

Math Problem Solving

MINDSETS MATTER

How to Foster a Math Mindset

Webinar Conductor: Laura Candler www.lauracandler.com

Meet Your Conductor: **Laura Candler**

Meet Your Conductor: **Laura Candler**

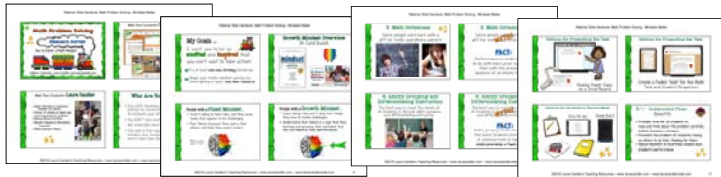
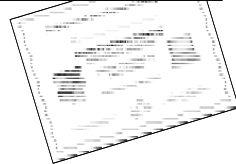
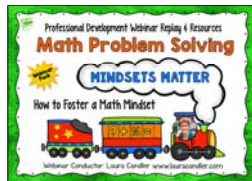
- Upper elementary classroom teacher (30 years)
- Author of dozens of digital and print resources for teachers
- National Board Certified
- Master's Degree in Elementary Education
- Milken Educator Award

Math Mindset Webinar Notes

Check your confirmation email for a link to the handouts.

Math Problem Solving: Mindsets Matter Webinar Pack

- Mp4 HD Video Recording
- Mp3 Audio Recording
- Editable PD certificate (90 min)
- Easy access to webinar freebies
- PDF handouts of webinar slides



Why Are You Here?



- You LOVE teaching math, and you're looking for research-based strategies to increase your effectiveness.
- You DON'T love math, but you wish you did, especially since you have to teach it!
- You worry that you might be spoon-feeding your students in math, but you aren't sure how else to help them.

Or Maybe Because...



- You're fascinated by growth mindset research and you want to know how it applies to math instruction.
- You teach in a Common Core school, and you feel overwhelmed by the changes in the math curriculum.

What You'll Learn Today...

- How most people define math and how that view differs from what mathematicians think
- The research about commonly held beliefs regarding math instruction
- How to turn a simple math word problem into an rich math task
- Strategies for facilitating math talk
- Where to find resources for fostering a math mindset

Math Mindset Connections Facebook Group



Math Mindset Connections
Closed Group

Joined Share Notifications

Math Problem Solving: Mindsets Matter

How to Foster a Growth Mindset in Math

Hi Friend!

I'm excited about Friday's webinar, and I hope you're excited, too! If you have time, I'd love for you and your students to tackle two Apple Peeling Challenge word problems this week. Ready?

How would you solve the two [Apple Peeling Challenge](#) problems below? Would your students solve them the same way? How many different ways can we solve these problems? Give them a try right now, and keep your solutions handy during the webinar.

Apple Peeling Challenge #1
If it takes 2 minutes to peel 1 apple and 4 minutes to peel 2 apples, how long will it take to peel 10 apples?

Apple Peeling Challenge #2
Sam needs to peel 10 apples for a pie. If he can peel 4 apples in 6 minutes, how long will it take him to peel all 10 apples?

How to Share Your Solutions
If you're willing to share one of your solutions, take a photo of your work that shows how you solved it. Then share your answer with me by email or on Padlet as described below:

- **Reply to this email** and attach your photo along with a short written description of how you solved the problem. If you made any mistakes while solving it, I'd love to know what you did wrong and how you figured out that you'd made an error.
- **If you're familiar with Padlet**, upload your image to this [Apple Peeling Challenge Padlet](#) and add a written description to that post explaining how you solved the problem. Please include your first name in your response. If you'd like to remain anonymous, just make up a name.

Let's Share Ideas on Padlet!

<https://padlet.com/lauracandler/mathmindsetswebinar1>

Open in another browser tab or on a mobile device.



Math Mindsets Webinar - Part I

Use this wall as a place to share ideas, work samples, and links to resources about how to foster a math mindset. This wall is secret, and only those with the link can view it. However, consider the wall to be public because anyone who watches the webinar replay will be able to view it. (If you have technical questions during the webinar, please ask them in the webinar Question Box.)

Laura

It's easy to add to the wall! Just click the plus sign in the lower right corner. Start by writing your first name at the top of the post, and then type a comment, link to a resource, upload an image, etc. Then click outside the box to post it.

Math Mindset Webinar Resources

www.lauracandler.com/webinars/



Teaching Resources
www.lauracandler.com

File Cabinet Strategies My Products Training My Blog

First time here?

Looking for something?
Enter Text Search

Math Problem Solving: Mindsets Matter
Webinar Resources and Freebies Page

Thanks for attending or watching the webinar! I've loaded this page with freebies, games, and resources for helping to foster a mathematical mindset. I'm still working on adding resources to this page, so check back later!

Looking for the Math Mindset Webinar Padlet Wall? [Click here.](#)

.....

