

## **Cultivating Math-Positive Parents: Passing the Growth Mindset on to Families**

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### Why Mindset Matters

1. Children's beliefs about their own intelligence have a significant impact on their motivation, effort, and approach to mistakes and challenges.
2. Those who believe their abilities are malleable are more likely to embrace challenges and persist despite failure.
3. Mindsets can be changed.

### Why Familial Mindsets Matter

1. Research shows familial influence on learning is formidable and enduring.
2. Children emulate parents' attitudes.
3. Homework is much less stressful!
4. Research support (Dweck, Boaler)

### Strategies for Passing Growth Mindset on to Families

#### 1. Activities for Family Math Night

- Malleability and Mindsets movement activity

Make line on floor using masking tape. Tell families to imagine this is our continuum of malleability. How malleable do you think certain traits are? MOVE LEFT—NOT Malleable MOVE RIGHT—Malleable There are no right or wrong answers. The goal is to explore your own beliefs and see how others think. No commenting on others' position unless you're invited to do so. Traits to explore: eye color, hair color, creativity, shyness, intelligence, athletic ability, math ability, musical ability. --source: [www.perts.net](http://www.perts.net)

- Brain Growing Game

Stand in circle. Start a web by describing math in your day, "I use math when I figure the unit price of peanut butter." Hold the end of the yarn and throw the ball to someone across from you. Repeat until a web is formed. Each person represents a brain cell (neuron). The string represents pathways, or synapses. By engaging in mathematical processes, we grow our brains and build pathways. Ask someone to tell a challenge in math. Give multiple strategies, repeatedly tossing ball of yarn between you to show how multiple experiences make connections thicker and stronger.

- Wall of Mistakes

Families use sticky notes to celebrate mistakes.

- Growth Mindset Quotes

Families create posters to display at school.

- Growth Mindset Memes

Use free apps to upload photos from family phones. Post the memes on school social media. Email to teacher to print out and display.

## 2. Class Newsletter

- Growth Mindset Corner focused on Beliefs to Actions, Growth Mindset Language, Growth Mindset Websites, and Celebrations of Growth Mindset in the classroom

## 3. Growth Mindset-Oriented Parent Conferences

- Data—Effort, Reactions to challenge & mistakes, Progress & processes over products
- Reflection--Include students' self-evaluations about their effort and persistence
- Goal Setting--Challenging oneself not competing against others, Emphasize progress.

## 4. At-Home Activities

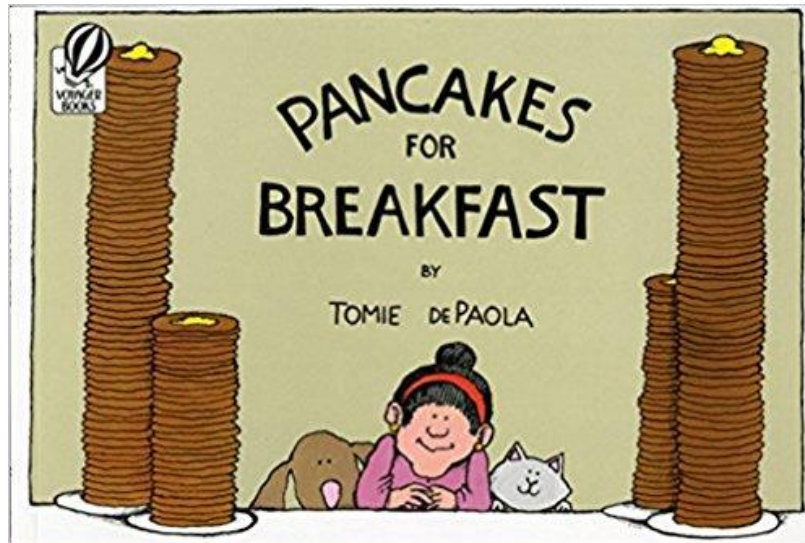
- Website Explorations
  - Video by Class Dojo & Carol Dweck <https://ideas.classdojo.com/i/growth-mindset-1>
  - GM in popular children's shows [https://www.youtube.com/watch?v=0Q6a\\_rD85X0](https://www.youtube.com/watch?v=0Q6a_rD85X0)
  - Sesame Street does Growth Mindset [https://www.youtube.com/watch?v=SnrHZ\\_uvtxk](https://www.youtube.com/watch?v=SnrHZ_uvtxk)  
<https://www.youtube.com/watch?v=XLeUvZvuvAs&feature=youtu.be>
  - Proctor and Gamble 2014 Olympic Games Thank You Mom <https://youtu.be/zsZ5yOImHQQ>
- Take-Home Book Bags with GM Picture Books
  - *A Walk in the Rain with a Brain* (Hallowell, 2004)
  - *Your Fantastic Elastic Brain* (Deak, 2010)
  - *The Girl Who Never Made Mistakes* (Pett, 2011)
  - *Nobody's Perfect* (Elliott & Zuppardi, 2015)
  - *Making a Splash* (Reiley, 2015)
  - *What Do You Do with a Problem* (Yamada, 2016)
  - *Beautiful Oops* (Saltzberg, 2010)
  - *Not Yet* (Cox, 2017)
  - *Frankie Pickle* (Wright, 2017)

