• Sorting and comparing</li> </ul>	<ul style="list-style-type: none"> <li>• One-to-One correspondence (each animal will take a spot in the mitten)</li> <li>• Counting from 1 to 8</li> <li>• Cardinality</li> <li>• One less-One more</li> </ul>
<b>Mathematical teaching practices</b>	<ul style="list-style-type: none"> <li>• Counting and multiple representations of numbers (e.g. Can you stack 10 cubes up on top? Can you stack 10 cubes by using two different colors?)</li> <li>• Acting out the story with stackable cubes for different numbers. Students can try to carry their stacks on a tray to provide more challenge and fun.</li> <li>• Posing story problems using pictures in the book (e.g., "The lion had 3 apples on top but the tiger had 7 apples. How many more apples does the tiger have up on top? The lion had 3 apples on top but the dog had one more. How many apples did the dog have up on top?")</li> <li>• Asking purposeful questions (see following for example questions)</li> </ul>	<ul style="list-style-type: none"> <li>• Counting and multiple representations of numbers (e.g., Can you build five by using different colors? Can you show 5 by using your two hands?)</li> <li>• Acting out the story with different numbers (e.g., "Let's pretend we are a family of 5 with 3 cats and just two parents. Let's pretend to be a family of 6 with 3 dogs and 3 people")</li> <li>• Posing story problems using the context of the story (e.g. "What if there were four who liked to eat fish, then how many did not like eating fish? If the dad and the orange cat like taking daytime naps, how many do not like taking daytime naps?")</li> <li>• Asking purposeful questions (see following for example questions)</li> </ul>	<ul style="list-style-type: none"> <li>• Counting and multiple representations of numbers (e.g., Illustrate the story and produce a number sentence or show me with your fingers how many animals are in the mitten?)</li> <li>• Acting out the story with different number of animals (e.g., "Let's pretend to be an owl, a badger and a hedgehog, how many animals are in the mitten?")</li> <li>• Posing story problems using the context of the story (e.g., "What if there were 2 owls and a rabbit in the mitten, how many animals are in the mitten? How many feet are in the mitten?")</li> <li>• Asking purposeful questions (see following for example questions)</li> </ul>

	<b>Ten Apples Up on Top!</b> by Theodor Geisel (or well known as Dr. Seuss)	<b>Five Creatures</b> by Emily Jenkins	<b>The Mitten</b> by Jan Brett
<b>Purposeful question examples</b>	<ul style="list-style-type: none"> <li>• How many apples up on top did the lion have if he had ... now?</li> <li>• When the tiger put one more apple on top of ... how many are there up on top now?</li> <li>• How many apples do the tiger and the dog have together?</li> <li>• The lion has ... how many more apples would the lion need to have ... apples up on top?</li> </ul>	<ul style="list-style-type: none"> <li>• How many cannot unbutton buttons if there are ... who can button buttons? How do you know?</li> <li>• How many do not like eating beets if there are ... who liked to eat beets?</li> <li>• Can you illustrate different combinations of five and write a number sentence showing how many in all?</li> </ul>	<ul style="list-style-type: none"> <li>• When ... got into the mitten how many animals are there now? Explain.</li> <li>• There are ... animals in the mitten once the ... got in, how many before?</li> <li>• There were only a rabbit and a mole and ... more animals joined, now how many animals in the mitten?</li> </ul>

## Conclusion

Children, especially during preschool and kindergarten years, benefit from concrete, relevant, authentic context to situate their learning. Stories can be a useful medium for children. Rich storybooks about common childhood experiences provide wonderful opportunities for children to negotiate their behaviors, learning, and skills in various subject areas in a fun, safe venue. Teachers can use the story plot as a platform to challenge their children in mathematical thinking. Children, in associating fun stories and acting out reading-related activities that are mathematically-oriented, acquire positive outlook on mathematics and are more likely to retain mathematical concepts.

Intentional preparation by the teachers is essential for children's initial and long-term learning in mathematics. Teachers of preschool and kindergarten age children need to know and organize developmentally appropriate mathematics instruction by selecting context rich stories that provide opportunities for children to apply and better make sense of the more abstract mathematical concepts. Productive mathematical discourse begins with determination of grade appropriate mathematics focus then providing activities that allow numerous opportunities for children to engage and re-visit the same topic from different lenses. Teacher's inclination to end a mathematical conversation when a child gives a correct response can limit young children's problem solving and exploration of mathematics.

The use of rich contexts and intentional questions that asks children to explain their answers as well as to represent mathematics in multiple ways facilitates mathematical discourse in the classroom. Teachers can facilitate children's formalization of abstract mathematical ideas when they provide opportunities for children to use the story context to make connection between prior learning and new mathematical experiences. With preschool and kindergarten age children, the thinking process matters more than the answer. Therefore, teachers listening to children's explanation of their thinking process and challenging them to think about the same question in different ways through a mathematical dialog will foster mathematical learning in young children.

**Funda Gonulates** is an assistant professor of mathematics education program at Northern Kentucky University and faculty associate for the Kentucky Center for Mathematics. She is interested in PreK-8 mathematics teaching and learning. Her research interest includes teacher learning from job embedded professional development experiences, productive teacher collaboration, and curriculum and instruction.

**Jaesook Gilbert** is a professor of Early Childhood Education (Birth-Kindergarten) program at Northern Kentucky University. She has worked with early care and education providers as a director, consultant, and trainer. Her research interests include staff development and home-school-community collaboration within early care and education.

## References

- Atinuke. (2017). *Baby goes to market*. Candlewick Press.
- Brett, J. (1989). *The mitten*. Scholastic Inc.
- Casey, B., Erkut, S., Ceder, I., & Young, J. M. (2008). Use of a storytelling context to improve girls' and boys' geometry skills in kindergarten. *Journal of Applied Developmental Psychology, 29*(1), 29-48. <https://doi.org/10.1016/j.appdev.2007.10.005>
- Carpenter, T. P., Fennema, E., Franke, M. L., Levi, L., & Empson, S. B. (2015). *Children's Mathematics: Cognitively guided instruction*. Heinemann.
- Hintz, A., & Smith, A. (2013). *Mathematizing read-alouds in three easy steps*. *The Reading Teacher, 67*(2), 103-108. <https://doi.org/10.1002/TRTR.1182>
- Institute of Education Sciences (IES) (2015). *2015 survey questionnaires results: Students' views of Mathematics, Reading, and Science*. [https://www.nationsreportcard.gov/sq\\_students\\_views\\_2015/](https://www.nationsreportcard.gov/sq_students_views_2015/)
- Jansen, M., Lüdke, O., & Schroeders, U. (2016). Evidence for a positive relation between interest and achievement: Examining between-person and within-person variation in five domains. *Contemporary Educational Psychology, 46*, 116-127. <https://doi.org/10.1016/j.cedpsych.2016.05.004>
- Jenkins, E. (2001). *Fiver creatures*. Square Fish.

- Jung, M., & Conderman, G. (2013). Intentional mathematics teaching in early childhood classrooms. *Childhood Education, 89*(3), 173-177. <https://doi.org/10.1080/00094056.2013.792689>
- LeSieg, T. (1961). *Ten apples up on top!* Random House.
- Paul, R. (2013). *Red Panda's candy apples*. Candlewick Press.
- Piaget J. (1952). *The origins of intelligence in children*, M. Cook (trans.). International University Press.
- Piaget J. (1977). *The development of thought: Equilibration of cognitive structure*. Viking Press.
- Schickedanz, J. A., & Collins, M. (2013). *So much more than the ABCs: The early phases of reading and writing*. National Association for the Education of Young Children.
- Slobodkina, E. (1987). *Caps for sale. A tale of a peddler, some monkeys and their monkey business*. Harper Trophy.
- Tullet, H. (2010). *Press here*. Handprint Books.
- Uscianowski, C., Opopenzato, C., Almeda, B., & Ginsburg, H. P. (n.d.). *Analyzing picture books: An overview*. Development and Research in Early Math Education (DREME) Network Early Math Resources for Teacher Educators. <http://prek-math-te.stanford.edu/overview/analyzing-picture-books-overview>
- van den Heuvel-Panhuizen, M., Elia, I., & Robitzsch, A., (2016). Effects of reading picture books on kindergartners' mathematics performance. *Educational Psychology, 36*(2), 323-346. <https://doi.org/10.1080/01443410.2014.963029>



ProSolutions Training is nationally recognized for its online training and more than 29 years of experience in early childhood education and human services.



**100+**

- ✓ Online courses including certificate programs available in English and Spanish
- ✓ CDA Training and CDA Renewal Training
- ✓ Annual Subscriptions with CDA Training Feature

Quality training delivered quickly, efficiently and affordably!

To learn more, visit

[ProSolutionsTraining.com](http://ProSolutionsTraining.com)

800-939-9694



ProSolutions Training is a formal partner with the Council for Professional Recognition.



ProSolutions Training is accredited by the International Association for Continuing Education and Training (IACET).



The National Workforce Registry Alliance

ProSolutions Training is a Recognized Training Organization of the National Workforce Registry Alliance.

# STEM in Early Childhood: Establishing a Culture of Inquiry with Young Children

Shari Farris and Cammy Purper



One of the most impactful and transformative practices early childhood teachers can engage in is the practice of inquiry. Inquiry requires educators to be both fully present and fully engaged in professional practice while adopting the mindset that the cycle of inquiry is never complete. In inquiry-based learning, the learner is at the center of the learning process. Discovery of new learning is encouraged through questioning, observing, exploration, and the sharing of ideas and reflection. In true inquiry, educators identify and investigate problems of practice, develop plans to improve, use evidence to have data-driven conversations, watch for evidence of progress, take action, and understand and reflect. Lifelong learning is not a new concept for educators, nor is the ability to reflect on practice. The exercise of inquiry, however, provides a framework to allow those behaviors to become more intentionally focused. The goal of teacher inquiry is a transformative educational practice. Cochran-Smith and Deemers (2010) sum up the practice of teacher inquiry, remarking that “it is a powerful way for teachers and teacher educators to understand the complexities of teaching and learning, construct rich learning opportunities for all students, interrogate their own assumptions, and work for social justice” (p. 14).

There are many frameworks used in inquiry practice with all anchored in questioning and reflection. Educators engaging in inquiry should be transparent about assumptions and open to new ideas, feedback, and improvement. Adding collaboration with colleagues becomes a powerful and important component of inquiry. In a study that explored the results of teacher inquiry, teachers shared that the opportunity to engage with other teachers in the inquiry project gave them reassurance that

they were not alone in the challenges and questions they had about improving student learning (Jao & McDougall, 2015).

The process of inquiry is also a powerful learning tool for young children. Engagement with inquiry in both teaching and learning transforms a classroom into a community of learners. Inquiry for young children can also be transformative as students explore ideas and materials, access prior knowledge, and construct new meaning and

learning. The use of an inquiry approach is especially suited to Science, Technology, Engineering, and Mathematics or STEM topics in early childhood. Young children, who are both naturally curious about how things work and inherently trial and error learners, can be guided in the processes of inquiry in STEM topics to enhance and deepen learning.

## Why Use Inquiry in Early Learning Environments?

Planning for inquiry learning by exploring STEM concepts can have long lasting benefits for young children. With a clearly documented need for greater access to technology and career preparation in STEM fields for women and students of color, early exposure to STEM is a wise investment of instructional time. A summary of research on early math learning found that effective math instruction “can enhance later learning and narrow achievement gaps” (National Science Foundation, 2018, p.1). In another study completed at Sultan Idris Education University in Malaysia (Binti & Siti, 2017), researchers studied the effects of using a play and inquiry-based learning tool to teach preschoolers numeracy concepts. The children participated in a series of lessons where they had the opportunity to question, solve real life problems, play with ideas, and reflect on their learning. They discovered that children were not only able to master numeracy concepts, but that their motivation for learning also improved.

Using knowledge about the benefits of inquiry, classroom teachers can simultaneously engage in their own inquiry cycles to improve their professional practice while creating STEM learning



opportunities in early learning classrooms. Modeling the inquiry process for young learners creates a culture of inquiry-based learning, and students can benefit from the same mindset of continuous improvement, questioning, and reflection as they explore and investigate while learning STEM concepts. The purpose of this article is to explore some ways in which teachers can use inquiry for young children and for themselves with STEM experiences to promote a culture of classroom inquiry and improve learning outcomes for their students.

