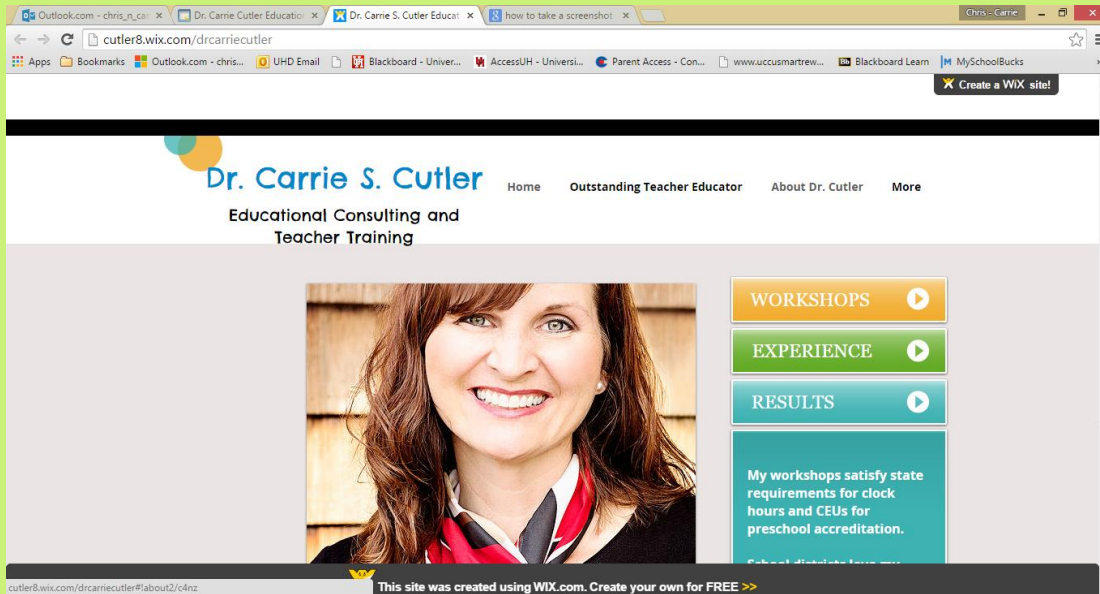




CULTIVATING MATH- POSITIVE PARENTS: PASSING THE GROWTH MINDSET ON TO FAMILIES

Carrie S. Cutler, University of Houston

A Very Little Bit About Me





Agenda

1. What is the growth mindset?
2. Why do parents need a growth mindset about mathematics?
3. Strategies for passing the growth mindset on to families.

What's Your Mindset?

—Jot your response on a sticky note.



Do you...

- a) Strongly Agree
- b) Agree
- c) Neutral (not sure)
- d) Disagree
- e) Strongly Disagree

You can learn
new things, but
you can't
change your
basic intelligence.

What's Your Mindset?



Do you...

- a) Strongly Agree
- b) Agree
- c) Neutral (not sure)
- d) Disagree
- e) Strongly Disagree

When you
make a
mistake, it
means you're
not smart.

What's Your Mindset?



Do you...

- a) Strongly Agree
- b) Agree
- c) Neutral (not sure)
- d) Disagree
- e) Strongly Disagree

Intelligence
is a fixed
trait—
something
you're born
with.

What's Your Mindset?



Do you...

- a) Strongly Agree
- b) Agree
- c) Neutral (not sure)
- d) Disagree
- e) Strongly Disagree

If you have to
try, it must
means you're
not very good
at something.

What's Your Mindset?



Do you...

- a) Strongly Agree
- b) Agree
- c) Neutral (not sure)
- d) Disagree
- e) Strongly Disagree

Math is one of
those things
you have to be
born good at.

If you answered mostly...

A or B, you may have a **fixed mindset**.

D or E, you may have a **growth mindset**.



WHAT IS THE GROWTH MINDSET?

Belief about Intelligence

- Intelligence is a **malleable** trait.



- Carol Dweck—Stanford Psychologist

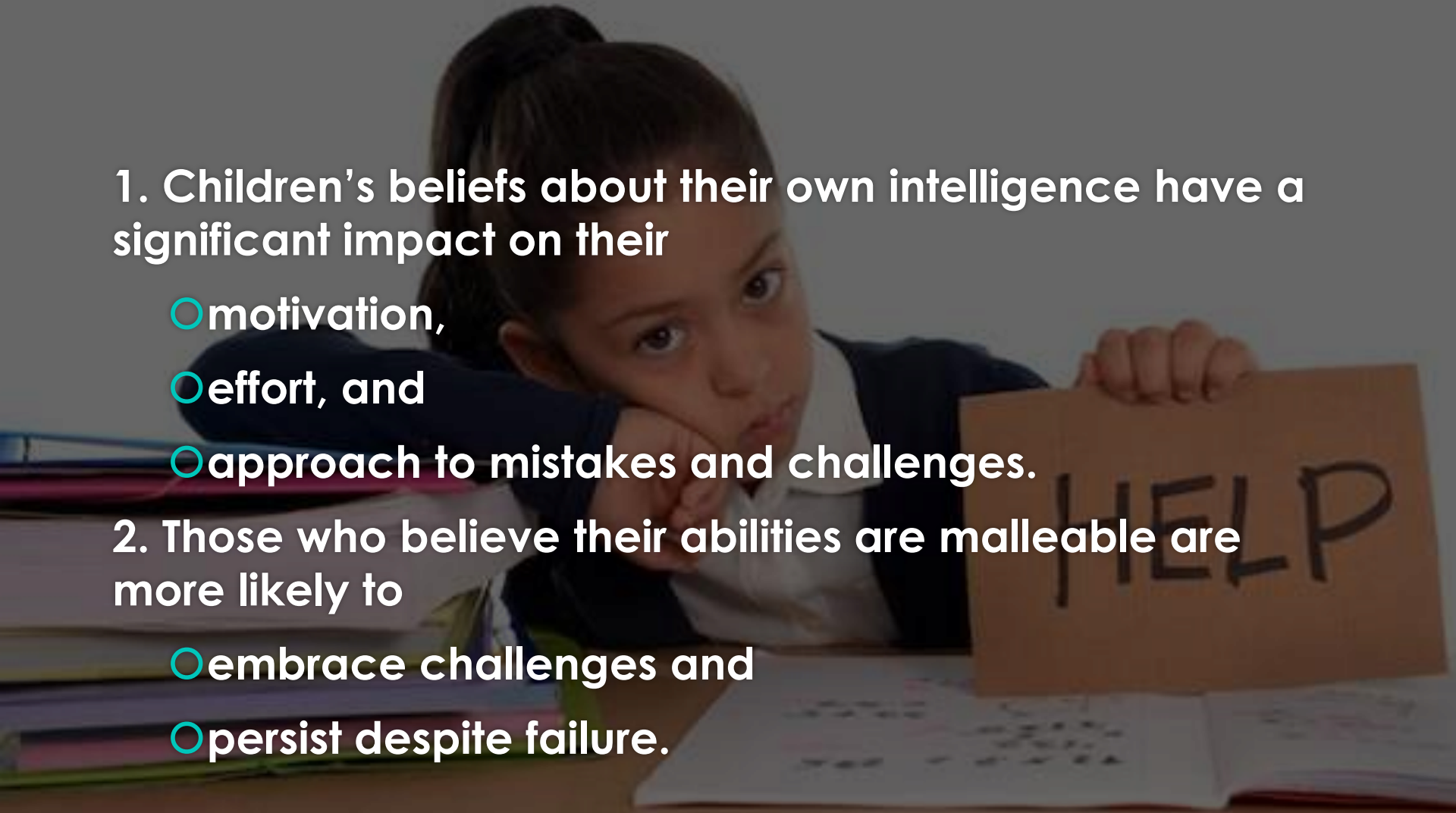
Why does mindset matter?