Live Webinar Giveaway Details (March 3, 2017)

One lucky webinar attendee will win the **Math Problem Solving Bundle!** To enter, visit my TpT store and leave feedback on one of the webinar freebies or products below, and then fill out this [Google form](#) before midnight EST today (March 3rd). I'll choose a winner sometime tomorrow morning.

- **Math Problem Solving Webinar Handouts (Free)**

Great Resources!

Is it a multiple of 5?

Mystery Number Detective Game


Math Problem Solving Bundle

How to Foster a Growth Mindset

Amazing


Agree or Disagree? (Rate 1 to 5)

1=Strongly Agree to 5=Strongly Disagree

1. Problem solving strategies should be taught before giving students problems to solve. 
2. Drawing and counting on fingers in math should only be encouraged for young children and struggling students.
3. Students should only use calculators in math after they can perform the computations by hand.

Agree or Disagree? (Rate 1 to 5)

1=Strongly Agree to 5=Strongly Disagree

4. Mistakes are only beneficial when we learn from them.
5. Some people were born with a gift for math, and others weren't.
6. The best way to meet the needs of all students is through ability grouping and differentiation. 

My Goals ...

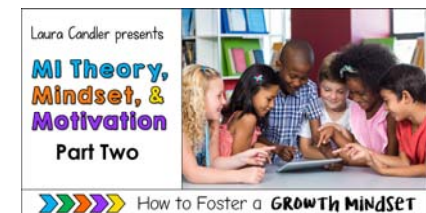
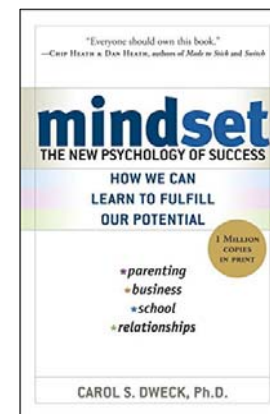
I want you to be so **excited** and **inspired** that you can't wait to take action!



- ➔ Try at least one new strategy next week
- ➔ Begin your math mindset journey by investigating at least one new resource

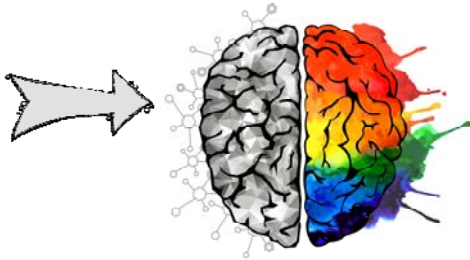
Growth Mindset Overview

Dr. Carol Dweck



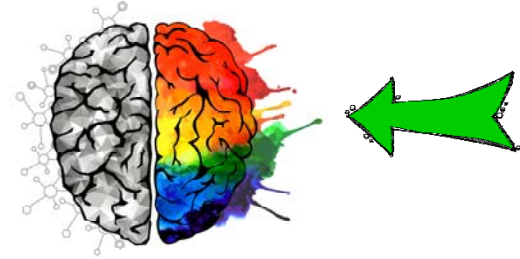
People with a **Fixed Mindset**...

- Aren't willing to take risks, and they avoid tasks that appear to be challenging
- Fear failure because they worry that others will think they aren't smart.

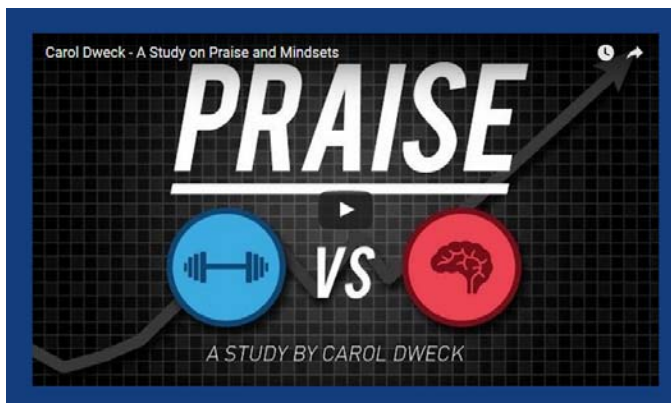


People with a **Growth Mindset**...

- Enjoy taking risks and trying new things; they love to tackle challenges
- Understand that failure is a sign that they are learning and growing; feel confident that they can improve their performance



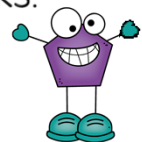
What's wrong with praise?



Why isn't it **SMART** to praise kids for being smart?

Praising students for being smart contributes to a fixed mindset and discourages kids from taking risks.

They worry that others won't think they're smart if they appear to be struggling or have to ask for help.



Harmful or Helpful Praise?

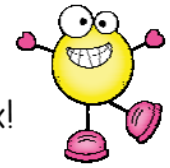
- Wow! You're so smart!
- You will rock at this!
- What are you worried about!
This will be so easy for you!
- Fantastic! You made a perfect score
and you weren't even trying!



What do kids hear as the "hidden" message in this type of praise?