### Creating a Culture of Inquiry with STEM

Teaching young children to engage in inquiry, particularly in the areas of science and math, can nurture powerful learning and social-emotional connections. Our university offers a course on STEAM (Science, Technology, Engineering, Art and Math) teaching for preschool and early elementary. In this course, we emphasize inquiry as an essential approach to STEM (with the addition of ART) for multiple reasons. One of these is the critical nature and need for the content. Mastery of STEM content is certainly important for children growing up in a technological-based society. More important, however, are the skills that engagement with STEM can nurture, such as problem solving, critical thinking, and collaboration. Ultimately, these are the skills our 21st century students will need to thrive when they leave the classroom, and current achievement data in math and science point to a need for a greater emphasis on instruction in these areas (National Science Foundation, 2018).

On occasion, our preservice students have expressed reservations about teaching STEM to our youngest of learners. They wonder if they should wait until children are a little older to introduce

such complex concepts. In fact, engagement with STEM concepts results in meaningful educational experiences for young children. As Sarama et al. (2018) point out, “young children are curious, inclined to explore, and eager to understand and make sense of their world” (p. 2). These characteristics make preschool and early primary students well suited for inquiry-based STEM learning. When STEM is taught using an inquiry model, the process is both integrated and collaborative, which nurtures multiple areas of children’s development, including literacy and social competencies. Students are encouraged to ask questions, explore materials, use tools, and communicate their ideas as they experience the world around them, exercises which transcend learning

within the content areas, helping children develop their understanding of both “content (what to learn) and processes (how to learn)” (Linder & Eckhoff, 2020, p. 28).

### Getting Started with STEM Inquiry: Learning Standards

The process of beginning inquiry teaching can be intimidating for teachers. Research supports the idea that teachers often feel unprepared to plan and deliver these experiences (National Science Foundation, 2018). One common concern is how an inquiry approach to teaching and learning STEM fits into a standards-based early learning framework. In our experience, inquiry learning with young children fits very well within early learning standards, although the process of connecting standards to learning is somewhat different than teachers typically engage in. Often, teachers examine the standards for learning and devise ways to teach children what they need to know. When using inquiry approaches with children, teachers observe and document what children say and do, and identify how children’s emerging knowledge fits within early learning standards. This, of course, does not mean teachers cannot plan on helping children acquire the learning goals established for young children, but it does require careful observation, reflection and strategic planning to get there because the process is more open-ended, and child directed. Similarly, it is not necessary to neglect ongoing assessment of children’s learning during inquiry lessons or units; in fact, the documentation associated with inquiry learning in early childhood, which can include dictation, images, artwork, video, and more, provide excellent evidence of children’s learning. These pieces can be collected, assessed, added to portfolios and shared with families to display the inquiry process and progress



in what is called STEAM learning, the integration of the arts into STEM. The knowledge gleaned by teachers from such pieces can also be used to plan further instruction for young children that will take them to the next level of learning.

STEM inquiry is also a naturally differentiated learning experience, with unique benefits for students with disabilities and students who are learning English. The process of inquiry makes room for students from all backgrounds and with a wide variety of skills to ask and answer the questions about a specific topic that are personally meaningful, and to construct the answers that build upon their current levels of understanding. We find the addition of art concepts to the STEM paradigm, STEAM, provides an especially helpful vehicle for students to express their learning. For students who may need accommodations or modifications, adding an art component can provide a means for expression of understanding outside of the constraints of typical written or verbal assessments.

## The Cycle of Inquiry

The process of STEM inquiry can take a variety of forms and names, but the essence of the process stays the same and involves questioning, investigation, and reflection. The following are common steps in the inquiry process for both children and adults.

**1. Ask:** For **teachers**, inquiry begins with questions about improving teaching and learning. A teacher may start with a question for a STEM unit. They may ask themselves questions such as: "What are the needs and abilities of the children in my care?" or "What do they children seem particularly interested in right now?" or "What are some skills and knowledge that would be especially useful to the children in my class right now?"

- a. For young **children**, inquiry also begins with asking or pondering questions about what they experience or observe in their environment. If needed, teachers prompt students with open ended questions and ask "What if we..." or "I wonder how ..." until children begin to ask their own questions. McTighe and Wiggins (2013) provide a rationale for engaging in questioning as part of creating a culture of inquiry in classrooms: "The use of questions signals to students that inquiry is the goal of learning in your class and makes it more likely that a unit of study will be intellectually engaging" (p. 22). Young children view questions as an invitation to explore, uncover, and experiment with ideas.

**2. Investigate:** During the investigate portion of an inquiry cycle, the learner and teacher practitioner experience self-motivating opportunities to explore. **Teachers** explore the alignment between teaching, the environment, and the conditions for motivation of learning and exploration. Teachers watch children play, discuss, and explore materials, noting their thinking, ideas, and learning processes. Teachers gather data and make observations, which can allow them to decide next steps in the learning process. They also provide materials and experiences related to the STEM concept being explored that will allow children to investigate and explore the topic in their own cycle of inquiry. **Children**, in this stage, use these to make meaning from their

own set of perceptions, interests, and begin to connect new learnings with previous knowledge about the topic. As children investigate, they should be encouraged to think out loud. This helps them process new learning, communicate with peers, collaborate, and also helps the teacher by generating key observation data on the inquiry and learning process.

**3. Create:** In this cycle of inquiry, both teacher and students begin to construct new ideas based on the investigative portion of the cycle. A joint study between the University of Winnipeg and Winnipeg School Division (Betts, et. al, 2017) observed classroom teachers using inquiry in mathematics and found that inquiry not only triggered the natural curiosity and creative thinking of students but also the openness to create new meaning, thereby motivating students who may otherwise disengage in math. A **teacher** might engage young children to activate additional learning by providing new materials or tools, and pose questions such as, "What are you noticing?" or "What do you think that means?" Teachers can watch and make note of learning that is happening, and what conditions promote learning, both for individual children and the group as a whole. **Children** can begin to represent their ideas and learning through words, pictures, and the arts.

**4. Discuss:** Successful inquiry includes collaboration. For both teachers and children, the practice of sharing ideas, data observations, assumptions, and new learnings is an important part of making meaning out of the inquiry process. **Teachers** can collaborate with colleagues about what they are observing in student behavior, motivation, brainstorm ideas, and address common assumptions. The teacher might encourage this same process with young children during the lesson by saying, "Tell us what you are noticing..." **Children** play and work in pairs and groups and discuss their ideas, observations, and conclusions, sometimes with prompting from the teacher. When young children collaboratively exchange ideas about STEM concepts as part of the inquiry process, they are also targeting key developmental growth areas, especially social- emotional and communicative learning.

**5. Reflect:** For both teacher and children, reflection as a part of inquiry invites the opportunity to not only look back, but also to look forward as new ideas merge with previous knowledge. For **teachers**, reflection can be done through journaling or through conversations with colleagues. Reflection propels teachers to adapt and expand their lessons, engagement strategies, the learning environment, and curriculum. **Children** can reflect verbally with teachers and classmates, a process which can be facilitated through the review of artifacts created through the learning process, such as video, art, pictures, or stories. Foley and Green (2015) describe several skills to develop as part of young children's reflecting, including remembering, explaining, translating, sharing and revisiting. For example, the teacher can encourage reflection with young children through conversation and questions such as, "Let's look back at what you already know about..." and "What did you learn today?", and then dictate children's responses. These types of activities can be motivating for children as they see discover their own growth between previous knowledge and new learning and meaning.

## Sink and Float Experiences: An Inquiry Cycle for Teachers and Children

The following table summarizes both student and teacher actions in this simple inquiry practice framework using a specific

STEM lesson from an early childhood setting. The scenarios are based on the topic of sink and float, which was chosen because it is appropriate for a wide variety of age groups, from older toddlers to early elementary. It relies on common experiences and easily accessible materials in the early childhood classroom.

**Table 1 Summary of Teacher’s and Children’s Inquiry Steps for Sink and Float**

Inquiry Step	Teacher Action	Student Action
<b>Ask</b>		
<p><i>The teacher asks questions about professional practice to improve children’s learning and motivation. The teacher may hypothesize and address any assumptions about the question.</i></p> <p><i>The children ask and discuss questions related to an observation or topic of interest.</i></p>	A teacher may ask: how can I motivate and develop student interest in understanding the properties of water and what makes items sink or float?	Children may notice natural phenomena (the Lego sank but the ball floated in the water table) and ask: what makes things float and others sink? They may make some predictions or hypothesize.
<b>Investigate</b>		
<p><i>The teacher observes and gathers data about children’s learning. The teacher may revisit assumptions about what children know or need to learn.</i></p> <p><i>The children explore materials and engage in trial and error learning related to the specific unit or lesson.</i></p>	A teacher takes notes and observes student behavior, communication, and interactions while at the water table. She may provide other areas to explore water and items to test.	Students practice placing items in water. They observe which items float or sink and what makes them different including size, position, weight, kind, etc.
<b>Create</b>		
<p><i>The teacher analyzes notes and data to challenge and refine assumptions about and plans for student learning and motivation.</i></p> <p><i>The children use pictures, graphs, video, or other representations to document, sort and chart new learning. Guided by teacher questioning, they create new learning by discovering what they were surprised by in the learning process.</i></p>	Teacher documents children’s explorations and assesses new learnings that surface. Notes are used to examine patterns in learning and behavior among students, as well as areas of misunderstanding. Teacher creates a plan for additional related questions or activities.	Children begin examining their ideas about things that float and sink. They create new ideas about why some things float and others sink based on their observations and begin to create new ideas. They generate hypotheses about what makes items sink and float and represent their understanding through graphing, sorting, and depicting ideas through words, pictures, and actions.
<b>Discuss</b>		
<p><i>The teacher collaborates with colleagues to share and test ideas, assumptions, and new learning.</i></p> <p><i>The children collaborate with peers to share and test ideas and new learnings about the unit or lesson.</i></p>	The teacher collaborates with colleagues to share observation notes, ideas, and new learnings about motivation and student interest in the sink and float activity.	Students share their ideas with peers and teachers and discuss their creations. For example, did they think the ball would float or sink? What about the pumpkin? What do the items that sink and float have in common? They may revisit assumptions, predictions, and new learnings. They may formulate new questions why items float and sink.

Inquiry Step	Teacher Action	Student Action
<b>Reflect</b>		
<p><i>The teacher revisits initial inquiry questions. They may develop new questions for inquiry and reflect on any changes or adjustments needed to the classroom environment, lesson, or unit.</i></p> <p><i>The children reflect on their initial questions about the unit or lesson through sharing out loud and reviewing the learning process. They acknowledge new learning, and they may ask new questions.</i></p>	<p>The teacher will revisit the initial question posed at the start of sink and float lesson. What are the new learnings? Based on the observational data, what would I do differently? How can I improve learning and motivation? What environmental conditions encouraged discovery and engagement in this lesson? How can I continue to capture that for further lessons?</p>	<p>Students would revisit the initial question posed at the start of inquiry about things that float and sink. They reflect on the learning process and articulate their new understanding about why items float or sink. They may be guided to ask new questions about objects that float and sink.</p>

## Resources

Teachers interested in developing a culture of inquiry through STEM instruction may want to start by exploring books and web-based resources created to support inquiry learning for teachers and young children. The web links in Figure 1 might be a good place to start:

**Figure 1. Suggested Web-based Resources**

### **The Smithsonian Science Education Center:**

<https://ssec.si.edu/>

This website is a unit of the Smithsonian dedicated to science reform for PreK - 8 students with a "curriculum is designed to meet the challenge of national and state standards by placing scientific inquiry at the core of science education programs." Numerous free curriculum resources and professional development materials are available.

### **STEMIE: Innovation for Inclusion in Education:**

<https://stemie.fpg.unc.edu/>

STEMIE was established by the Frank Porter Graham Institute at the University of North Carolina Chapel Hill to promote STEM learning for young children with disabilities. One notable feature is a Community page, where teachers can share and support each other with stories and ideas.