1. Children's beliefs about their own intelligence have a significant impact on their

- motivation,
- effort, and
- approach to mistakes and challenges.

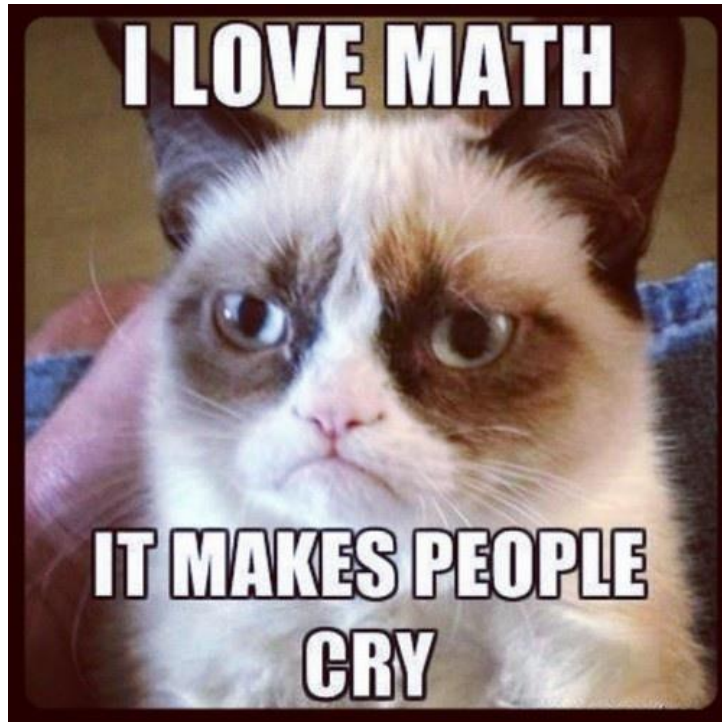
2. Those who believe their abilities are malleable are more likely to

- embrace challenges and
- persist despite failure.





WHY PARENTS NEED A GROWTH MINDSET

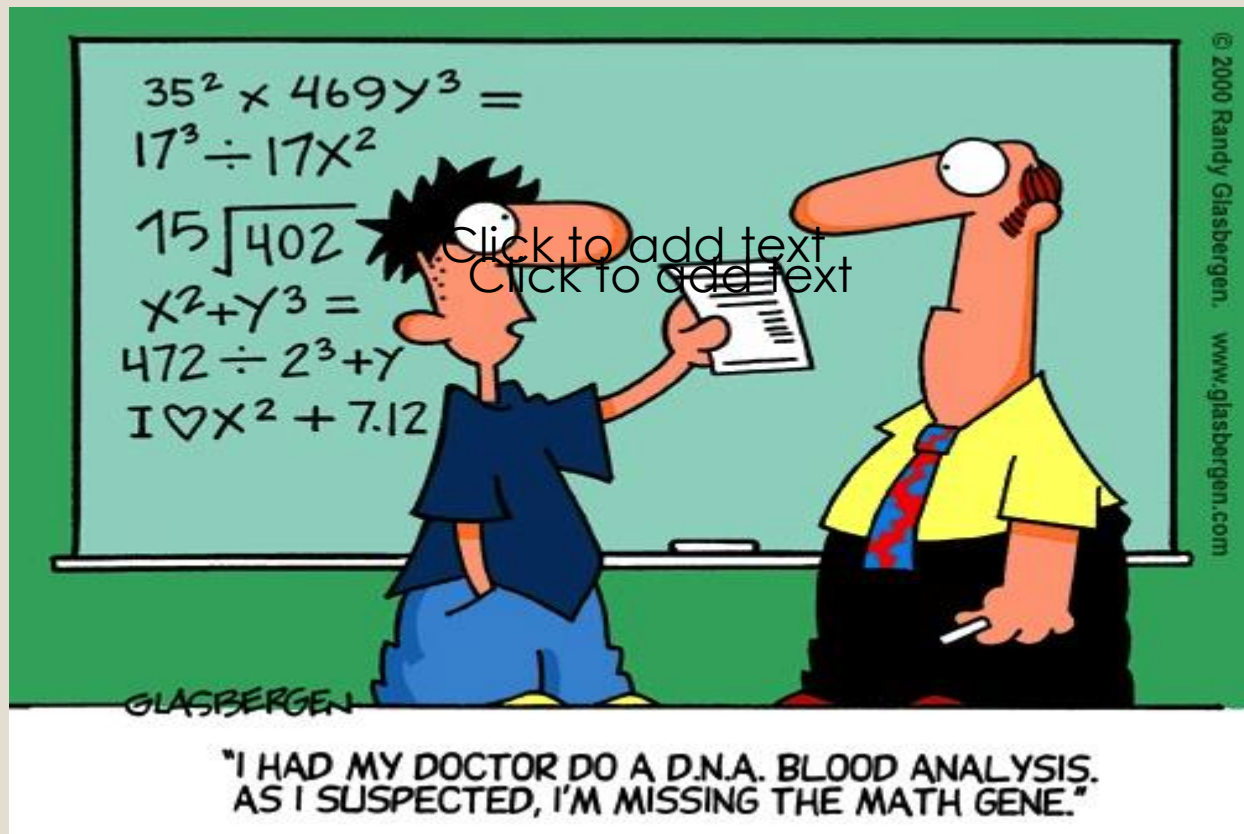


Parents— Bless their Hearts

Sometimes say to their
kids...