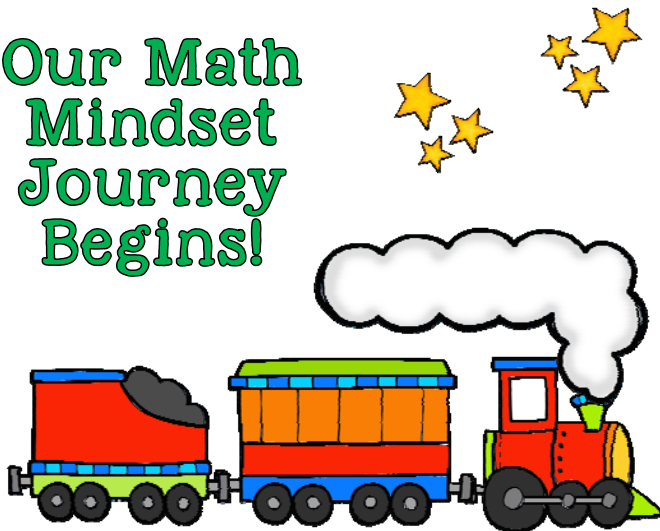
Empowering Praise

- You're thinking outside the box!
- I like how you tried different ways to solve that problem.
- I can tell you worked hard on this!
- I'm proud of how you persevered and didn't give up.



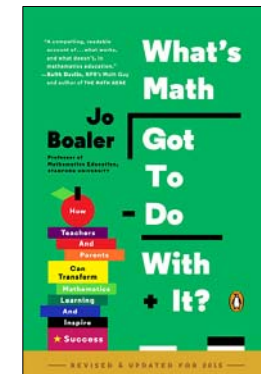
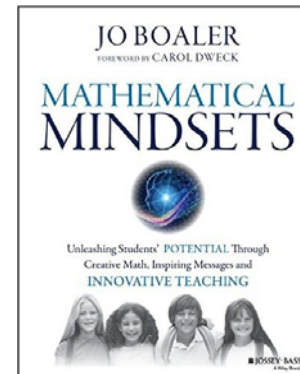
What messages are we conveying with this type of praise?

Our Math Mindset Journey Begins!



Mathematical Mindsets

Dr. Jo Boaler



My Math Mindset Journey

While teaching....

- Gifted education program
- Kagan cooperative learning author & consultant
- NCPIMS* Lead Teacher



In recent years...

- Carol Dweck's work with growth mindset
- Jo Boaler's work with mathematical mindsets



*NC Partnership for Improving Mathematics and Science



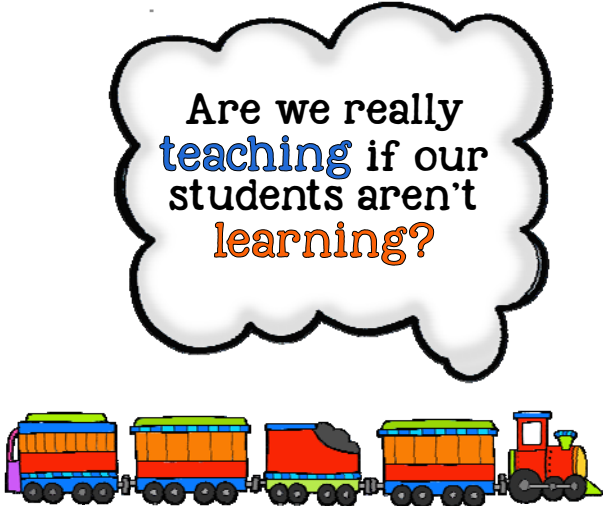
Cartoon Source: Joyce Hodges, NCPIMS Program Facilitator - Artwork Credit: Wendy Candler



Cartoon Source: Joyce Hodges, NCPIMS Program Facilitator - Artwork Credit: Wendy Candler



Cartoon Source: Joyce Hodges, NCPIMS Program Facilitator - Artwork Credit: Wendy Candler



Are we really **teaching** if our students aren't **learning**?




Let's Bust Some Math Myths!

1. Strategy Instruction


Problem solving strategies should be taught **MYTH!** before giving students problems to solve.

FACT: Students should solve problems first, and discussions about strategies should take place later.

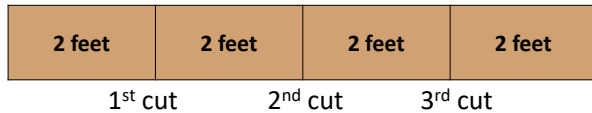


2. Visual Math

Drawing and counting on fingers in math should only be encouraged with young children and struggling students.



Ramon needs to cut an 8-foot board into 2-foot pieces to make shelves. It takes him 30 seconds to make each cut. How long will it take him to make all of the necessary cuts?



3 cuts x 30 seconds = 90 seconds
or 1.5 minutes

2. Visual Math

Drawing and counting on fingers should only be used with young children and struggling students.

MYTH!