### **Teaching Great Lakes Science:**

<https://www.michiganseagrant.org/lessons/teacher-tools/guided-inquiry-process/>

Developed through the collaborative efforts of the University of Michigan and Michigan State University, this website was developed to provide support for teachers interested in learning about inquiry-based science teaching. Although the resources are focused more on students in older grades (grades 4 to 12), the content includes several helpful handouts explaining the process of inquiry which could be part of professional development or shared with parents.

## Conclusion


The process of inquiry has benefits for young children as well as their teachers. Cheeseman (2009) discusses that the role of the teacher within the process of inquiry is to observe, listen, interact, and probe the children's thinking by encouraging them to share explanations and discoveries in order to promote continuous learning. Capturing their natural curiosity, STEM inquiry lessons can be collaborative, data-driven, and reflective for young children, allowing teachers to promote learning for diverse groups of young children as well as improve their professional practice. Whatever the STEM topic, presenting an inquiry experience to children, while at the same time teachers use inquiry tools for planning and modifying the learning experience as it unfolds, has the potential to result in a positive learning experience for all.

**Shari Farris, Ed.D.**, has worked in the field of education for over 25 years as a teacher, administrator, and university professor. She served as classroom teacher working with PreK and elementary school students and families. She has also served as a school administrator and school district professional development trainer. For the past 9 years Dr. Farris has worked with preservice teachers and school leaders at the college level serving as a professor, department chair, and program director. She currently serves as the director for the Master of Science in Education program in the Online and Professional Studies Division at California Baptist University in Riverside, CA.

**Cammy Purper, Ph.D.**, has worked as an educator for the past 30 years in preschool, K-12, and higher education settings, and has served in leadership as a director, lead faculty, chair and assistant dean. She currently is the program coordinator for the Early Childhood Studies program in the Online and Professional Studies Division of California Baptist University in Riverside, CA.

## References

- Betts, P., McLarty, M., & Dickson, K. (2017). An action research project by teacher candidates and their Instructor into using math inquiry: Learning about relations between theory and practice. *Networks: An Online Journal for Teacher Research, 19*(4), 8-9. <https://dx.doi.org/10.4148/2470-6353.1011>
- Binti, A., & Siti, R. (2017). A case study of fun learning with numeracy of preschoolers. *International Journal of Early Childhood Education and Care, 6*, 51-58.
- Cheeseman, J. (2009). Young children are natural inquirers: Posing and solving mathematical problems. *Waikato Journal of Education, 24*(2), 11-22. <https://doi.org/10.15663/wje.v%vi%i.664>
- Cochran-Smith, M., & Demers, K. (2010). Research and teacher learning: Taking an inquiry stance. In: O. Kwo (Ed.), *Teachers as learners. Critical discourse on challenges and opportunities* (pp.13-43). Springer, Dordrecht.
- Foley, J., & Green, J. (2015). *Supporting young children's reflections with phones and tablets*. NAEYC <https://www.naeyc.org/resources/pubs/tycljun2015/supporting-childrens-reflection>
- Jao, L., & McDougall, D. (2015). The collaborative teacher inquiry project: A purposeful professional development initiative. *Canadian Journal of Education, 38*(1), 1-22.
- Linder, S.M., & Eckhoff, A. (2020). Breaking down STEAM for young children. *Teaching Young Children, 13*(3), 28-30.
- McTighe, J., & Wiggins, G. P. (2013). *Essential questions: opening doors to student understanding*. Alexandria, Virginia, USA: ASCD.
- National Science Foundation (2018). *Nurturing STEM Skills in Young Children, PreK -3*. <https://successfulstemeducation.org/resources/nurturing-stem-skills-young-learners-prek-3>
- Sarama, J., Clements, D., Nielsen, N., Blanton, M., Romance, N., Hoover, M., Staudt, C., Baroody, A., McWayne, C., & McCulloch, C. (2018). Considerations for STEM education from PreK through grade 3. Waltham, MA: Education Development Center, Inc. Retrieved from <http://cadrek12.org/sites/default/files/DRK12-Early-STEM-Learning-Brief.pdf>



**FunShine**  
*Express*  
Early Learning Curricula

**CURRICULUM**  
At Your Fingertips

- ✓ **Save lesson planning time**
- ✓ **Aligned to early learning standards**
- ✓ **Assessment and parent engagement**

[funshineexpress.com](http://funshineexpress.com)

# Building Bridges between Home and School

Anna Hall and Qianyi Gao



“It takes a village” is a famous quote that not only rings true for raising children, but also for raising writers. Let’s face it; writing is challenging. It is a social and cognitive process requiring fine motor skills, a shared understanding with readers, and a proficient vocabulary. When teachers take on the sole responsibility for teaching children to write, it is a hefty load to bear. Fortunately, families can serve alongside teachers as powerful writing role models and help welcome children into the world of written language.

Involving families as team members in your writing instruction is not always easy. It takes more effort to develop and maintain reciprocal relationships with families than it does to utilize one-way communication through newsletters and emails (Daniel, 2009; Ferlazzo, 2011; Halgunseth, 2009; Tran, 2014). However, once you put the extra time and energy into building relationships with families, you will reap the benefits that come from creating an extended writing community within your classroom (Lopez & Caspe, 2014; Tran, 2014). When teachers and families share openly about writing goals, instructional strategies, and children’s progress, children feel supported, motivated, and inspired. Instead of viewing teachers as the all-knowing experts, families realize that they too are their children’s first writing teachers.

## Building Bridges and Connecting with Families

To engage families in the classroom writing community, teachers need to build bridges between home and school. Bridges are two-way streets that connect two significant places and suspend

over endless possibilities. They are not easy to build and are sometimes tricky to cross, but once established on a firm foundation, they allow open sharing and infinite opportunities to work together. As you begin building bridges with families, it is helpful to reflect on your writing attitudes and practices and to ask families to share their beliefs about writing. Do you like to write? Do you encourage your children to write often and share their writing with others? Do you write for enjoyment, or to complete daily tasks? Sharing your beliefs about writing and writing instruction will help nurture deeper family

relationships, which will further support your students’ writing development.

When you ask young children if they are writers, the majority will say they are despite their current phase of writing development (Hall et. al., 2019). As a teacher, it is important to nurture children’s natural self-efficacy in writing instead of extinguishing it. Building bridges between home and school and cultivating reciprocal relationships are the first steps in this important process. We hope this article inspires you to begin building bridges and talking to your colleagues about celebrating the unique writing contributions of all families.

## Establishing a Writing Community

*Community: a unified body of individuals who share a feeling of fellowship, as a result, of sharing common attitudes, interests, and goals.*

Writing is an activity that bonds a class together as a community of learners. It can be a highly personal form of self-expression and has the power to bring people together through shared experiences and form a unique community within the classroom. We sometimes write about our lives during mini lessons. The children then come to know our families, our hobbies, and our passions. They may say things like “How’s your husband’s sore knee?” or “When will you visit your grandmother again?” after hearing our stories. Although they may never meet any of our family members or visit our favorite places, they know all about

them from our writing. Sharing this helps them to feel a part of our world.

We also learn about the children's lives as they read their writing to the class during daily sharing time. We know that John was excited about losing his first tooth and that Peyton was extra tired because his new baby brother was keeping him up at night. When families visit our classroom to see children's writing, parents, grandparents, and siblings would join our sharing circles and contribute their unique feedback and praise. Because of what is shared in writing, we don't remain just a teacher, classmates, and families; we became a close school family.

To create an extended writing community, all members must share in the experience of writing. This means the teacher writes, the children write, and families write together. Writers within the community lean on each other for support, ask each other questions, and provide helpful feedback and praise. Here are some essential practices to establish an extended writing community:

- Include time for children to talk, write, and share their writing each day with you, their classmates and their families.
- Encourage collaboration among peers and helpful talk during writing time.
- Create a comfortable space for writing and sharing and allow children to choose where they write each day (e.g., desk, table, floor, reading area).
- Lay the groundwork for responding respectfully to others and building trust when writing is shared (in whole group or peer conferences). Don't expect this to come naturally.
- Model writing daily for authentic purposes (e.g., making a list, writing a story about a favorite pet, recording research on an interesting topic). Let your voice come through in your writing so your students will feel comfortable sharing their voice as well.
- Demonstrate taking risks with your writing and making adjustments when your choices don't work the first time around.
- Practice asking each other questions about your writing and provide compliments and suggestions for revisions.
- Celebrate the writing process each step along the way instead of just the finished product (Make peer conference day just as exciting as your Author's Tea, which celebrates completed pieces).
- Feature teacher and student writing throughout your classroom and refer to it often.
- Invite families to join you on special publishing days, participate in writing conferences, and join in during writing celebrations.

Just like any other type of community, shared values are established when you create a writing community in your classroom. Through watching you write, being invited to write, and seeing their families writing, children learn that writing is essential and that it has many purposes in our society. Children also recognize that each member of their writing community makes unique contributions and that every step of the writing process is critical.

## Building a Bridge of Communication

*Communication: The successful conveying or sharing of ideas and feelings by speaking, writing, or using some other medium*

Imagine showing children's writing samples from different time points during the year to their family members. It is hard to explain writing progress in a letter or on a report card, but during these conferences, it is easy for families to see words, sentences, and paragraphs lengthening over time. Their positive reactions will not only be because of the progress they notice in the samples. The smiles will also come from seeing their names in their children's stories and from recognizing the comfort their children feel in sharing their lives with their classmates. After looking through writing samples together at family conferences, families may start explaining the nuances behind their children's stories and sharing how their children are writing at home or inviting their family to write together.

In thinking about building bridges between home and school, it is critical to foster two-way communication with families and to remember that there is not one correct way to communicate (Daniel, 2009; Ferlazzo, 2011; Halgunseth, 2009). Teacher communication shifts as new technologies become available and depends on the unique needs of the families you work with each year (Burris, 2019; Parnell & Bartlett, 2012). It is vital to use a variety of methods so that families can select the one that best suits their lifestyle. In choosing communication methods, it is important to consider if they allow for one-way or two-way sharing (Ferlazzo, 2011; Ferlazzo & Hammond, 2009). For example, if you are using a group texting app, can families reply to the thread or you individually? Can the technology you are using maintain the privacy of your families and children? If you are using a classroom blog, is there space for family comments or a place to upload photos and writing samples? Here are some examples of ways to encourage two-way communication about writing with families:

- Educational social media apps like Edmodo or SeeSaw which allow families to join a private group and post comments or ask questions.
- Class websites or blogs which invite families to view children's writing and to send in photographs or home writing samples to post.
- Educational texting apps like Remind which allow teachers to use a private phone number for group or individual texting so they can share links with families and families can respond with comments or questions.
- Weekly folders with writing samples and comment cards for families.
- Writing nights that invite families to join their children in the writing process
- Family volunteer opportunities during conferencing days to provide individualized suggestions for revisions or help children with final edits.
- Class visitors to share what they love about writing or how they use it in their daily life
- Phone calls to report progress noticed and to ask families what they have noticed at home (Rotate five per week until

you get through your class role).

- Two-way conferences – ask parents beforehand to bring in their children’s writing samples or topics their children like to write about at home.

## Building a Bridge of Respect

*Respect: Due regard for the feeling, wishes, rights, or traditions of others*

At the beginning of each school year, as customary, you could send a letter to families inviting them to tell you about their children. You could ask them to tell you about what their children like to do, where they like to visit, and what makes them special. You could also invite them to send in photographs that would conjure up their children’s favorite memories, maybe a trip to the beach or a first bicycle ride. By sending this invitation before meeting the families, you are sending the message that you welcome and respect each child in your class and each family’s unique contributions to the classroom. The letters and photographs will remain in children’s writing folders and become valuable resources when they need to brainstorm new ideas for writing.

Demonstrating respect for families goes beyond being courteous and kind and extends to showing interest and valuing the unique contributions of each member of your extended writing community (Ferlazzo, 2011). Respect begins with recognizing that every family has important social and cognitive resources and special traditions that enrich their children’s lives and the life of your classroom. Respect is demonstrated when you ask families to share with you as often as you share information with them and when you honor their cultural contributions. It is also shown when you invite families to join your classroom in a variety of ways that take individual scheduling, transportation, and childcare needs into consideration.