- Don't worry, honey. I was never very good at math either.
- You inherited my good looks and bad math skills.
- You're naturally good at reading but struggle with math, don't you?

Many, many people believe mathematical ability is inherited.





Research shows familial influence on learning is formidable and enduring.

Reasons Familial Mindsets Matter

Children Emulate
Parents/Siblings' Attitudes

With Guidance, Mindsets
Can Be Changed

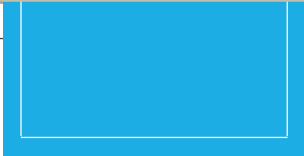
A Person with a Growth
Mindset is a Lot more Fun
to Be Around During
Homework!



A Growing Body of Research...

- There is no such things as a math gene or a math brain.
- Everyone can learn math to a high level with adequate support and superior effort.

--Jo Boaler



HOW DO WE
HELP PARENTS
UNDERSTAND
THIS?

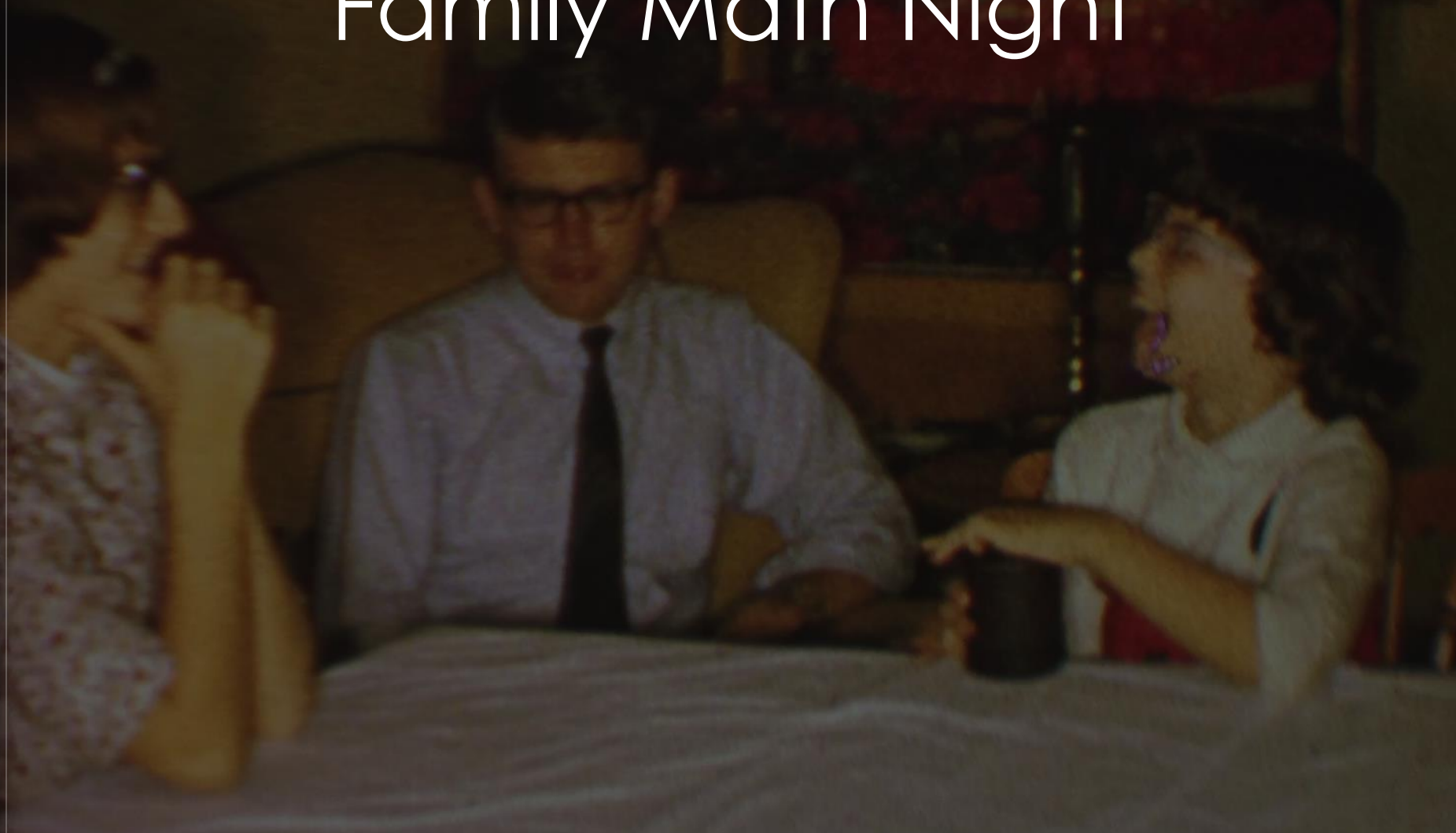




STRATEGIES FOR PASSING GROWTH MINDSET ON TO FAMILIES

1. Family Math Night
2. Newsletters
3. Parent Conferences
4. Take-Home Activities

Activities for Family Math Night



Activity 1:

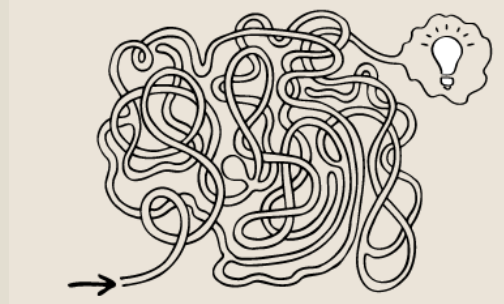
Moving Along the Malleability Line

- Imagine a line extending the length of the room. 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.

--source: www.perts.net

Activity 2:

Brain Growing Game

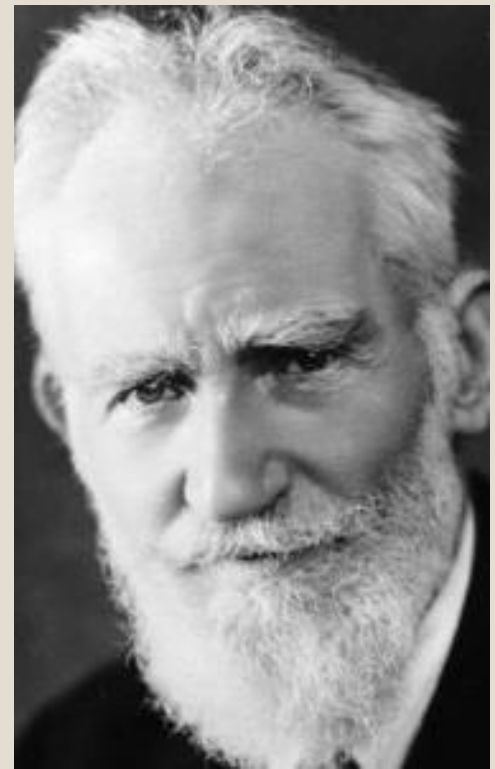


1. Stand in circle.
2. Start a web by describing math in your day, "I use math when I figure the unit price of peanut butter." Hold the end of the yarn and throw the ball to someone across from you.
3. Repeat until a web is formed.
4. Each person represents a brain cell (neuron). The string represents pathways, or synapses. By engaging in mathematical processes, we grow our brains and build pathways.
5. 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.