FACT:



Brain research supports the importance of visual math and finger computation at all levels.

2. Visual Math

“When students learn through visual approaches, mathematics changes for them, and they are given access to deep and new understandings.”

~ Jo Boaler



3. Calculator Use

Students should only use calculators after they can perform the computations by hand.



3. Calculator Use

Students should only use calculators in math after they perform the computations by hand.

MYTH!

FACT:

When used effectively to support problem solving, calculators enable students to engage with cognitively rich problems that address exploration of patterns and relationships. (NCTM)

4. Importance of Mistakes

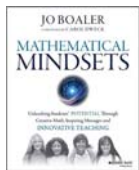
Mistakes are only beneficial when we learn from them.

MYTH!

FACT:

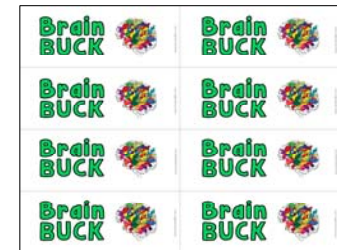
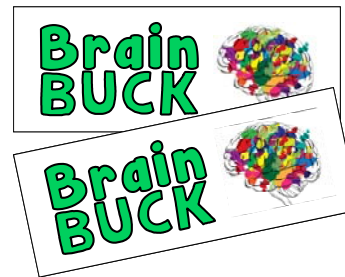
Each time we make a mistake, a synopsis fires and our brains grow, even when we aren't aware that we made a mistake!

Activity: Changing the Way Students View Mistakes



Activity described on page 15

Recognize Growth Mindset Attitude with Brain Bucks



Brain Bucks can only be earned by words and/or actions that demonstrate a growth mindset.

5. Math Giftedness



Some people were born with a gift for math, and others weren't.



5. Math Giftedness



Some people were born with a gift for math, and others weren't.

MYTH!

FACT:

Performance in math has more to do with one's prior experiences than with the presence or absence of an innate math gift.

6. Ability Grouping and Differentiating Instruction

The best way to meet the needs of all students is through ability grouping and differentiating instruction.



6. Ability Grouping and Differentiating Instruction

The best way to meet the needs of all students is through ability grouping and differentiating instruction.

MYTH!

FACT:

Ability grouping sends the message that some students aren't capable of achieving math at high levels, which promotes a fixed mindset.



We ALL need a math mindset adjustment!

**Students, Teachers, Parents
Administrators, ... Everyone!**

What is math?

What does it take to be successful in math?



<p>Math Survey</p> <p>What is math?</p> <p>What does it take to succeed in math?</p>	<p>Math Survey</p> <p>What is math?</p> <p>What does it take to succeed in math?</p>
<p>Math Survey</p> <p>What is math?</p> <p>What does it take to succeed in math?</p>	<p>Math Survey</p> <p>What is math?</p> <p>What does it take to succeed in math?</p>

What is math?

Numbers, rules, formulas, computation, etc.



What does it take to be successful in math?

Performing well on speed drills, answering questions correctly, following the rules, not making mistakes, memorizing formulas, doing all your homework, etc.

What is math?

Using numbers and symbols, Finding patterns, connecting ideas, analyzing data...



What does it take to be successful in math?

Being skilled in ... asking questions, working collaboratively, analyzing data, identifying trends, solving complex problems, seeing connections, finding patterns, etc.

Implications for Instruction: Rich Math Tasks



Whoever is **doing the talking**
is doing the **learning**. ~Anonymous



Getting Started with Rich Math Tasks




We're on track
for math
success!

What are Rich Math Tasks?

- Open-ended with multiple methods and pathways to the solution
- Actively engages students in critical thinking, analysis, and questioning
- Talking and sharing ideas is encouraged; students explain and justify solutions.
- Problems can be represented visually or with concrete objects
- Strategies are discussed AFTER the problem is solved.

Three Block Towers



The screenshot shows a Youcubed page for a task called "3 Block Towers". It features a stack of three blocks (red, yellow, blue) and asks: "How many different towers can you make using one red, one blue and one yellow block?" and "How many can you make if you have a green block as well?". The page is from nrich.maths.org.

Always, Sometimes, or Never?


Are the following statements always true, sometimes true or never true?

A hexagon has six equal length sides	Triangles have a line of symmetry
Squares have two diagonals that meet at right angles	Cutting a corner off a square makes a pentagon
The base of a pyramid is a square	A cuboid has two square faces

Source: <http://nrich.maths.org/12673>


Where Can You Find Rich Math Tasks?

- Websites like Youcubed.org, Nrich.org, NC Math Wiki, etc.
- Print or digital books
- Discussion forums & Facebook groups
- Create your own! (You can transform math word problems into math tasks.)



Apple Peeling Challenge #1

If it takes 2 minutes to peel 1 apple and 4 minutes to peel 2 apples, how long will it take to peel 10 apples?



Student #1: $2 \times 10 = 20$ so it takes 20 minutes.