Just like bridges, trust and respect are and must be developed over time. Developing respectful relationships involves understanding that families’ prior experiences with writing (positive or negative) may influence their participation in your classroom and that family engagement is a choice. It is essential to respect each family’s involvement level, whether it be minimal or high. Ultimately, respect is shown through sharing, listening, and understanding. Try to put yourself in the shoes of your families. Consider the pressures of balancing work, attention to all their children, and other life circumstances. Here are a few ways to develop a respectful relationship with families:

- Send a postcard welcoming families to your class before the first day of school.
- Send a letter during the first week of school inviting families to tell you about their children.
- Call families the first week of school and at least once a month throughout the year to share good news about their children and to ask families if they have anything they would like to share.
- Plan conference time equally among sharing with families and inviting families to share with you. Build in enough time with

each family so that no one feels rushed. This could be achieved through home visits or 20-30 minute school conferences.

- Celebrate the many cultures and traditions represented in your classroom and make special occasions inclusive of all families’ heritage.
- Invite families to share their expertise with your class (An editor can tell the class the steps authors go through to publish a book, A chef can explain the importance of writing a sequencing piece).

## Building a Bridge of Support

*Support: to give encouragement or assistance to someone because you want them to succeed*

Unlike the stages of walking and talking, writing approximations are not widely talked about or understood in mainstream society. It is hard for adults to remember how they went from learning the alphabet to constructing conventional words and sentences. Conventional writing does not happen on a particular day, like a child’s first steps, and it is often hard for families to know the best ways to support their children along the way. Building a bridge of support for young writers includes sharing developmental writing milestones, demonstrating strategies for modeling and guiding writing, and talking to families about how to set up a welcoming writing environment at home.

In supporting families, it is helpful to talk about what their children could do in writing instead of what they could not. For example, you could say “See how John is using initial and ending sounds when he writes “ct” for “cat”. He knows so much about sounding out words. Pretty soon, he will start to hear the vowel sounds, too when he stretches his words, and he will add in the “a”.” By focusing on children’s capabilities as emergent writers, you empower families to support children at their current developmental level. You also validate the ways they are already supporting early writing behaviors at home.

A bridge of support is designed to help teachers and families set writing goals, share instructional strategies, and monitor progress together throughout the year. As the saying goes, “Two heads are better than one.” When families and teachers discuss catalysts for children’s writing and support children in similar ways, it leads to less confusion for the children, comparable expectations among adults, and extends learning between home and school. For example, if teachers and families both encourage invented spelling by asking children to stretch the words orally (C-A-T) and use an alphabet chart to match the letters with the sounds they hear, the children will become more independent writing new words at home and school. Here are some other ways to build a bridge of support:

- Invite families to tell you their children’s preferences for writing at home (location, type of writing, do they like to share?).
- Share how you set up your writing environment (materials, time, flexible arrangements).
- Demonstrate ways to encourage invented or phonetic spelling and decrease children’s dependence on adults for spelling words.

- Tell families how topic choice increases children’s writing motivation – ask what topics they notice their children enjoy writing about at home.
- Show how you model being a writer in the classroom and ask families how they use writing at home (e.g., texting, social media, work, diary). Reinforce that they are their children’s first teachers. Explain to families that they are a powerful role model for their young writers.
- Talk about your focus on the writing process and how real authors go through the steps of prewriting, drafting, revising, editing, and publishing. Ask if they have noticed their children going through these steps at home when they write.
- Discuss the phases of writing development and set goals for helping children progress throughout the year.
- Share ways that you provide feedback during writing conferences and sharing time (e.g., asking the children to tell you about their writing, pointing out things they know about writing and are doing well, focusing on one teaching point instead of many)
- Invite families to share ways they celebrate their children’s writing at home (e.g., hanging it on the refrigerator, listening to their children read their stories aloud)

## Why Bridges are Important to Support Writing

Children’s emergence as writers is steered by interactions with the materials, environments, and people they encounter in their day-to-day lives. As they participate in and observe writing at home and school, children internalize their perceptions and understandings about writing. Although most children follow a similar developmental trajectory when learning to write, their distinct journeys are embedded within their own experiences and history.

Building bridges of communication, respect, and support with families can catalyze writing development by encouraging plentiful opportunities to write, availability of writing tools and materials, adult modeling, scaffolding, encouragement, and meaningful peer interactions focused on writing. Bridges can also support families in providing language experiences that help children build their oral and written vocabulary and modeling functional uses of writing in their everyday lives.

Children make judgments of their writing abilities based on their writing performance and messages they receive from significant adults in their lives (like teachers and family members). These judgments (or self-efficacy levels) are significant because they affect children’s levels of persistence and perseverance. In turn, children’s effort levels lead to their level of writing achievement in school and beyond. By building bridges, you can empower families, increase family involvement, and improve the writing outcome of your students.

## Making Time for Bridge-Building

The hardest challenge of being a teacher is fitting everything that you deem important into your school day and incorporating every new idea that you hear into practice. We may all have

experienced leaving professional development sessions with pages of notes and brimming with new ideas and possibilities, only to realize that, like New Year’s resolutions, only one or two new practices would last throughout the year. Every teacher faces endless demands from their students, families, administration, and districts. Sometimes it is all you can do to get through the day without crying (and we all have those days, too). However, the support you will receive in return from families and the progress you will see in your students will well exceed the time you invest in building the bridges. Like any investment, it takes lots of energy up front, but over time, the interest builds, and the community that you establish will do much more than support your writing curriculum.

**Anna H. Hall** is an Associate Professor of Early Childhood Education at Clemson University. Her scholarship focuses on examining the writing attitudes of teachers and students and developing and adapting instructional writing strategies. She believes in forming research partnerships within her own community, as well as the educational community at large, to improve the writing lives of young children.

**Qianyi Gao** is a doctoral candidate in the Curriculum and Instruction program at Clemson University with an emphasis in Early Childhood Education. Her current work focuses on drama-based instruction and its impact on the development of young children.

## References

- Burris, J. (2019). Syncing with families: Using technology in early childhood programs. *American Journal of Education and Learning*, 4(2), 302-313.
- Daniel, J. (2009). Intentionally thoughtful family engagement in early childhood education. *Young Children*, 64(5), 10-14.
- Ferlazzo, L. (2011). Involvement or engagement? *Educational leadership*, 68(8), 10-14.
- Ferlazzo, L., & Hammond, L. A. (2009). *Building parent engagement in schools*. ABC-CLIO.
- Halgunseth, L. (2009). Family engagement, diverse families, and early childhood. *Young Children*, 64(5), 56-58.
- Hall, A. H., White, K., Guo, Y., & Emerson, A. (2019). Who counts as a writer?: Examining child, teacher, and parent perceptions of writing. *Early Child Development and Care*, 189(3), 353-375.
- Lopez, M. E., & Caspe, M. (2014). Family engagement in anywhere, anytime learning. *Family Involvement Network of Educators (FINE) Newsletter*, 6(3).
- Parnell, W. A., & Bartlett, J. (2012). iDocument: How smartphones and tablets are changing documentation in preschool and primary classrooms. *Young Children*, 67(3), 50-57.
- Tran, Y. (2014). Addressing reciprocity between families and schools: Why these bridges are instrumental for students’ academic success. *Improving Schools*, 17(1), 18-29.



# Creando un puente entre el hogar y la escuela

Anna Hall and Qianyi Gao



“Se necesita un pueblo”, es una famosa frase que no solo es cierta al criar a los niños sino también para desarrollar la escritura. Debemos reconocerlo, aprender a escribir es un reto. Es un proceso social y cognitivo que requiere de las destrezas motor-finas, un nivel de comprensión y un buen vocabulario. Cuando los maestros asumen solos la responsabilidad de enseñar a los niños a escribir, la tarea puede ser muy trabajosa. Por fortuna, las familias pueden colaborar con los maestros sirviendo como modelos muy importantes dándole a los niños la bienvenida al mundo del lenguaje escrito.

Involucrar a las familias como parte del equipo para apoyar la enseñanza de la escritura no siempre es fácil. Toma bastante mucho más esfuerzo desarrollar y mantener relaciones recíprocas con las familias que mantener una comunicación unidireccional a través de boletines y mensajes (Daniel, 2009; Ferlazzo, 2011; Halgunseth, 2009; Tran, 2014). No obstante, una vez situamos nuestra energía y tiempo extra para establecer relaciones con las familias, podemos cosechar los beneficios que vienen al crear una comunidad extendida para la escritura dentro de nuestras aulas (López & Caspe, 2014; Tran, 2014). Cuando los maestros y familias comparten abiertamente sobre las metas para la escritura, las estrategias de enseñanza y el progreso de los niños, los niños se sienten apoyados, motivados e inspirados a aprender. En lugar de ver al maestro como los expertos que lo saben todo, las familias comienzan a ver que también son los primeros maestros enseñando a escribir a sus pequeños.

## Creando puentes y conectando con las familias

Para involucrar a las familias en la comunidad de escritura del

aula es necesario que los educadores establezcan puentes entre el hogar y la escuela. Los puentes son como calles que van en ambas direcciones conectando dos lugares importantes y que están suspendidos sobre un sinfín de posibilidades. No son fáciles de construir y a veces difíciles para cruzar, pero, una vez establecidos sobre una base firme, permiten compartir y ofrecen muchas oportunidades para trabajar juntos. Al comenzar a establecer puentes con las familias, es importante que reflexionemos sobre nuestras actitudes y prácticas en relación con la escritura y también conocer lo que piensan las familias sobre la escritura. ¿Le gusta escribir? ¿Anima usted a sus niños a escribir y a compartirlo con otros? ¿Escribe por gusto o para completar tareas? Compartir nuestras ideas sobre lo que es escribir y sobre su enseñanza contribuirá a fortalecer las relaciones con las familias lo que afirmará aún más su apoyo a los pequeños en el desarrollo de la escritura.

Cuando preguntamos a los niños si saben escribir, la mayoría dirá que lo son indistintamente de la etapa de desarrollo de la escritura en que se encuentren (Hall et. al., 2019). Como maestros es importante animar este sentido de poder y autoeficacia que sienten los niños con respecto a la escritura y no desanimarlo. Establecer un enlace entre el hogar y la escuela y el cultivo de relaciones recíprocas son los primeros pasos en este importante proceso de aprender a escribir. Esperamos que este artículo inspire a construir puentes y a conversar con sus colegas sobre como reconocer la importante contribución al desarrollo de la escritura de todas las familias

## Estableciendo una comunidad de escritores

*Comunidad: un grupo unificado de individuos que comparten sentimientos en común como resultado de compartir actitudes, intereses y metas en común.*

Escribir es una actividad que une a un grupo como comunidad de aprendices. Puede ser una forma muy personal de autoexpresión que tiene el poder de atraer a los estudiantes al compartir experiencias y que forma una comunidad muy especial en el aula escolar. A veces nosotros los maestros escribimos sobre nuestras propias rutinas durante las actividades y lecciones. De esta forma, los niños conocen sobre nuestras familias, pasatiempos y las cosas que nos gustan. Es así como después de oírnos hablar sobre nuestras historias nos preguntan, “¿Como está la rodilla de su esposo?” o “¿Cuándo vuelve su abuela a visitarlos?” Aunque nunca lleguen a conocer a nuestros familiares o visitar nuestros lugares favoritos, los conocerán a través de lo que compartimos con ellos por escrito. Compartiendo les ayuda a sentirse que son parte de nuestro mundo. Así también ven una razón para escribir.

Nosotros también conocemos sobre los niños cuando nos leen lo que escriben durante el momento para compartir en el aula. Sabemos que a John le emocionó perder su primer diente y que Peyton está muy cansado porque su nuevo hermanito lo mantiene despierto en la noche. Cuando las familias visitan nuestros salones para ver los escritos de los niños, sus padres, abuelos y hermanos se unen al círculo compartiendo y contribuyendo con sus comentarios y elogios. Dado lo que se comparte por escrito, pasamos de ser maestro, estudiantes y familias y nos convertimos en una íntima familia escolar.

Para formar una comunidad extendida de escritura, todos los miembros deben compartir la experiencia de escribir. Esto significa que el maestro escribe, los niños escriben y las familias escriben. Los escritores en esta comunidad dependen entre sí, preguntan, reciben comentarios y reconocimiento. A continuación, se presentan algunas prácticas básicas para establecer una comunidad extendida de escritores.