Celebrate Mistakes

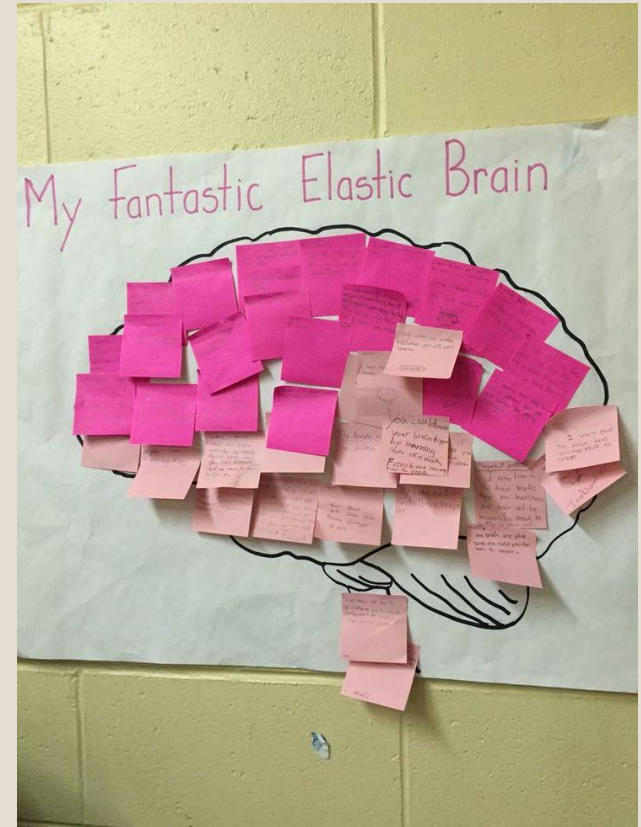
“A life spent making mistakes is not only more honorable but more useful than a life spent doing nothing.”

George Bernard Shaw

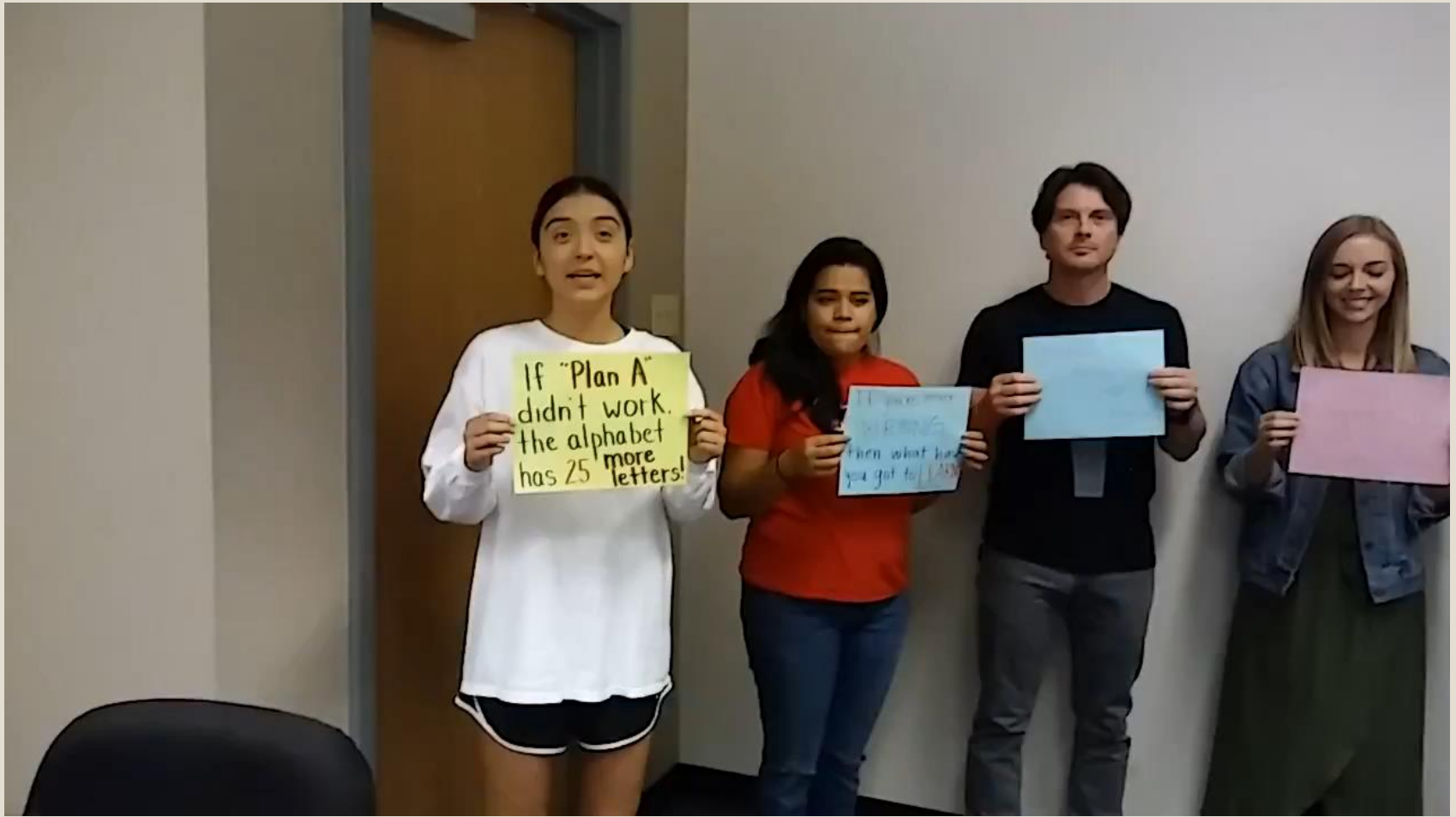


Activity 3: Wall of Mistakes

- Families use sticky notes to celebrate mistakes.



Activity 4: Growth Mindset Quotes



IF THERE IS A WILL
THERE IS A WAY
just keep trying

I love you

Growth Mindset
Language builds
Growth Mindsets in
Children

Whether you
think you CAN
or you CAN'T
Either way you are
Right!