Student #2: It takes 2 minutes per apple so I drew 10 apples and counted by 2's and the answer is 20 minutes.

2

4

6

8

10

12

14

16

18

20

Apple Peeling Challenge #2



Sam needs to peel 10 apples for a pie.
If he can peel 4 apples in 6 minutes, how long will it take him to peel all 10 apples?

1	2	3	4	5	6	7	8
6 minutes				6 minutes			
9	10	X	X	$6 + 6 + 3 = 15$			
3 minutes							

Apple Peeling Challenge #2



Sam needs to peel 10 apples for a pie.
If he can peel 4 apples in 6 minutes, how long will it take him to peel all 10 apples?

6 minutes			
1	2	3	4
1½	1½	1½	1½

$1\frac{1}{2}$ minutes x 10 apples = 15 minutes

1 min x 10 apples = 10 minutes

$\frac{1}{2}$ of 10 = 5 minutes

$10 + 5 = 15$ min

More Apple Peeling Problems



- Crystal peeled one apple in 2 minutes, the second apple took her $2\frac{1}{2}$ minutes and the third took her 3 minutes. If she continues at this rate, how long will it take her to peel the fifth apple?
- Xavier can peel a small apple in 2 minutes, but it takes him 3 minutes to peel a large apple. How long will it take him to peel 4 small apples and 2 large ones?

Apple Pie Peeling Story Challenge



Google slide presentation and story by Rebecca Pilver.
Shared in Math Mindset Connections Facebook group.

Apple Pie Peeling Story Challenge



If it takes me 2 minutes to peel 1 apple and 4 minutes to peel 2 apples, how long will it take me to peel 10 apples?

Apple Pie Peeling Story Challenge



I can peel 4 apples in 6 minutes using the apple peeling machine. How long will it take me to peel 10 apples?

Challenge Yourself! (Extension Activities)

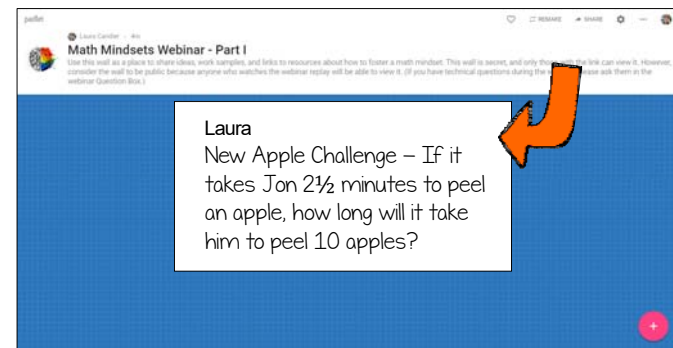
- Write several sentences to explain how you solved the problem.
- Explain how you could solve the problem using a different strategy.
- If you made a mistake, explain what you did wrong and how you corrected it.
- Change the numbers in the problem to create a new problem and solve it.
- Create a similar, but more challenging, problem and solve it.



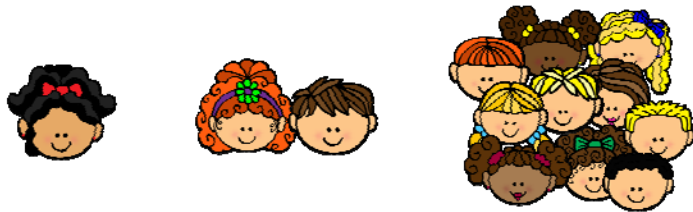
You Try It! Create a New Apple Challenge!

If it takes 2 minutes to peel 1 apple and 4 minutes to peel 2 apples, how long will it take to peel 10 apples?

<https://padlet.com/lauracandler/mathmindsetswebinar1>



How to Facilitate Math Task Engagement

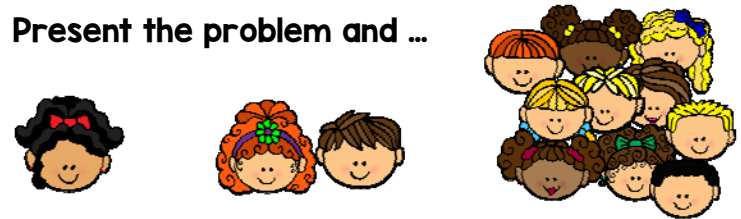


IPC* Problem Solving Step by Step

*Individuals- Partners-Class

IPC Problem Solving

Present the problem and ...



1. Provide time for individuals to work alone.
2. Partners share and discuss solutions.
3. Facilitate a class discussion to share ways of solving the task and to reflect on the problem-solving process.



Apple Peeling Challenge

If it takes 2 minutes to peel 1 apple and 4 minutes to peel 2 apples, how long will it take to peel 10 apples?