- Planifique tiempo para que los niños hablen, escriban y compartan lo que escriben con usted, sus compañeros y familias.
- Invite a los niños a que colaboren con sus pares y a que hablen mientras escriben.
- Cree un espacio confortable para escribir y compartir. Permita que los niños escojan el lugar preferido donde deseen escribir (por ejemplo, en sus mesas, en el piso, en el área de lectura, y otros).
- Establezca los parámetros para responder y comentar de manera respetuosa cuando los compañeros comparten lo que escribieron (ya sea con todo el grupo o en con compañeros). No espere que esto surja por sí solo.
- Diariamente, modele el uso de la escritura con fines legítimos (hacer una lista, escribiendo un cuento, haciendo anotaciones sobre un tema interesante). Deje que su voz se refleje en lo que escribe para que los niños se sientan cómodos al expresarse.
- Demuestre que se pueden tomar riesgos al escribir y que podemos hacer ajustes cuando lo que escribimos no funciona de primera intención.
- Practique como hacer preguntas entre sí sobre lo que escribimos y como ofrecer reconocimientos y sugerencias.
- En lugar de esperar hasta el producto final, a cada paso, celebre el proceso de escribir (haga del día de conferencias entre pares uno tan especial como cuando tenemos el día del té con los autores donde celebramos los trabajos ya terminados).
- Destaque los escritos de los niños y maestros a través del aula y haga referencia a estos con frecuencia.
- Invite a las familias a participar en los días de las publicaciones, en las conferencias sobre la escritura y a celebrar los escritos de los niños.

Al igual que cualquier otra comunidad, hay valores en común que se establecen al crear una comunidad de escritores en el aula. Observando al maestro escribir, siendo invitado a escribir y viendo a sus familias escribir, los niños aprenden que la escritura es esencial y que tiene muchos propósitos en la sociedad. Ellos también reconocen que cada miembro de la comunidad de escritores en su aula contribuye de forma especial y que cada paso del proceso de escritura es crítico.

## Creando un puente de comunicación

*Comunicación: la forma exitosa de expresar o compartir ideas y sentimientos al hablar, escribir o al usar algún otro medio.*

Imaginemos compartir con las familias las muestras de trabajos escritos de los niños a través del año. Es muy difícil explicar el progreso en la escritura ya sea en una carta o informe de progreso, sin embargo, es mucho más fácil cuando las familias pueden ver palabras, oraciones y párrafos según estos progresan. Su reacción positiva no solo será al ver el progreso en las muestras sino también al ver sus nombres en lo que escriben los niños y al ver como estos se sienten cómodos al compartir cosas de sus vidas con sus compañeros. Luego de compartir las muestras con las familias, estas comenzaran a explicarnos sobre algunos de los detalles en los escritos de los niños así como compartirán como ellos escriben en el hogar o invitan a las familias también a escribir.

Al crear puentes entre el aula y el hogar, es fundamental que estos sean un medio que invite a la comunicación entre ambas partes recordando que no existe un medio que sea el más correcto para comunicarse (Daniel, 2009; Ferlazzo, 2011; Hलगunseth, 2009). La comunicación cambia según las nuevas tecnologías se hacen más accesibles y depende de las necesidades de las familias con las que se trabaja (Burris, 2019; Parnell & Bartlett, 2012). Es vital utilizar una variedad de métodos de manera que las familias puedan escoger aquel que se acomode a su estilo de vida. Al seleccionar los métodos de comunicación es importante considerar si estos permiten una interacción en una sola dirección o de ambas partes (Ferlazzo, 2011; Ferlazzo & Hammond, 2009). Por ejemplo, si se usa una aplicación para mensajes de texto, ¿pueden las familias contestar al grupo o individualmente? ¿Puede la tecnología que se usa mantener la privacidad de las familias y niños? Si se usa un blog, ¿hay espacio para los comentarios de las familias o para colocar fotos y muestras de escritura? Aquí aparecen algunos ejemplos de formas en que podemos estimular la comunicación con las familias:

- Usar medios sociales como Edmodo o SeeSaw que permite a las familias unirse a un grupo privado y compartir mensajes o hacer preguntas
- Páginas de internet de la clase o blogs que invitan a las familias a ver los trabajos escritos de los niños y a enviar fotos o muestras de escritura hechas en casa para ser compartidas en la página.
- Aplicaciones educativas para mensajes de texto como Remind que le permite a los maestros utilizar un número de teléfono privado o para enviar mensajes individuales para compartir enlaces con las familias y para estas responder con sus comentarios o preguntas.
- Carpetas semanales con muestras de trabajos escritos y tarjetas para las familias hacer comentarios.
- Celebrar noches para escribir donde se invita a las familias a participar junto a sus niños en el proceso de escribir.
- Oportunidades durante los días de reuniones para que la familia sirva como voluntarios ofreciendo sugerencias o ayudando a los niños a hacer las últimas correcciones.
- Visitantes en la clase para compartir lo que más les gusta sobre la escritura o como la usan en la vida diaria.

- Comunicaciones telefónicas para informar sobre el progreso de los niños y para conocer lo que las familias han observado en el hogar (por ejemplo, hacer cinco llamadas a la semana hasta completar el grupo).
- Pedir a las familias que traigan muestras de los trabajos o de los temas que a los niños les gusta escribir en casa.

## Construyendo un puente de respeto

*Respeto: Debida consideración por los sentimientos, deseos, derechos o tradiciones de otros.*

Al comienzo de clases, como es costumbre, podemos enviar cartas a las familias invitándolos a que nos hablen sobre sus hijos. Podemos preguntar qué cosas les gusta hacer, donde les gusta visitar y lo que les hace especial. También podemos invitarles a que nos envíen fotografías sobre los recuerdos favoritos de los niños como quizás un viaje a la playa, o la primera vez que montaron en bicicleta. Al enviar una invitación antes de reunirnos con las familias, estamos enviando un mensaje donde damos la bienvenida y que demuestra respeto por cada niño y por la familia en el aula. Las cartas y fotos permanecerán en las carpetas de escritura de los niños siendo valiosos recursos para cuando ellos busquen nuevas ideas para escribir.

Mostrar respeto a las familias va más allá de simplemente ser corteses y amables e incluye como demostramos interés y valoramos las contribuciones de cada miembro de una comunidad extendida (Ferlazzo, 2011). El respeto comienza al reconocer que cada familia tiene importantes recursos sociales y de conocimientos y tradiciones especiales que enriquecen las vidas de los niños y del salón de clases. Se demuestra cuando solicitamos a las familias que compartan tan a menudo como nosotros compartimos con ellos y cuando honramos sus contribuciones culturales. También se demuestra cuando invitamos a las familias a participar en el aula en una variedad de maneras donde consideramos sus necesidades individuales de horarios, transportación y cuidado para sus niños.

Al igual que los puentes, la confianza y el respeto se desarrollan con el tiempo. Desarrollar relaciones respetuosas con las familias implica entender las experiencias previas de las familias, positivas o negativas, que puedan influenciar su participación en el aula y saber que la involucración de la familia es una opción. En esencia respetar cada diferente nivel de involucración de la familia, ya sea mínima o extensa. Finalmente, el respeto se demuestra al compartir, escuchar y comprender. Consideremos las presiones de balancear el trabajo, atención a los niños y otras circunstancias de la vida. Algunas ideas para desarrollar una relación de respeto con las familias son las siguientes:

- Enviar una tarjeta de bienvenida a las familias antes del primer día de clases.
- Enviarles una carta durante la primera semana de clases invitando a las familias a que nos hablen sobre sus niños.
- Llamar a las familias durante la primera semana de clases y al menos una vez al mes a través del año para compartir buenas noticias sobre los niños y para conocer si hay algo que les gustaría compartir.
- Planificar conferencias para compartir e invitar a las familias

también a compartir. Organice el tiempo de manera que tenga tiempo suficiente con cada familia y que no sientan que están siendo apurados. Esto se puede lograr con visitas al hogar o conferencias de 20-30 minutos en el aula.

- Celebre las diferentes culturas y tradiciones representadas en su aula y haga ocasiones especiales inclusive de la herencia cultural de todas las familias.
- Invite a las familias a compartir con la clase sus experiencias y conocimientos. Un editor puede hablar sobre los pasos al publicar un libro, un chef puede hablar sobre la importancia de escribir una secuencia.

## Construyendo un puente de apoyo

*Apoyo: ofrecer aliento o asistencia a alguien porque uno desea que sean exitosos.*

A diferencia de las etapas al caminar o hablar, los pasos al iniciar la escritura no son tan plenamente discutidos o comprendidos en la Sociedad. Para un adulto es difícil recordar cómo fue que aprendieron el alfabeto y de ahí pasaron a construir palabras y oraciones de forma convencional. La escritura convencional no ocurre en un día en particular, como los primeros pasos de un niño, y es a veces difícil para las familias saber cuáles son las mejores maneras de apoyar sus hijos. Establecer un puente de apoyo para apoyar a los pequeños escritores incluye compartir los éxitos que demuestran su progresivo desarrollo de la escritura, demostrando estrategias para modelar y guiar la palabra escrita y dialogar con las familias sobre como crear un ambiente que invite a escribir en el hogar.

Damos apoyo a las familias, cuando en lugar de comentar sobre los que los niños no pueden, hablamos sobre lo que sí ya hacen. Por ejemplo, podemos decirles, "John está usando los sonidos iniciales cuando escribe una palabra. Al poner atención a las habilidades de los niños como escritores emergentes, empoderamos a sus familias para que les apoyen según se desarrollan. También validamos las maneras en que en el hogar se apoyan los esfuerzos de escritura emergente de los niños.

Un puente de apoyo ayuda tanto al maestro como a las familias a establecer metas para la escritura, compartir estrategias de enseñanza y para conjuntamente monitorear el progreso a través de año. Según dice el refrán, "Dos cabezas piensan mejor que una." Cuando las familias y maestros discuten formas para incentivar y apoyar la escritura eliminamos cualquier posible confusión en los niños teniéndolos adultos, a su vez, iguales expectativas y extendiendo el aprendizaje al hogar. Por ejemplo, si tanto los maestros como las familias estimulan a los niños a usar el deletreo inventado y utilizan carteles del alfabeto para aparear las letras con los sonidos que escuchan, hacemos que los niños sean más independientes al escribir. Algunas ideas para construir un puente de apoyo son las siguientes:

- Invite a las familias a que compartan las preferencias de los niños al escribir como lugar, lo que escriben y si les gusta compartirlo.
- Comparta ideas para organizar un ambiente que invite a escribir (materiales, tiempo, arreglos flexibles).

- Demuestre formas para estimular la escritura inventada o fonética y reduzca la dependencia de los niños en los adultos para deletrear palabras.
- Explicar a las familias como seleccionando temas motiva a los niños a escribir. Pregunte cuáles son los temas ven que los niños disfrutan al escribir en el hogar.
- Demuestre como sirve de modelo al escribir en el salón e indague como las familias utilizan la escritura en el hogar (enviando mensajes de texto, trabajando, llevando un diario). Haga hincapié en que ellos son los primeros maestros de los niños. Explique las familias son un poderoso modelo para los niños.
- Hable con ellos sobre su enfoque en el proceso de escritura y como los autores utilizan las etapas de preescritura, bosquejo, revisión, editar y publicación. Pregunte si han observado a los niños utilizar estos pasos al escribir en casa.
- Discuta las fases del desarrollo de la escritura y establezcan metas para ayudar a los niños en su progreso a través del año.
- Comparta las maneras en que usted ofrece sugerencias a los niños durante las conferencias y tiempo para compartir (por ejemplo, preguntando a los niños sobre lo que escribieron, señalando aspectos de la escritura que ellos conocen y hacen bien, enfocando la enseñanza en un aspecto específico en lugar de muchos a la vez. saben)
- Invite a las familias a compartir como ellos celebran los esfuerzos de escritura de los niños en el hogar (por ejemplo, desplegados en el refrigerador, escuchando a los niños leer las historias que escriben)

## Por qué los puentes de apoyo a la escritura son importantes

La interacción con materiales, el ambiente y con personas en su diario vivir estimulan la escritura emergente en los niños. Según participan y observan a otros escribiendo en el aula y en el hogar, los niños internalizan sus percepciones y conocimientos sobre el proceso de escribir. Aunque la mayoría de los niños siguen trayectorias similares en el desarrollo, su camino está marcado por sus propias experiencias e historias.