THERE ARE
NO
FAILURES
JUST
DISCOVERIES

Growth
mindset
thinking effort practice trying

Every
mistake mistake
you
make
Progress!

Growth
Mindset
Instead of
"I can't do this"
I can't do this
yet

Yet

Wow!
I can tell you
have spent time
practicing!

When you make
Mistakes,
you are LEARNING
and STRETCHING

~~Failing~~
IS JUST ANOTHER
WORD FOR
GROWING

That looks
like it took
A LOT of
effort

Mistakes
Happen!

Quit

Get
UP
GROWTH
Mindset

This is too hard X
Say: I
just may make some
progress and learn!

Mistakes
are my
teachers!

Mistakes
are my
teachers!

Activity 5: Growth Mindset Memes

- Free apps
- Families use their photos on their phones
- Post the memes on school social media
- Email to teacher to print out and display



MATH SHOULDN'T LEAVE A NASTY TASTE IN YOUR MOUTH

#GROWTH MINDSET

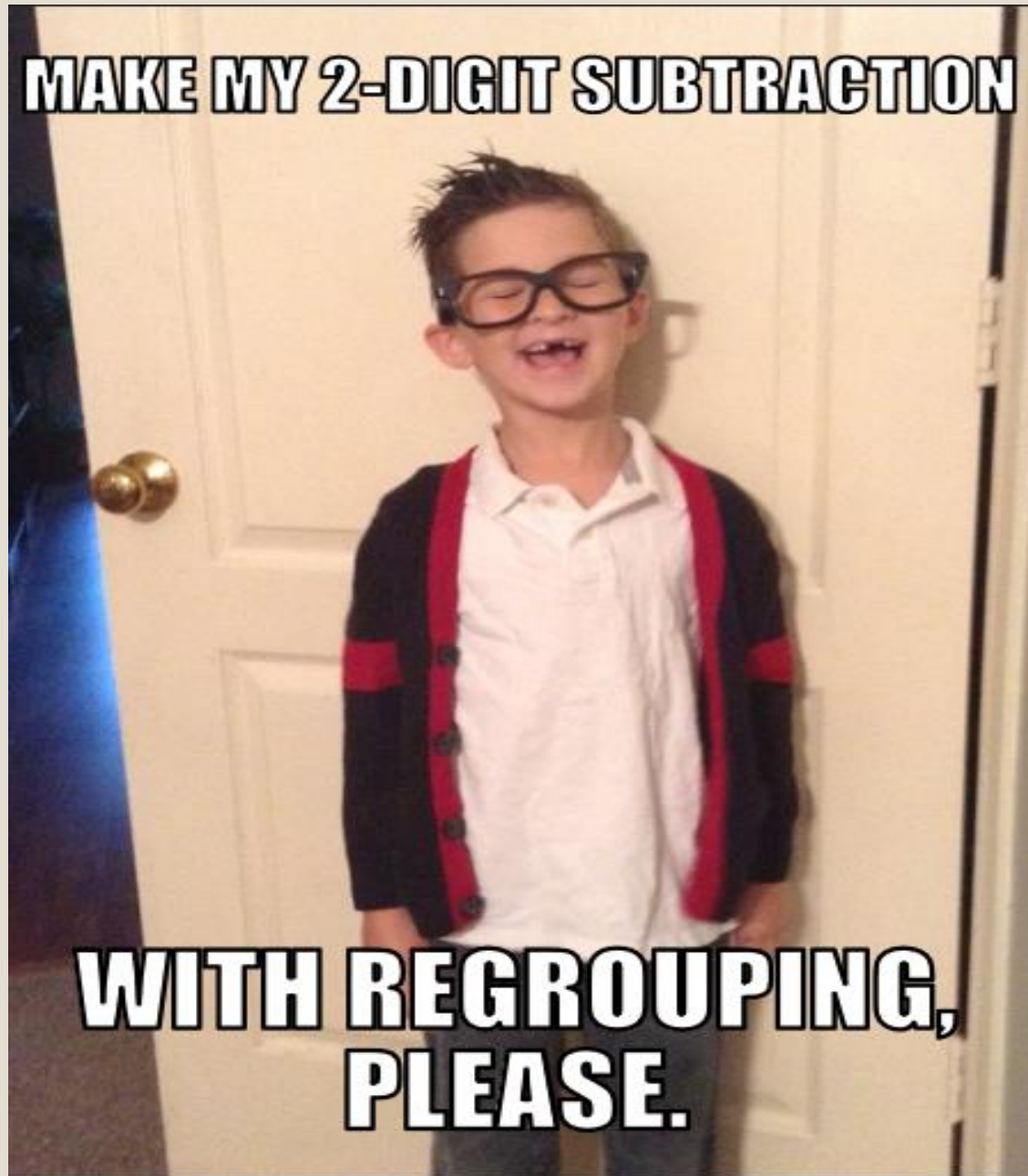


SOLVING PROBLEMS



SO WORTH THE TIME

MAKE MY 2-DIGIT SUBTRACTION



**WITH REGROUPING,
PLEASE.**

10 OUT OF 9 DENTISTS RECOMMEND

FRACTIONS




Class Newsletter




NEWSLETTER

Growth Mindset Corner

1. Beliefs to Actions
2. Language
3. Websites to learn more
4. How we showed the growth mindset in school this week.



Welcome Back!



News and Notes from Mrs. Wilson's Classroom
For the week of: August 6-11.

Here's what we are working on!

Reading: We have been starting up our Reading Workshop and talking about picking "just right" books.

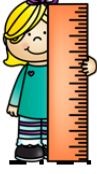
Math: Place Value - Writing numbers in standard, word, and expanded form.

Language: We will be starting up our Writing Workshop this week!

Social Studies: We are reviewing mapping skills and getting ready to learn all about Arizona.

Science: We have begun our unit on plant needs and adaptations.


Dates to Remember


 .. PTSA Meeting TONIGHT at 6:00 in the Library - Come join us!
.. Curriculum Night Th. Aug. 8 - 6PM


Other Reminders


Any unfinished classwork needs to be completed daily and returned to school. Look for any items circled in red in the planner.

The following supplies are needed in our classroom:
.. old magazines that we can cut up

 We started using our planners this week. These will need to be signed and returned to school DAILY.

 Thank you all so very much for your generous back-to-school donations! We are pretty well stocked up for the first part of the year. I truly appreciate all of your contributions.

 Thank you!



Beliefs & Attitudes



Growth Mindset Beliefs → Actions

- Transform your inner dialogue from, “Ugh, I hate math homework. It’s so hard to know how to help my child” to “Hey, with time and effort I can improve in helping my child with his math homework. I can see that he is starting to catch on, and so am I.”