Individuals -> Partners -> Class



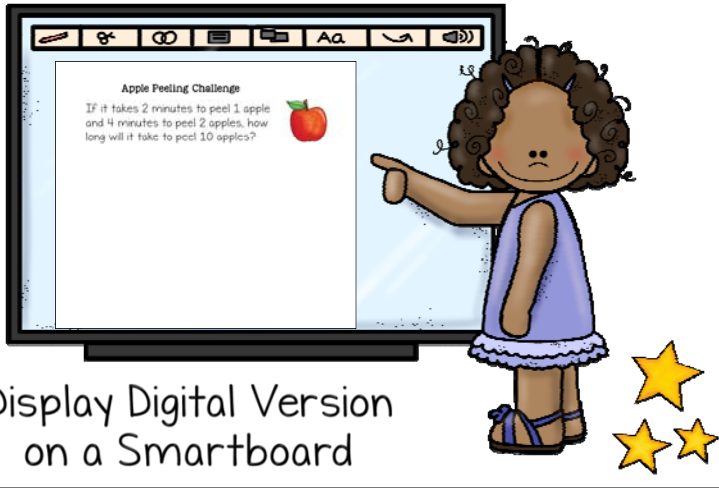
Options for Presenting the Task

Individual Task Slips for Math Journals

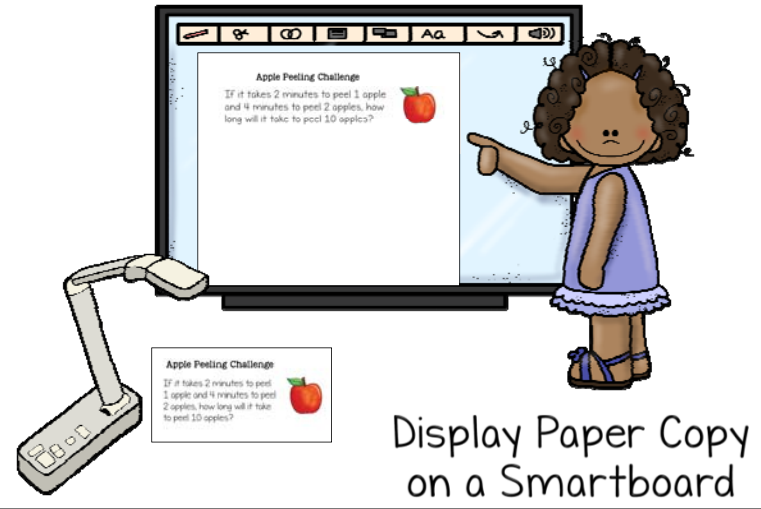


<p>Apple Peeling Challenge</p> <p>If it takes 2 minutes to peel 1 apple and 4 minutes to peel 2 apples, how long will it take to peel 10 apples?</p>	
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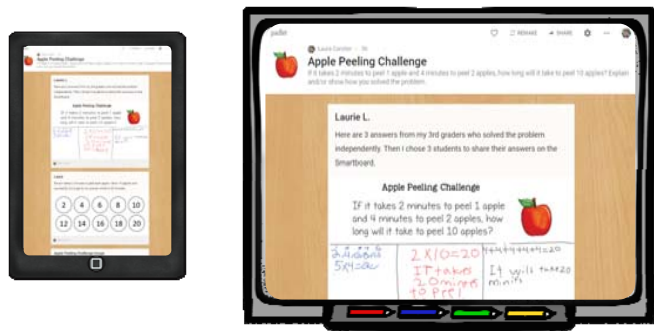
Options for Presenting the Task



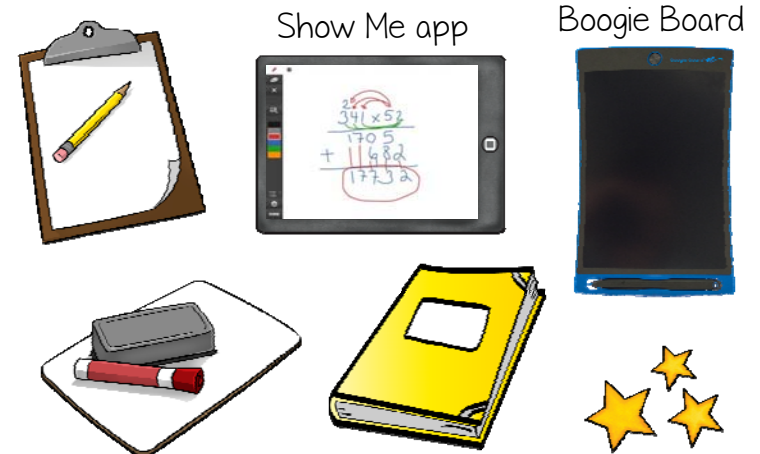
Options for Presenting the Task



Options for Presenting the Task



Options for Students to Record Work



IPC - Independent Phase Benefits



- Provides time for all students to read and think about the problem carefully before choosing a strategy
- Prevents the problem of students relying on others to do their thinking for them
- Allows teachers to informally assess each student's performance



IPC - Independent Phase

Management Tips



- Provide access to math tools (measuring devices, base 10 blocks, calculators, pattern blocks, etc.)
- Require students to show solutions visually
- Resist the urge to rescue students who are having trouble getting started
- Begin partner work stage when MOST students are finished



IPC - Partner Phase Benefits



- Students have to explain their strategies and defend their solutions
- Helps students feel more confident about their solutions prior to the class discussion
- Fosters social skill development




IPC - Partner Phase Management Tips



- Assign partners instead of letting students choose; change partners frequently
- Give specific directions about how students should share their work
- If students realize they made an error, encourage them to correct it on the spot







Share-Share-Compare

Partner Math Talk Strategy

1. Partners sit side-by-side and place their work face down in front of them.
2. Partner A shows/explains his or her solution; Partner B listens and asks questions.