Construir puentes de comunicación, respeto y apoyo a las familias puede contribuir al desarrollo del proceso de escribir estimulando un sinnúmero de oportunidades para escribir, promoviendo la disponibilidad de materiales, teniendo a los adultos como modelos y animando interacciones con los compañeros enfocadas a escribir. Los puentes también estimulan a las familias a apoyar el vocabulario oral y escrito de los niños y modelando el uso funcional de la escritura en la vida cotidiana.

Los niños juzgan su capacidad para escribir de acuerdo a los comentarios de los adultos importantes en su vida (como los maestros y familiares). Estos juicios o niveles de autoeficacia, son importantes porque influyen en los niveles de persistencia y perseverancia de los niños. A su vez, los niveles de esfuerzo de los niños les conducen a sus logros en la escritura en la escuela y más allá. Al construir puentes, empoderamos a las familias, aumentamos la involucración con estas y mejoramos la escritura en los estudiantes.

## Tomando tiempo para construir puentes

El reto mayor para un maestro es tratar de acomodar todo lo que es importante en el día escolar e incorporar cada nueva idea en nuestra práctica. Posiblemente tenemos la experiencia de haber concluido una sesión de desarrollo profesional con un sinfín de notas e ideas y posibilidades, solo para luego darnos cuenta que, como las resoluciones del Nuevo Año, solo utilizaremos una o dos. Cada educador un sinfín enfrenta responsabilidades de sus estudiantes, familias, administración y distrito. Sometimes it is all you can do to get through the day without crying (and we all have those days, too). Sin embargo, el apoyo que a cambio recibiremos de las familias y el progreso que veremos en los niños superan el tiempo invertido en crear puentes. Como cualquier otra inversión, al comienzo implica mucha energía pero con el tiempo, el interés crece y la comunidad que estableces logrará mucho más que tan solo apoyar el currículo de la escritura.

**Anna H. Hall, EdD** es una profesora asociada de educación temprana en Clemson University. Su trabajo investigativo examina las actitudes de los maestros y niños sobre la escritura. Ella cree en formar trabajos de investigación de forma colaborativa con su comunidad así como con la comunidad educativa para mejorar la escritura en la vida de los niños pequeños

**Qianyi Gao** es una candidata a doctoral en el programa de Currículo e Instrucción de Clemson University con énfasis en la Educación Temprana. Al presente, su trabajo está enfocado en el uso del drama instruccional y su impacto en el desarrollo de los niños pequeños.

## Referencias

- Burris, J. (2019). Syncing with families: Using technology in early childhood programs. *American Journal of Education and Learning*, 4(2), 302-313.
- Daniel, J. (2009). Intentionally thoughtful family engagement in early childhood education. *Young Children*, 64(5), 10-14.
- Ferlazzo, L. (2011). Involvement or engagement? *Educational leadership*, 68(8), 10-14.
- Ferlazzo, L., & Hammond, L. A. (2009). *Building parent engagement in schools*. ABC-CLIO.
- Halgunseth, L. (2009). Family engagement, diverse families, and early childhood. *Young Children*, 64(5), 56-58.
- Hall, A. H., White, K., Guo, Y., & Emerson, A. (2019). Who counts as a writer?: Examining child, teacher, and parent perceptions of writing. *Early Child Development and Care*, 189(3), 353-375.
- Lopez, M. E., & Caspe, M. (2014). Family engagement in anywhere, anytime learning. *Family Involvement Network of Educators (FINE) Newsletter*, 6(3).
- Parnell, W. A., & Bartlett, J. (2012). iDocument: How smartphones and tablets are changing documentation in preschool and primary classrooms. *Young Children*, 67(3), 50-57.
- Tran, Y. (2014). Addressing reciprocity between families and schools: Why these bridges are instrumental for students' academic success. *Improving Schools*, 17(1), 18-29

# Using Children's Literature to Embed Character Education in Primary Classrooms

Melissa Parks and Mary Ellen Oslick

## Introduction

Educators strive to support their students as they develop into well-rounded, productive members of society. Today's primary students are developing character traits and personal beliefs that will inform their emerging identities as they develop their 21st century skills including critical thinking, communication, and collaboration (Wantanabe- Crockett, 2016). Memorizing facts, formulas, and procedures are typical classroom experiences that help students as they mature. However, to be productive members of society, primary classrooms are striving to support students beyond basic academic curriculum. While character education programs may not be as universally utilized in primary classrooms, advocates of character education programs implore educators to rethink the daily experiences provided in their classrooms. They remind us that, "The goal of education is not acquiring knowledge alone but developing the dispositions to seek and use knowledge in effective and ethical ways" (Shields, 2011, p. 49). Teachers cannot make students' decisions for them, but providing them solid academic skills paired with character traits may build on their personal emotional and social skills to better prepare them for becoming positive and productive members of society (Elias, 2009).

## Meeting Children Needs with Character Education

The ability to act with respect and to work well with others may come somewhat naturally for some young children, while others may benefit from more direct exposure to character education programs. Although character education programs may vary slightly, the core focus of character education programs is on the learning process that helps children learn about, develop, and practice ideals such as respect, justice, citizenship, and responsibility (U.S. Department of Education, 2005). Academic learning and performance are linked to character education programs because the "very nature of school-based learning is relational" (Elias, 2009, p. 838). If students are learning how to better communicate, handle their emotions, and persevere with character education programs then it makes sense that they would improve other aspects in the classroom such as academics. For example, when the in- and after-school program, *CARE (Character and Resilience Education) Now*, was implemented and assessed after two years, the whole school's math percentages of A's rose from 15% to 22%, and the math percentages of E's dropped from 10 % to 1% (Hill et al., 2015). This supports the fact that while children were learning traits such as honesty, trustworthiness, and rule following, they transferred those skills into daily interactions with peers, which may have positively impacted their learning environment to facilitate better academic learning.

Reducing negative behaviors may be another positive impact of character education programs. In a safe and positive classroom, the teacher facilitates learning experiences that encourage all students to participate. Students who have externalizing behaviors, such as aggression, and internalizing behaviors such as withdrawal, are more at risk for academic failure (Griggs et al., 2016). By teaching and modeling the character strengths of hope, leadership, perseverance, honesty, and compassion teachers can create an atmosphere conducive to learning for all students. By explicitly teaching concepts such as hope and leadership some students reported feeling less anxious, while the explicit teaching of character strengths of persistence, honesty, and compassion are taught, resulted in fewer external behaviors such as aggression (Betzatell & Shechtman, 2017; Nansook, 2009).

## Character Education Programs and Classroom Climate

Classroom climate, in general terms, includes the atmosphere of the learning environment in which children acquire (or fail to acquire) knowledge, skills and attitudes (Yoneyama, & Rigby, 2006). Classroom climate can be positive or negative. Positive classroom climates foster academic performance, respectful behavior, and motivation (Brown, Jones, Aber, & LaRusso, 2010). A negative classroom climate cultivates the opposite. In a negative classroom climate, students develop poor peer relations, higher levels of aggression, and begin to have poor academic focus (Brown et al., 2010).

Students who exhibit poor behavior may also engage in bullying behavior (Yoneyama, & Rigby, 2006). Bullying can be defined as "proactive aggression that repeatedly occurs and involves a power imbalance between the aggressor and the victim" (Bradshaw et al., , +2013, p. 283). Bullying can have serious negative consequences for the health and well-being of those who are victimized, as well as negative consequences on the bully who creates a habit of their negative behaviors (Yoneyama, & Rigby, 2006).

The character education program, Positive Action, showed a significant decrease in bullying and helped create a positive classroom and school climate (Lewis, Vuchinich, Ji, DuBois, Acock, Bavarian, Day, Silverthorn, & Flay, 2016). Focused on the developmental shifts of self- concept and self-esteem, occurring young and middle age children, the work suggested the importance of developing positive self-esteem from an early age. The climate was assessed through a questionnaire where students self-reported eight times throughout the study. The students answered questions related to peers, ethics, and social skills. The

questions were on a scale of 1 (never or none) to 4 (always or all); questions asked included things like “How many of your friends get into fights at school?”, “It is okay to hit someone if they hit you first” (Lewis, et al., 2016). Participants initially reported, high instances of bullying and aggressive behavior, but as the study proceeded, participants reported fewer instances of negative interactions. Acknowledging and honoring the diverse students that share a classroom, teachers need a wide array of tools and strategies to create positive classroom climates. Children’s literature can meet those needs.

## Start with Children’s Literature

Children’s literature consists of an ever-growing collection of texts “that are read to and by children” (Temple, Martinez, & Yokota, 2015, p. 7). These texts vary in genre and format. The Library and Book Trade Almanac (2010) estimates that about 25,000 new titles are published every year in the English language alone. Children’s literature holds personal values of enjoyment, imagination and inspiration, vicarious experiences, understanding and empathy, heritage, and moral reasoning (Short, Lynch-Brown, & Tomlinson, 2013). Additionally, it has long been considered an important component of reading instruction (International Literacy Association [ILA], 2010). The topics and themes found in children’s literature can be used to highlight and support character education standards (Freeman, 2014; Heath, Smith, & Young, 2017; Linter, 2011; McNamee & Mercurio, 2007; Montgomery & Maunders, 2015; O’Sullivan, 2004; Theron, Cockcroft, & Wood, 2017; Zeece, 2009).

As an entry point to determine what elements of character education are most impactful for their students, teachers can implement the VIA Institute on Character survey. Intended for ages 10 and up, the self-report survey asks 96 questions that will assess character strengths based on 24 character traits. The 24 character traits are summed up into six categories: wisdom and knowledge, courage, humanity, justice, temperance, and transcendence. The survey can be administered in approximately 15 minutes and the results will shed light on students’ character strengths and areas for improvement (<https://www.viacharacter.org/survey>) Using data garnered from the survey, teachers can select literature pieces and activities that best meet the needs of their students.

For those interested in exploring character traits in young children, Shoshani (2019), developed The Character Strengths Inventory for Early Childhood (CSI-EC). The survey, focused on Israel children, ages 3-6, gathered responses from parents on topics including, but not limited to, love, kindness, fairness, and teamwork. The 96 item inventory may be helpful for educators working with preliterate children to establish a baseline of awareness of character strengths and use that baseline to bring age-appropriate literature and learning experiences into the classroom.

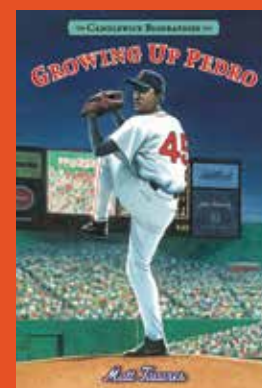
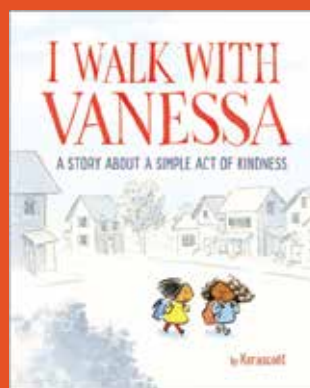
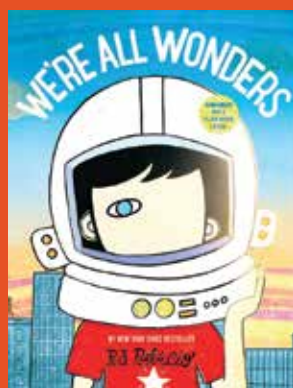
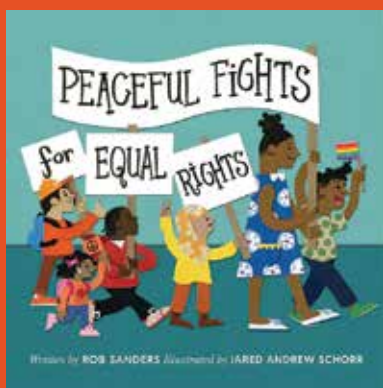
Suggested are children’s literature that can help teachers instruct some of these character traits in response to their students VIA results. Using these texts purposefully could help develop a positive classroom climate. A brief summary of the selected text is offered and a list of complimentary discussion questions or activities is suggested; audience grade levels are also included, but all books would be appropriate as read-alouds in younger grades. While this is not an exhaustive list, it is offered it as a platform for teachers to use to begin to find resources most appropriate for their classrooms.