**MISTAKES OPEN
YOUR MIND**



MAKE ONE TODAY!!

Growth Mindset Beliefs → Actions

- How do you react when you make a mistake? Do you model a growth mindset response?
- This week make an effort to celebrate mistakes and how they make your brain grow.



Growth Mindset Beliefs → Actions

- Instead of saying...
 - I'm really not good at making crepes.
- Say...
 - I guess I better keep practicing before I apply for the chef position at Chez Cutler.
- Your kids are listening!




Growth Mindset Beliefs → Actions


1. Celebrate **efforts** not just results
2. Recognize “**sticking to it**” during a difficult task
3. Reinforce **patient problem solving**
4. Reward **optimism** during math homework

Growth
Mindset
Corner:
Encouraging
Comments
for
Homework
Time

That took a lot of
work. I bet you feel
proud you stuck
with it.



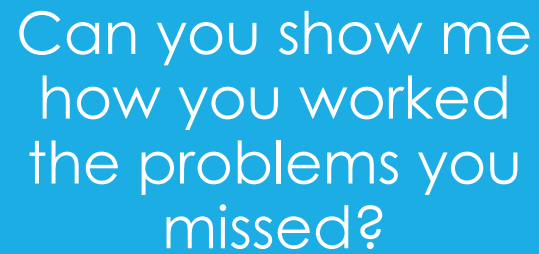
I like how you kept
trying even when it
was tough.



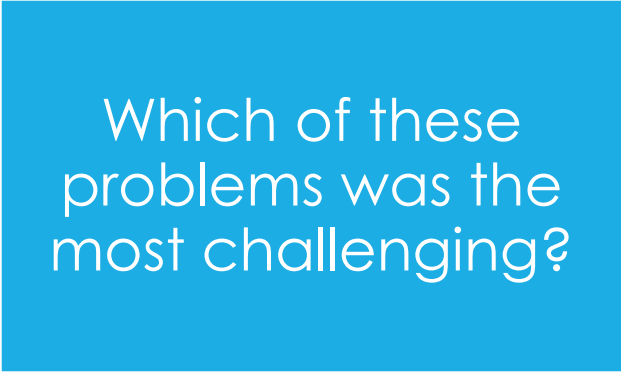
I've noticed you're
getting better at
staying positive
during homework.

Growth
Mindset
Corner:
Encouraging
Questions for
Homework
Time

Can you show me
how you worked
the problems you
missed?



Which of these
problems was the
most challenging?



How do you feel
about your work?



How we showed the Growth Mindset at school this week...

Highlight patient problem solving, sticking to it (grit), optimism, and effort.

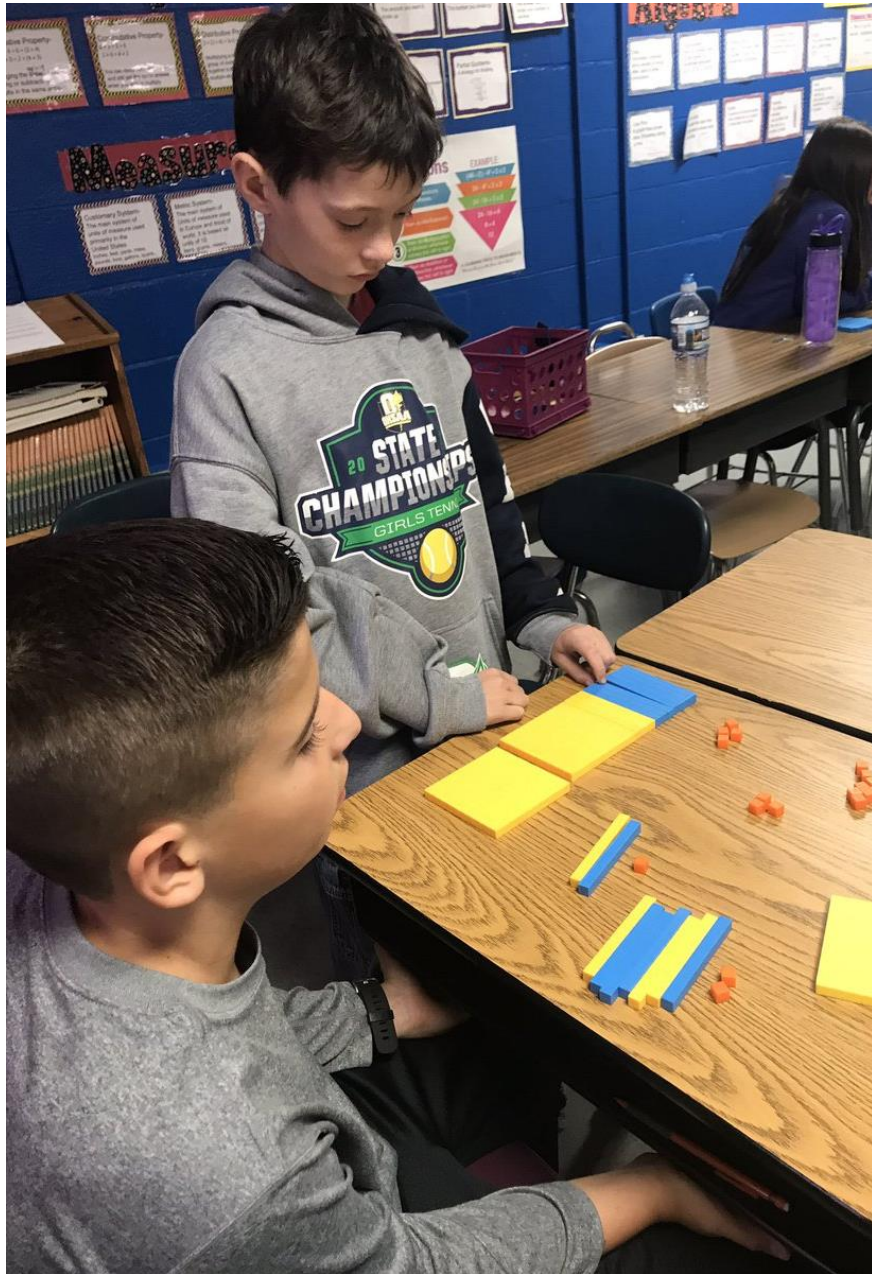
- Marytsa showed patient problem solving to complete multi-step problems in math. When she made errors, she tried a new strategy—drawing a diagram.
- Tip: Use children's names. This will get parents to READ the newsletter.