A – Shows work; explains strategy B – Listens; asks questions



Share-Share-Compare


Partner Math Talk Strategy

3. Partner B shows/explains his or her solution; Partner A listens and asks questions.
4. Both partners compare their work, discuss strategies, talk over any mistakes, and prepare to share during the class meeting.




A – Listens; asks questions B – Shares work; explains strategy

IPC – Class Phase Benefits



- Students are exposed to a wide variety of strategies.
- Teacher can use this time to correct any misunderstandings or misconceptions.
- Students learn to appreciate creative thinking in their classmates.
- Fosters risk-taking in a safe environment; chance to reaffirm that mistakes make our brains grow.



IPC – Class Phase Management Tips



- Invite volunteers to display their work and explain how they solved the problem.
- Don't reveal the answer until the end.
- Ask, "How many different ways can we solve this problem?" (Tally them.)
- Teach students how to be polite "skeptics," asking for clarification, questioning faulty reasoning or errors in computation.

IPC - Class Phase

More Tips






- Recognize creative thinking, persistence, and unusual approaches to the task.
- Invite students to share their mistakes, and celebrate those mistakes as opportunities for our brains to grow.
- Encourage “what if” questions and other extensions of the original task.

Problem-Solving Resources to Explore



Youcubed Website

youcubed
at Stanford University

Brain Science | Work of Math | Ideas & Tasks | Courses | Parents | Students | Resources | Community

Inspiring ALL Math Learners



More for Students >

Upcoming Events
Upcoming Events & Recent Talks
View Events

Online Course for Teachers
NEW Group Discounts Available
View Course

New Book - Mathematical Mindsets
Book Seller
View Book

Building a Mathematical Mindset Community

Building a Mathematical Mindset Community	
<p>Teachers and students believe anyone can learn math at HIGH LEVELS.</p> <ul style="list-style-type: none"> Students are not treated as “maths people” All students are offered high-level work “How do you do that?” “Where do you get that?” Praise effort and persistence, not the person Students model and learn from each other 	<p>Communication and reasoning are valued.</p> <ul style="list-style-type: none"> Students work in groups sharing ideas and results Students write notes in journals, lessons or books Students connect that ideas to their peers’ ideas, methods, and representations Teachers create opportunities for students to see connections Students work hard to solve their own problems
<p>The math is VISUAL.</p> <ul style="list-style-type: none"> Teachers use students to draw their ideas Tasks are posed with a visual component Students gesture to describe their thinking 	<p>The math is OPEN.</p> <ul style="list-style-type: none"> Students are invited to see math differently Students are encouraged to use and share different ideas, methods, and perspectives Students work hard to understand Students work hard to understand “the method,” “the idea”
<p>The environment is filled with science and curiosity.</p> <ul style="list-style-type: none"> Students extend their work and investigate Teacher makes curiosity when posing tasks Students see math as an investigation Students have fun and pose questions Students work together to solve problems “The more thought of it the better” 	<p>The classroom is a safe place to share ideas.</p> <ul style="list-style-type: none"> Students share ideas even when they are wrong There are no “right” or “wrong” answers Students feel comfortable when they get stuck or confused Teachers and students work together when stuck Teachers use low-stakes questioning Students disagree with each other and disagree
<p>Recommendations for Task/Lesson Design</p> <p>Open the task to encourage multiple methods, pathways and representations.</p> <p>Pose a problem before teaching the method.</p> <p>Design a task that allows all learners to contribute to the learning and have room for extension.</p> <p>Make opportunities for students to authentically share their thinking with peers.</p> <p>Add a visual component</p> <p>Add the requirement to convince a skeptical peer.</p>	<p>Powerful Questions to develop a deep level of understanding</p> <p>How do you see that idea?</p> <p>Why does that answer make sense?</p> <p>Why does that method work?</p> <p>How can that idea be represented in different ways?</p> <p>Can you prove it?</p> <p>Can you prove it visually?</p> <p>Can you justify your thinking?</p> <p>Can you predict what would happen if...?</p> <p>Did you make any interesting mistakes?</p>

9 Math Mindset Findings

youcubed Brain Science - Week of Math - Ideas & Tasks - Courses - Parents - **Students** - Resources - Community - Q

These **9 findings** have very strong implications for mathematics classrooms. If acted upon they could **unleash the potential of millions** more students.