Using children’s literature as a tool, teachers can connect classroom literacy and English language Arts (ELA) skills while embedding character education topics. Providing access to the selected books, either through a classroom borrowing system or books on reserve at the local library, can extend the learning and facilitate child/parent conversations about selected topics. Using care when selecting topics to avoid triggering children’s fear or anxiety is critical.

## Teaching Justice – Leadership, Fairness, Teamwork

1. **Peaceful Fight for Equal Rights** by Rob Sanders
  - Description: This story is told in lyrical prose the book illustrates the importance of teamwork and standing up for personal beliefs to invoke change.
  - Audience: This book best suits grades K-3.
  - Suggested Activity: After a read aloud, collaborate with students to brainstorm ideas of how to keep the classroom peaceful. Collaboratively create a class contract to demonstrate class must work together and be fair to have

Suggested Children’s Literature that Encourages Character Education



a great school year. Connect text to current (age-appropriate) events (newspaper headlines and photos). Ask student to make inferences based on photos; Is this a peaceful protest? What could be difficult about a protest? What character traits are displayed in the photo?

## Teaching Humanity – Kindness, Love, Respect, Responsibility

### 2. *We're All Wonders* by R. J. Palacio

- Description: This is a story about a boy named Auggie who has a facial difference and wants everyone to realize that he can do ordinary things. Many different character traits can be linked to this amazing book, but kindness, compassion, and respect for all are the top contributors to this story.
- Audience: This book is intended for PreK- 3.
- Activity: After reading the book with students, invite a guest speaker to speak to the class about respecting all people regardless of differences. Offer a question and response session where students can ask questions and conclude with students sharing how they can make all people feel welcomed.

### 3. *I Walk with Vanessa* by Kerascoet

- Description: This book is a wordless story that shows a young girl who encourages her community to oppose bullying. Through her acts, everyone can learn more about love and kindness and see how anger and hate do not make anything better.
- Audience: Intended audience is PreK-3.
- Discussion questions: Ask these questions after a read aloud: Use pictures to introduce and label emotions expressed in the book. Ask students to identify emotions based on situational and facial clues of photos. For older students, integrate art or music and have students create an action plan or slogan depicting how to act an ally.

## Teaching Courage – Perseverance, Bravery, Honesty/Authenticity

### 4. *Growing Up Pedro: How the Martinez Brothers Made It from the Dominican Republic All the Way to the Major League* by Matt Tavares

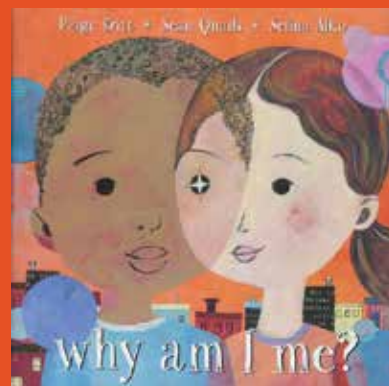
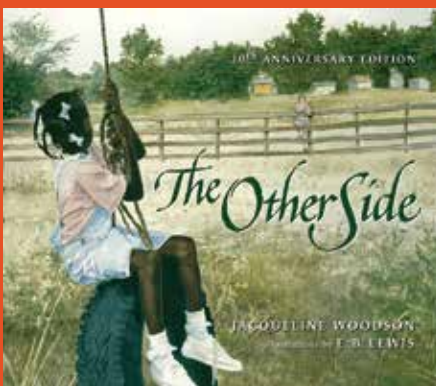
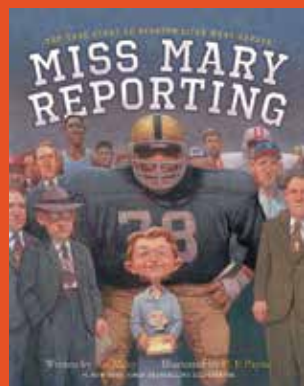
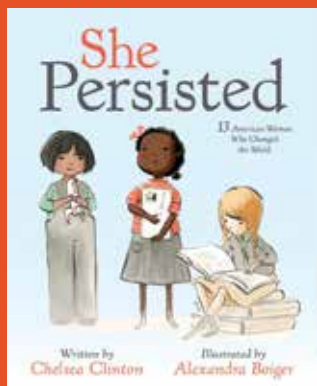
- Description: This is a true story about young Pedro Martinez who makes his dream come true by persevering to be a major-league baseball player.
- Audience: This book is intended for grade 3.
- Discussion questions and activity: Begin the reading by asking students if they know what perseverance is; after reading, ask the students how they think Pedro persevered. Teachers can open the floor for students to share when they have persevered in the classroom or outside of it. After they share when they persevered, ask if they have ever not persevered? If they have an instance, have the class come up with a quote or phrase that could be used to help preserve through the challenge. Finish the discussion by having the students write how they will use perseverance in the classroom and at home and how perseverance builds their personal character. Collectively arrange products into a, 'Perseverance Protocol' display for students to review when in need of a refresher.

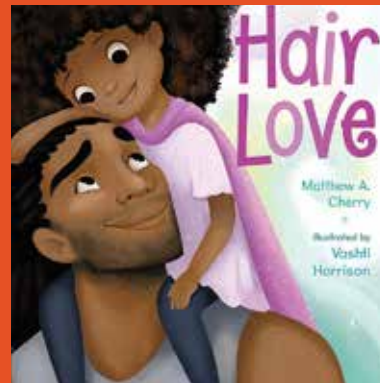
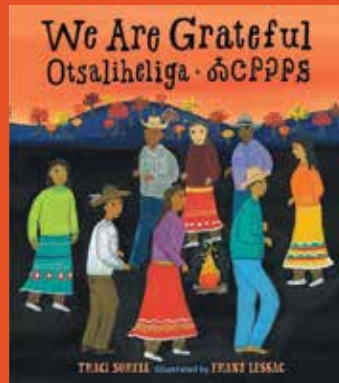
### 5. *She Persisted* by Chelsea Clinton

- Description: This book introduces 13 young feminist and activist women who want to make a change. All of these women persevered through many challenges.
- Audience: This book is intended for grades 1-3.
- Discussion questions: Before reading aloud, have students brainstorm what the title means and what they think the story will be about. Then explain what it means to persist. Give examples and nonexamples. After reading aloud ask: Which of the women stands out to you and why? What are some examples of how these women showed persistence? How would persistence benefit you? How can you persist at school and/ or at home?

### 6. *Miss Mary Reporting: The True Story of Sportswriter Mary Garber* by Sue Macy

- Description: This is the true story of Mary Gerber and her determination to become one of the first female sportswriters in American history.
- Audience: This book is intended for grades K-3.
- Discussion questions: After read aloud ask: How was Mary Gerber brave? What did she do to reach her dream? How can we use May Gerber's story to help us persevere in the classroom?





## Teaching Wisdom and Knowledge – Open-mindedness & Perspective

7. **The Other Side** by Jacqueline Woodson
  - Description: This is a story about two girls of different races who separated by a physical and symbolic fence.
  - Audience: This book is intended for grades 1-3.
  - Activity: After reading aloud, ask students to think of something they could do to make their world or classroom a better place. Working in teams, students brainstorm and plan one way to improve their class, lunchroom, or school. Plans should be realistic. Create an I-movie or recording to share ideas on the morning news.
8. **Why Am I Me?** by Paige Britt
  - Description: This story shows humanity and diversity as two characters talk about the same things that they wonder about in the world and about themselves.
  - Audience: This book is intended for grades PreK- 2.
  - Activity: Since the book involves the characters asking questions about what and why they are who they are, it could be a great way to spark students' personal interest on things that they wonder about in the world or about themselves. First, use paper doll cut outs and have students draw or write four things they wonder about. Share with class to demonstrate similarities and honor differences. Create a 'Wonder Wall' that can be filled throughout the whole year with all of your students' questions and answers.
9. **The Day War Came** by Nicola Davies
  - Description: This is a story about a little girl who is forced to become a refugee as a war comes to her home and she is forced to flee.
  - Audience: This book is intended for grades PreK- 2
  - Discussion questions: After a read aloud, connect to text with sharing a time you (the teacher) was scared. Offer ideas on how you overcame the fear. Using that example, ask students how they could make anew classmate feel welcomed into the room. Create a class book, 'Faces of Room\_\_' where a photo each child is surrounded by child drawn pictures about themselves. Offer the book to new students to help them feel welcomed.

## Teaching Transcendence – Appreciation of Beauty, Gratitude, Religiousness, Hope

10. **We are Grateful: Otsaliheliga** by Traci Sorell
  - Description: This story shows the Cherokee community being grateful for blessings and challenges that each season brings.
  - This book is intended for grades 1-3.
  - Discussion questions and/or activity: Explain why the Cherokee people say "otsaliheliga" to express gratitude. Then have them think about what it means to express gratitude. Do they express gratitude? Is it important to express gratitude? How can expressing gratitude help us develop our character? Ask students to create a, "Gratitude Journal". Prior to dismissal, student write or drawn one thing for which they are grateful.
11. **Hair Love** by Matthew Cherry
  - Description: Focused on patience and self-acceptance, this book focuses on accepting help, and showing appreciation for one's self, and others.
  - Audience: This book is intended for grades Pre-K-3
  - Activity: Children complete a mirror reflection of themselves. On the reflection, children emphasis one unique personal characteristic that makes them feel proud

## Conclusion

Teaching character traits during and after school has shown positive effects on academic learning and performance, as well as student well-being and classroom climate (Elias, 2009; Hill et al., 2015; Hynes-Gerry, 2015; Montgomery & Maunder, 2015; Nansook, 2009). Respect, responsibility, honesty, justice, and caring are a few traits that help students grow and promote a positive classroom and school experience. Teachers and their students spend approximately 120 hours a month together. In this time, they laugh, persevere through challenges, and even share "Aha" moments. Teachers work arduously to create content-based, meaningful lessons. They also worry about their student's safety and well-being. Embedding character education as an experience in the primary classroom can be a way to successfully blend these two goals together.



**Melissa Parks, PhD.**, is currently an assistant professor of education at Stetson University. Dr. Parks serves on the Outstanding Science Trade Books Panel of the National Science Teaching Association and is an Area Director for the Florida Association of Science Teachers. Her research interests include environmental education and elementary pedagogies.

**Mary Ellen Oslick, Ph.D.**, is an associate professor of literacy and reading in the Department of Education at Stetson University. She teaches undergraduate and graduate courses in reading methods, children's literature, and critical literacy practices throughout the content areas. Her research areas of interest include: social justice and critical literacy applications; multicultural children's literature; and reading and writing instruction with diverse learners. She is an active member of the International Literacy Association (ILA) and currently serves as the co-chair of the award selection committee for the Notable Books for a Global Society (NBGS).