Our Growth Mindsets

- Reese, Jill, Selena, and Walter didn't get angry when their block tower fell over. They just said, "Oh, well" and started building again.





Our Growth Mindsets

- Stephen and Hussein built models for multiplication problems using base ten blocks. Even though it took a lot of time, they were able to explain what happens when we multiply by demonstrating their model to the class.

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

At Home Activities

- Website Explorations
- Book Bags
- Mistake Wall





Websites to Explore as a Family

- Adorable and powerful Youtube video by [Class Dojo](#) and [Carol Dweck](#)'s Stanford research group on growth mindset.
- Google it!

Websites to Explore as a Family

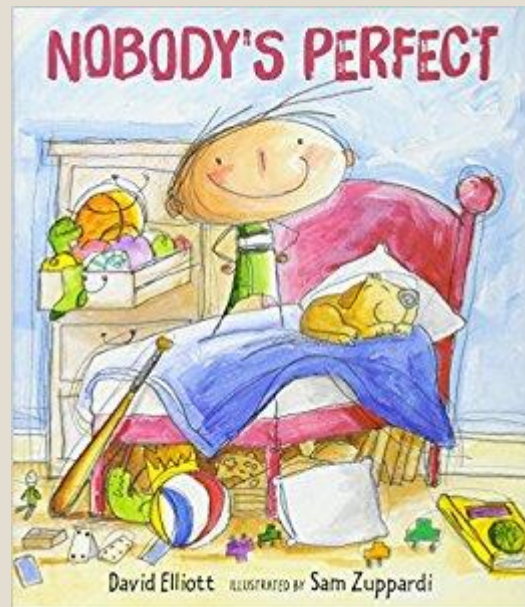
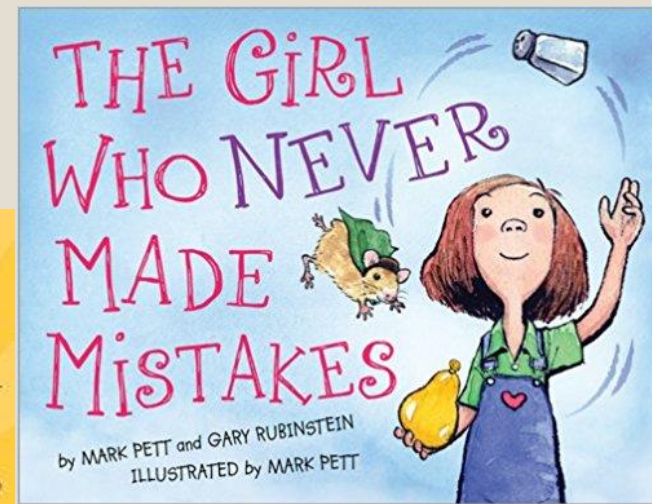
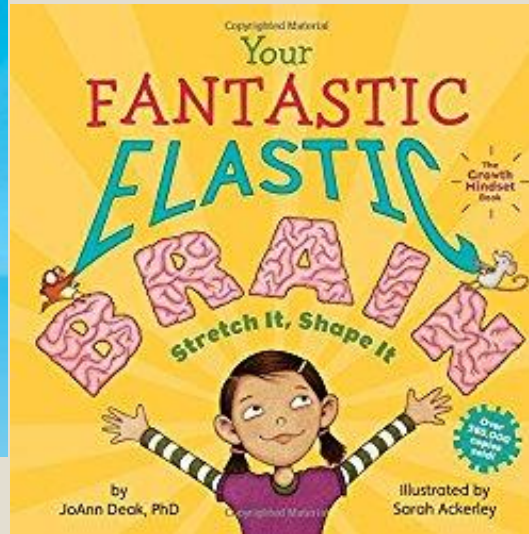
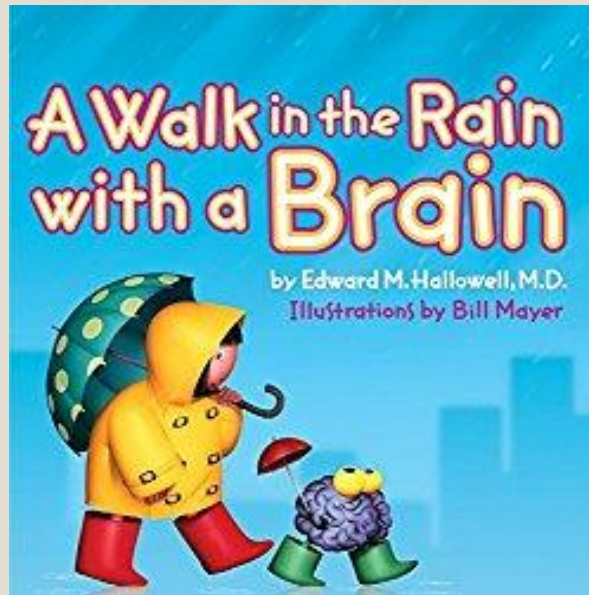


- Video clips of **growth mindset and grit in popular children's shows** and movies
 - https://www.youtube.com/watch?v=0Q6a_rD85X0
- **Sesame Street** does Growth Mindset
 - https://www.youtube.com/watch?v=SnrHZ_uvtxk
 - <https://www.youtube.com/watch?v=XLeUvZvuvAs&feature=youtu.be>
- Proctor and Gamble 2014 Olympic Games **Thank You Mom Ad**
 - <https://youtu.be/zsZ5yOImHQQ>

Take-Home Book Bags

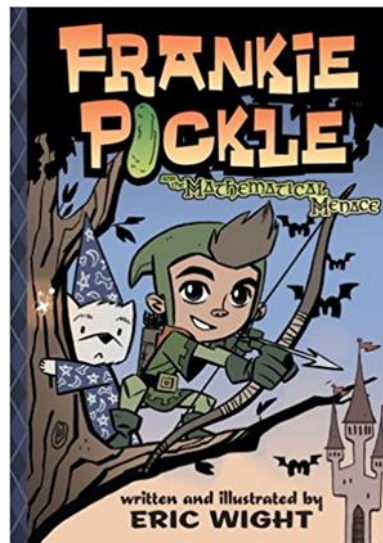
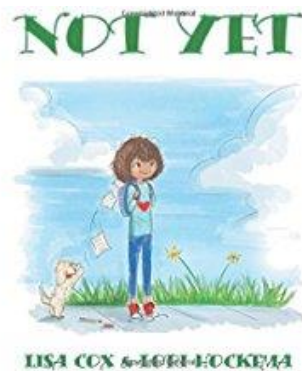
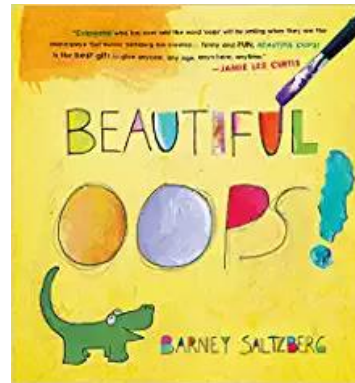
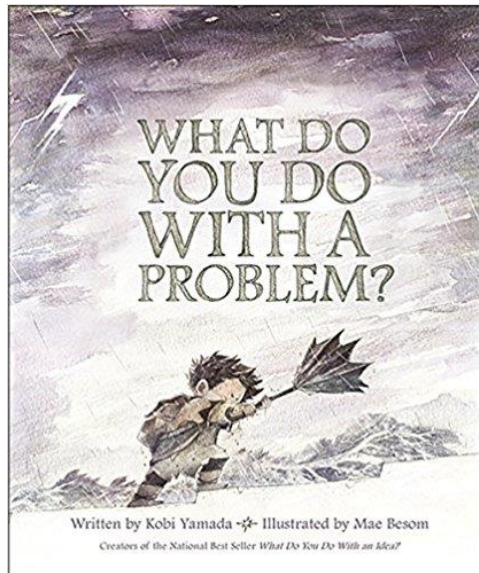