Anyone Can Learn to High Levels	Mistakes Grow Your Brain	When You Believe In Yourself Your Brain Operates Differently
Ideas of "Giftedness" Hurt Students	Speed and Time Pressure Block Working Memory	Visual Math Improves Math Performance
When You Believe In Your Students They Do Better	Parents' Beliefs about Math Change Their Children's Achievement	Aligning Assessment to Brain Science

Nrichmaths.org

NRICH enriching mathematics

Topics Go

Student Guide **Teacher Guide**

Student Homes *Teacher Homes*

Lower Primary Early Years
 Upper Primary Primary
 Lower Secondary Secondary
 Upper Secondary

Welcome to the home of rich mathematics!

"The essence of mathematics lies in its freedom."
Georg Cantor

Rich mathematics? What can they mean?

Which one's for me?

Finding your home on NRICH

We have homes for students of different ages, and we have homes for teachers of different age groups. If you are a parent or carer, we suggest that you start with the Teacher Guide.

In your home you'll find the latest resources we have added to our collections, and we'll keep you up to date with open problems and events.

NC Math Wiki (Elementary)

Public Schools of North Carolina
State Board of Education
Department of Public Instruction

Elementary

K Kindergarten	1 First Grade	2 Second Grade
3 Third Grade	4 Fourth Grade	5 Fifth Grade

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Announcements
Contact Us

NC Math SCOS
K-12 Standards Resources
Elementary Resources
Middle School Resources
High School Resources
K-12 Resources

PD and Webinars
Recognitions

Math Pretest, Posttest, and Scoring Guides

Problem Solving Assessments

Laura Candler

American Version

Free!

Pre and Post

Assessment Results

Problem Solving Pretest 1

Problem Solving Posttest 1

Problem Solving Pretest 2

Problem Solving Posttest 2

Problem Solving Pretest 3

Problem Solving Posttest 3

Problem Solving Pretest 4

Problem Solving Posttest 4

Problem Solving Pretest 5

Problem Solving Posttest 5

Problem Solving Pretest 6

Problem Solving Posttest 6

Problem Solving Pretest 7

Problem Solving Posttest 7

Problem Solving Pretest 8

Problem Solving Posttest 8

Problem Solving Pretest 9

Problem Solving Posttest 9

Problem Solving Pretest 10

Problem Solving Posttest 10

Free!

Daily Math Puzzlers

daily Math Puzzlers Name _____

Try to solve each problem *on your own*. Show your work using numbers, pictures, words or symbols. We will discuss the problems together and correct them as a class.

1. Sally has 210 jelly beans. Tom has 80 jelly beans, and Douglas has 50. How many more jelly beans does Douglas have than Sally?

2. On Monday Bradford picked 5 tomatoes from his garden. Each day that week he picked 2 more than the day before. How many did he pick on Thursday?

Answers: _____

3. Mary can get 10 scoops of ice cream from one carton. She plans to serve 2 scoops to each person at her party. How many people will she need to buy 10 people?

4. Donald bought a toy car for \$4.37. He gave the clerk a \$5 bill and received 7 coins back in change. What were the 7 coins?

Answers: _____

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Math Problem Solving Bundle
Includes Math Mindset WEBINAR

GROWTH MINDSET

Webinar Added to Daily Math Puzzlers

The Math Problem Solving Bundle and each level (A–D) include the Math Problem Solving: Mindsets Matter PD Webinar Pack!

Teaching Resources
Created by Laura Candler

Math Mindset Challenges

Math Mindset Challenges
Editable Multi-step Word Problems

Grades 3-5
Laura Candler

Coming Soon!

Apple Peeling Challenge

If it takes 2 minutes and 4 minutes to peel 1 apple and 4 minutes to peel 2 apples, how long will it take to peel 4 apples?

Math Mindset Challenge # Name _____
Date _____

Challenge Yourself!

After solving the problem, challenge yourself by doing one of the following:

- Write several sentences to explain how you solved the problem.
- Explain how you could solve the problem using a different strategy.
- If you made a mistake, explain what you did wrong and how you corrected it.
- Change the numbers in the problem to create a new problem and solve it.
- Create a similar, but more challenging, problem and solve it.

Future Train Stops

More math mindset topics to explore...

- Cooperative learning team strategies
- Low-floor, high-ceiling rich math tasks
- Tracking, ability grouping, and equity issues
- Rethinking homework
- Assessment for a growth mindset

Math Mindset Connections Facebook Group



Check the freebies page for details about how to sign up.

My Goals ...



I want you to be so **excited** and **inspired** that you can't wait to take action!

- ➔ Try at least one new strategy next week
- ➔ Begin your math mindset journey by investigating at least one new resource

Math Mindset Webinar Notes



Page 3 of the webinar note—taking outline

Math Mindset Webinar Freebies

www.lauracandler.com/webinars/problemsolving