- Mistakes on the Fridge

In addition to a wall or a fridge filled with children's achievements, have a safe space where family members can brag about their biggest mistakes and what they learned from them.

\*\*For more ideas about cultivating parent's mindsets, please see *Math-Positive Parents: A Q & A Guide to Helping Your Child Succeed in Mathematics* (Cutler, Math Solutions, forthcoming)

# GROWTH MINDSET TAKE-HOME BOOK BAG



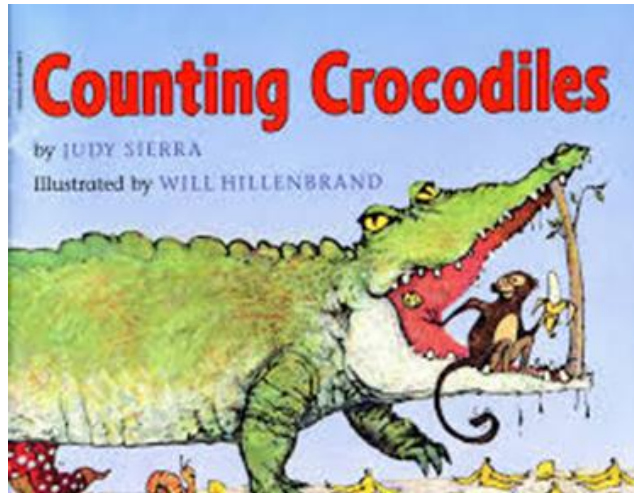
## Discussion Questions:

- What is this book about?
- How does the lady feel at the beginning, in the middle, and at the end of the book?
- How did the lady get what she wanted?
- What does the sign say at the end of the book?
- How does the lady show a growth mindset?
- When have you had to try things several times? Did you succeed in the end or not? Why?
- How is this book similar to or different from other books we have read about the growth mindset?

## Activity:

Draw a picture of when you had to try several times to get something you wanted. Tell about your picture.

# GROWTH MINDSET TAKE-HOME BOOK BAG



## Discussion Questions:

- What is this book about?
- How does the monkey feel at the beginning, in the middle, and at the end of the book?
- What did the monkey do to get what she wanted?
- How does the monkey show a growth mindset?
- When have you had to try things several times? Did you succeed in the end or not? Why?
- How is this book similar to or different from other books we have read about the growth mindset?

## Activity:

Act out the story using the monkey and crocodile puppets. Why didn't the monkey give up when he saw how many crocodiles there were?

# GROWTH MINDSET TAKE-HOME BOOK BAG



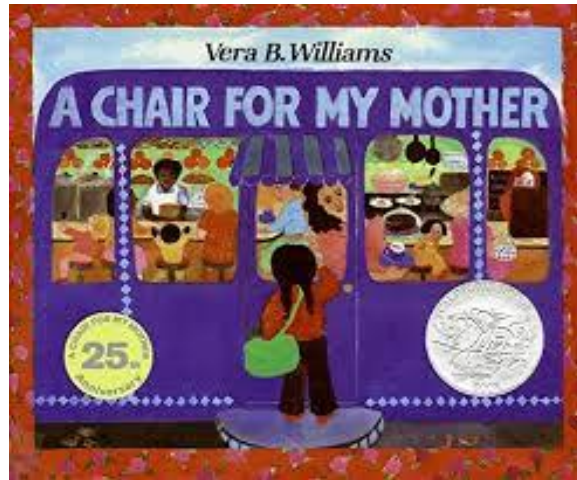
## Discussion Questions:

- What is this book about?
- What obstacles does the girl have to overcome to return the ring to the man?
- How does the girl show persistence?
- How do you think the girl felt at the end of the book?
- How does the girl show a growth mindset?
- When have you had to try hard to overcome a challenge? Did you succeed in the end or not? Why?
- How is this book similar to or different from other books we have read about the growth mindset?