## References

- Betzalel, N., & Shechtman, Z. (2017). The impact of bibliotherapy superheroes on youth who experience parental absence. *School Psychology International, 38*(5), 473–490.
- Bogart, D. (2010). *Library and book trade almanac*. Medford, NJ: Information Today.
- Bradshaw, C. P., Hanish, L. D., Espelage, D. L., Rodkin, P. C., Swearer, S. M., & Horne, A. (2013). Looking toward the future of bullying research: recommendations for research and funding priorities. *Journal of School Violence, 12*(3), 283–295.
- Brown, J., Jones, S., LaRusso, M., & Aber, L. (2010). Improving classroom quality: Teacher influences and experimental impacts of the 4Rs program. *Journal of Educational Psychology, 102*(1), 153–167.
- Elias, M. (2009). Social-emotional and character education and academics as a dual focus of educational policy. *Educational Policy, 23*(6), 831–846.
- Freeman, G. G. (2014). The implementation of character education and children's literature to teach bullying characteristics and prevention strategies to preschool children: An action research project. *Early Childhood Education Journal, 42*, 305–316.
- Griggs, M., Mikami, A., Rimm-Kaufman, S. (2016). Classroom quality and student behavior trajectories in elementary school. *Psychology in the Schools, 53*(7), 690–704.
- Heath, M. A., Smith, K., & Young, E. L. (2017). Using children's literature to strengthen social and emotional learning. *School Psychology International, 38*(5), 541–561.
- Hill, E., Milliken, T., Goff, J., Clark, D., & Gagnon, R. (2015). Education and implementation of CARE now: A university, municipal recreation department, and public school collaborative model. *Journal of Park & Recreation Administration, 33*(3), 62–75.
- Hynes-Gerry, M. (2015). *Don't leave the story in the book: Using literature to guide inquiry in early childhood classrooms*. New York, NY: Teachers College Press.
- International Literacy Association (2010). *Standards for Reading Professionals*. Newark, DE: Author.
- Lewis, K., Vuchinich, S., Ji, P., DuBois, D., Acock, A., Bavarian, N., Day, J., Silverthorn, N., & Flay, B. (2016). Effects of the positive action program on indicators of positive youth education among urban youth. *Applied Educational Science, 20*(1), 16–28.
- Linter, T. (2011). Using "exceptional" children's literature to promote character education in elementary social studies classrooms. *The Social Studies, 102*, 200–203.
- McNamme, A., & Mercurio, M. (2007). Who cares? How teachers can scaffold children's ability to care: A case for picture books. *Early Childhood Research and Practice, 28*(3), 277–288.
- Montgomery, P., & Maunder, K. (2015). The effectiveness of creative bibliotherapy for internalizing, externalizing, and prosocial behaviors in children: A systematic review. *Children and Youth Services Review, 55*, 37–47. doi: 10.1016/j.childyouth.2015.05.010
- Nansook, P. (2009). Building strengths of character: Keys to positive youth education. *Reclaiming Children & Youth, 18*(2), 42–47.
- O'Sullivan, S. (2004). Books to live by: Using children's literature for character education. *The Reading Teacher, 57*(7), 640–645.
- Shields, D. (2011). Character as the aim of education. *Phi Delta Kappan, 92*(8), 48–53.
- Short, K. G., Lynch-Brown, C. M., & Tomlinson, C. M. (2013). *Essentials of children's literature*. Upper Saddle River, NJ: Pearson.
- Temple, C. A., Martinez, M. A., & Yokota, J. (2015). *Children's books in children's hands: A brief introduction to their literature*. Upper Saddle River, NJ: Pearson.
- Theron, L., Cockcroft, K., & Wood, L. (2017). The resilience-enabling value of African folktales: The Read-Me-to-Resilience intervention. *School Psychology International, 38*(5), 491–506.
- Wantanabe-Crockett, L. (2016). *The critical 21st century skills every student needs and why*. Retrieved from <https://globaldigitalcitizen.org/21st-century-skills-every-student-needs/>
- Yoneyama, S., Rigby, K. (2006). Bully/victim students and classroom climate. *Youth Studies Australia, 25*(3), 34–41.
- Zeece, P. D. (2009). Using current literature selections to nurture the education of kindness in young children. *Early Childhood Education Journal, 36*, 447–452.

## Children's Books Cited

- Britt, P. (2017). *Why am I me?* New York, NY: Scholastic Press.
- Clinton, C. (2017). *She persisted: 13 American women who changed the world*. New York, NY: Philomel Books.
- Davies, N. (2018). *The day war came*. Somerville, MA: Candlewick.
- Kerascoet. (2018). *I walk with Vanessa: A story about a simple act of kindness*. Toronto, Canada: Schwartz & Wade.
- Latham, I. & Waters, C. (2018). *Can I touch your hair? Poems of race, mistakes, and Friendship*. Minneapolis, MN: Carolrhoda Books.
- Macy, S. (2016). *Miss Mary reporting: The true story of sportswriter Mary Garber*. New York, NY: Simon & Schuster.
- Palacio, R. J. (2017). *We're all wonders*. New York, NY: Knopf Books for Young Readers.
- Sanders, R. (2018). *Peaceful fight for equal rights*. New York, NY: Simon & Schuster.
- Sorell, T. (2018). *We are grateful: Otsaliheliga*. Watertown, MA: Charlesbridge Publishing.
- Tavares, M. (2017). *Growing up Pedro*. Somerville, MA: Candlewick.
- Woodson, J. (2001). *The other side*. New York, NY: G.P. Putnam's Sons Books for Young Readers.

## Meet the Expert: Gina Keene, Speech-Language Pathologist

Kenya Wolff



Language development is one of the key milestones during the early years. How to best support a child's emerging language development is a concern for early childhood educators and for families. This time, to answer some of the questions and concerns, we interview a language pathologist.

Gina Keene, M.A., M.S., CCC-SLP, is a Speech-Language Pathologist and Clinical Instructor at the University of Mississippi. She is also the supervisor of the HILL Program, in which students with severe language disabilities receive individualized, one-on-one and group intervention to meet language goals. Her primary interests are childhood language acquisition, incorporating natural environment instruction, and augmentative/alternative means of communication.

**Question: At what age can speech and language issues first be detected?** *We know so much more than ever before about early detection. One of the earliest issues we see is in babies around 6 months of age, they should be babbling. If they aren't babbling, or if they begin to babble but then stop, a hearing test needs to be done. Another important milestone is that infants 4 – 6 months of age should be fascinated with the human face and should be imitating facial expressions. Along the same lines, by the age of 12 months, an infant should be using their index finger to point to things of interest in their environment. By 18-24 months, a child should have a vocabulary of about 50 words and it should continue to grow. If this isn't happening, a teacher should suggest to the parent that the child see a pediatrician or an early interventionist.*

**Question: Does a parent need to have a doctor's referral for a child to see an early interventionist?** *No, in fact any-*

*one can refer a child to one. These are specialists who work within a broader system of services that help infants and toddlers with developmental delays or disabilities. Early intervention focuses on helping eligible babies and toddlers learn the basic skills that typically develop during the first three years of life for example, reaching, rolling, crawling, walking, and speaking, etc. Once a parent is connected with their community's early intervention program, they should be assigned a service coordinator who will explain the early intervention process, which will start with an assessment and screening to determine eligibility which is absolutely free. If eligible, the service coordinator will help the family with a creation of a plan to provide early intervention services with the goal of helping the child to develop and thrive.*



**Question: How can parents and caregivers help children develop optimal language skills?** *The best place for a child to learn language is on a caregiver's lap. Singing, reading books, taking a walk and talking to your baby about what you see, and just having lots of interaction throughout the day. In fact, you don't need anything to teach language, and everything is an opportunity to talk. There are two really important ways you can practice teaching language. "Self-talk" which is when you are using short sentences to talk about what you are seeing, doing or doing when you are with your baby. For example, when you are setting the table for snack you may say "Ms. Nancy is putting out the plates." Parallel talk is when you use child-friendly language to describe what the child is doing. For example, "Madison is stacking the blocks so tall." Children love for you to notice them and this also helps to build their vocabulary.*

**Kenya Wolff, Ph.D.**, is an Assistant Professor of Early Childhood Education at the University of Mississippi and is also the director of the Willie Price Laboratory School. Her experience as a classroom teacher and administrator allows her to bring real-world knowledge to the students she teaches. Dr. Wolff's research utilizes qualitative methodologies and focuses on various social contexts of childhood. She is a member of the editorial board for the Southern Early Childhood Association and serves as board member for the Mississippi Early Childhood Association.

# Children's Book Review

## Room on Our Rock

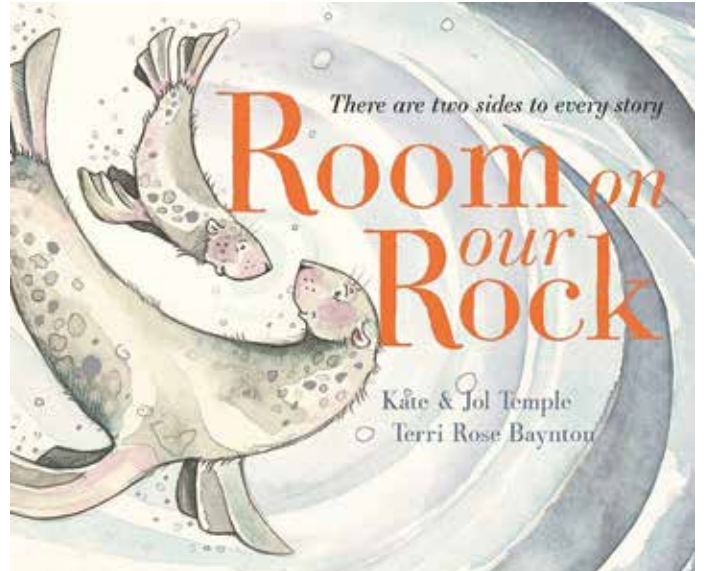
By Dina Costa Treff

At first glance, Kate and Jol Temple's *Room on Our Rock* (2019) shares the story of seals that are very adamant that there is no room on their rock. The other seals approach the rock and attempt to climb on, but they are quickly shooed away. The reader might even be caught off guard by the sometimes terse and unsympathetic seals. It is later realized that there are two sides to every story, especially this book. Once read front to back, the reader is directed to read it again. This time from back to front. Perspective, and then compassion, end up erupting from the beautiful illustrations by Terri Rose Baynton. What initially feels bitter, shifts attitudes towards more brighter and welcoming encounters. This clever book provides an opportunity to pause and see that things are not always how we see them the first time. *Room on Our Rock* allows children the ability to understand that there is more than one way to see a situation. When reading to younger children, ages 3-5, the interaction with the book seems as if it is just reading each page backwards. However, it is then recognized that the book is retelling a different story than the initial read. Older children, ages 4-8, can grasp the greater messages of kindness, caring for others, and empathy.

\*Note to the reader: As with all books, make sure you are familiar with the stories *Room on Our Rock* prior to reading to children. There are words that require emphasis in order for the book's flow and rhythm.

.....

De primera intención, el libro de Kate y Jol Temple, *Room on Our Rock* (2019) presenta la historia de unas focas muy obstinadas que creen que no hay lugar para otros en su roca. Cada vez que las otras focas tratan de subir a la piedra, estas son prontamente echadas fuera. Al lector le sorprenderá ver la forma poco agradable y ruda de las focas. Es luego al leer que vemos que hay dos lados en cada historia. Una vez leemos el cuento del principio al final, el lector es invitado a leerlo de atrás hacia adelante. Las hermosas ilustraciones de Terri Rose Baynton ofrecen perspectiva, así como compasión. Lo que inicialmente parece ser un encuentro amargo cambia de su tono hacia algo más positivo y de bienvenida. Este brillante libro nos ofrece una oportunidad para hacer una pausa y ver que las cosas no siempre son como las vemos de primera intención. El libro *Room on Our Rock* permite que los niños comprendan que hay más de una manera de ver una situación. Al leerlo con niños de 3-5 años, parece como si estuviéramos leyendo cada página de atrás hacia adelante. Sin embargo, es así como nos damos cuenta de que el libro cuenta una historia diferente a la que ya habíamos leído. Los niños de 4-8 años podrán captar mensajes de bondad, consideración a otros y de empatía.



\*Nota al lector: Al igual que con todos los libros, asegúrese de familiarizarse con las historias en *Room on Our Rock* antes de leerlo con los niños. Hay palabras que requieren énfasis a fin de mantener el ritmo del libro.

**Dina Costa Treff** is lead teacher of the Preschool Program at the McPhaul Center, University of Georgia.

### SECA EDITORIAL COMMITTEE

**KAREN WALKER, ED.D., COMMITTEE CHAIR**  
LOUISIANA

**WILMA ROBLES DE MELENDEZ, PH.D., EDITOR**  
FLORIDA

**DIANE BALES, PH.D.**  
GEORGIA

**BEVERLY GILBERT BOALS, ED.D.**  
ARKANSAS

**MARY JAMSEK**  
TEXAS

**DINA COSTA TREFF**  
GEORGIA

**KENYA WOLFF, PH.D.**  
MISSISSIPPI



# THE BEST SOURCE FOR EARLY CHILDHOOD PRODUCTS & SERVICES

- Educational Materials for Birth through Elementary
- Quality Wooden Furniture
- Technology designed for how children learn
- Professional Development - Online & Onsite
- Turnkey Playground design and installation
- Kaplan Truck Delivery & Classroom Setup

**KAPLAN**<sup>®</sup>  
EARLY LEARNING COMPANY

1-800-334-2014 • [www.kaplanco.com](http://www.kaplanco.com)