- Children take a comfortable leadership role in the family activity (Newkirk, 2012). As they interact with their family members, children can pass on growth mindset knowledge to family.
- Especially effective when book characters are representative of family culture.

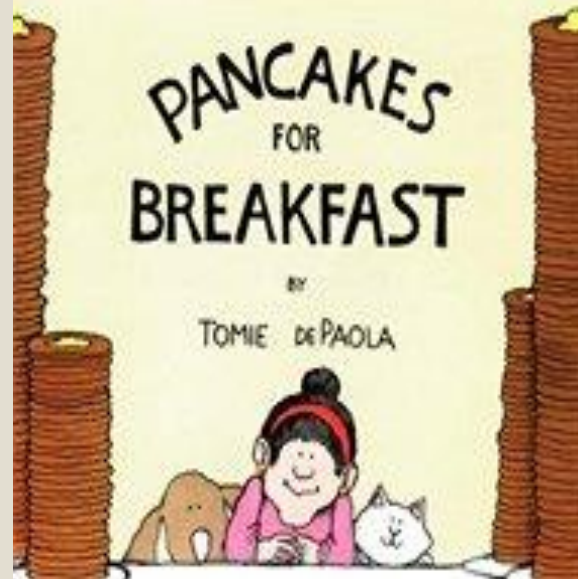
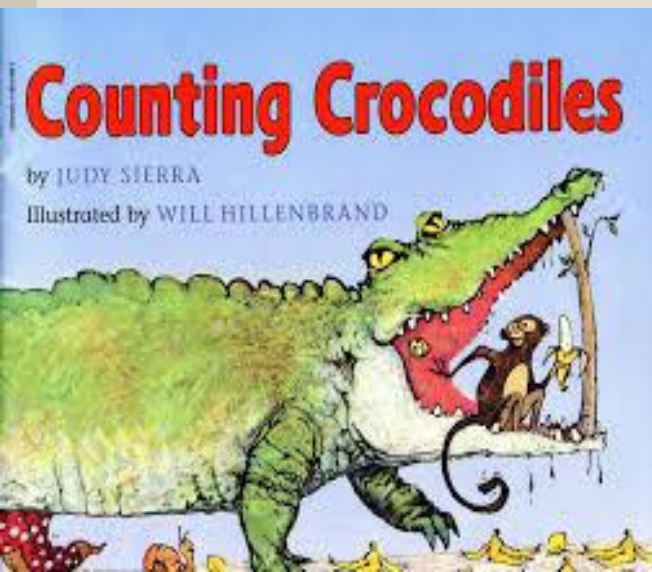
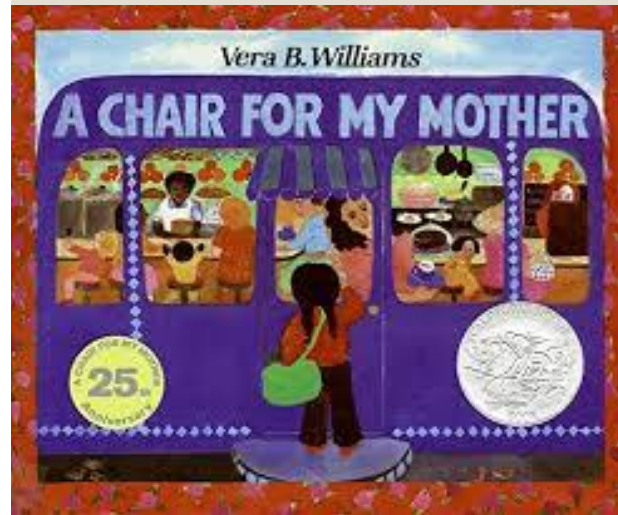


Books about the
brain and mindset!

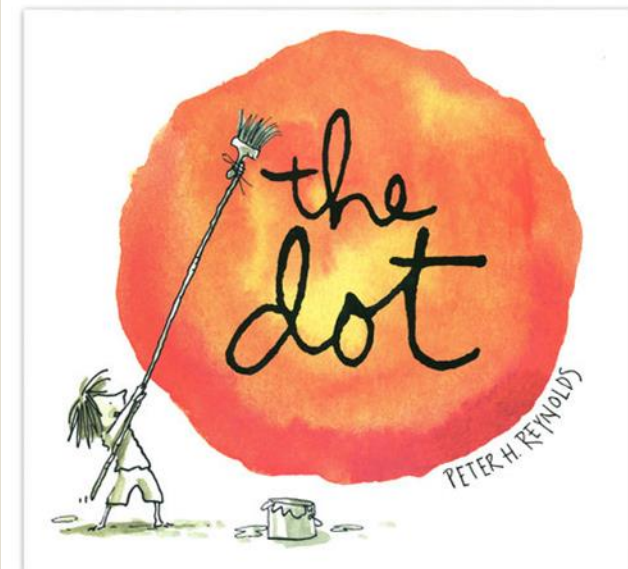
More Growth Mindset Titles to Love



I Brought Some Bags for You!



Let's try some out!



Mistake Wall

- 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.

Have a Growth Mindset for Parents, too!

- It's okay for parents to be somewhere along a growth mindset continuum.
- If parents aren't all the way there, continue to nurture their growth mindset by being positive, encouraging, and supportive.



Thank You For Coming

- Dr. Carrie S. Cutler
- carriecutler@hotmail.com
- www.carriecutler.com
- Email me if you try these ideas,
and I will do my happy dance!