## Activity:

Make an obstacle course out of crepe paper and have your family go through it. How does making it through an obstacle course show persistence?

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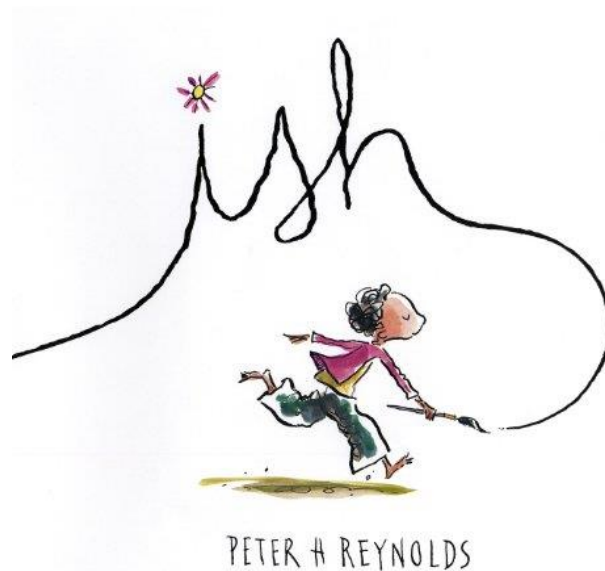
## Discussion Questions:

- What is this book about?
- What obstacles does the girl have to overcome to earn the money to buy her mother a chair?
- How does the girl show persistence?
- How do you think the girl felt at the end of the book?
- How does the girl show a growth mindset?
- When have you had to try hard to accomplish something difficult? Did you succeed in the end or not? Why?
- How is this book similar to or different from other books we have read about the growth mindset?

## Activity:

Talk about something your family would like to save up money to buy. What kinds of challenges will you face as you budget and save?

# GROWTH MINDSET TAKE-HOME BOOK BAG



## Discussion Questions:

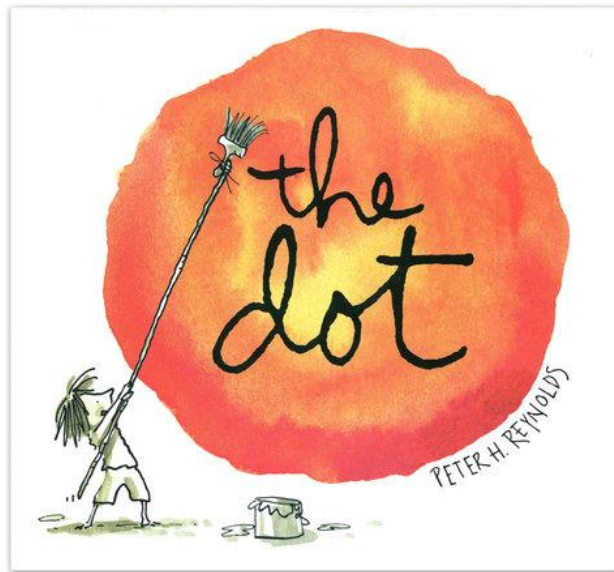
- What is this book about?
- How does Ramon feel at the beginning, the middle, and the end of the book?
- Why does Ramon feel like his drawings don't look right?
- What does Ramon's sister mean by "vase-ish?"
- How does thinking "ish-ly" affect Ramon's drawing?
- How does Ramon show a growth mindset?
- When have you had to try hard to accomplish something difficult? Did you succeed in the end or not? Why?
- How is this book similar to or different from other books we have read about the growth mindset?

## Activity:

Draw a picture of something you've never drawn before. How does knowing a drawing can look "ish" make you feel?



# GROWTH MINDSET TAKE-HOME BOOK BAG



## Discussion Questions:

- What is this book about?
- How does Vashti feel at the beginning, the middle, and the end of the book?
- Why does Vashti feel afraid to draw?
- Why does Vashti's teacher tell him to sign his artwork?
- How does Vashti show a growth mindset?
- When have you been afraid to try something? Did you try it in the end or not? Why?
- How is this book similar to or different from other books we have read about the growth mindset?

## Activity:

Listen and dance along to a children's song inspired by the book *The Dot*, "The Dot Song" by Emily Arrow. <https://youtu.be/-ZQMhdYJhsA>

How does being brave and taking chances show the growth mindset?