# Resiliency, Creativity, and Adaptations: Telling Our Stories

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# Acknowledgements

# Resiliency

"You never know how strong you are until being strong is your only choice."

– Bob Marley

# Do you know this teacher?

- Laughs and loves unconditionally
- Fatigued and full of positive energy
- Gives their all but is asked to give more
- Outwardly smiles but inwardly conflicted
- Works tirelessly but wonders where the energy is coming from
- Listens to others but are not heard
- Takes the "punches" and keeps coming
- Rarely complains but feels "some type of way."

# What is resilience?

- The ability to work through challenges
- The capability to persevere
- The skill of being able to have impact
- Being able to minimalize the impact of difficulties

# A resilient person has…

- A person to talk to about important things, feelings, or problem solving
- A belief and confidence that things will be okay
- A willingness to try new and different things
- A willingness to achieve goals and to do well
- A belief that what they do and who they are makes a difference
- A good sense of humor
- A desire to make plans and follow through
- A willingness to do for others

# Personal Resiliency Builders

- Relationships
- Service
- Humor
- Inner Direction
- Perceptiveness
- Independence
- Optimism for the future
- Flexibility
- Love of Learning

- Self Motivation
- Competence
- Self Worth
- Spirituality
- Perseverance
- Creativity
- Focus on Strengths, not Weaknesses
- Patience

# Why is resilience important?

- Challenges and trauma occur in life – no one is exempt from facing some adversity

- We need to be able to face and overcome challenges

- It is important that people manage challenges

- Resilience is the ability to overcome and triumph

# **Sources of Resiliency**

- According to The International Resilience Project, resilience comes from features labeled as:
  - "I Have"
  - "I Am"
  - "I Can"

# I Have

- External supports and resources
- Before a person can develop internal means of resilience, they relay on outside sources

# I Have

- The resilient person has:
  - People whom they trust
  - People who set limits and boundaries
  - People who will assist them if they need of help/guidance
  - People who will guide them and lead by a positive example

# I Am

- Personal strengths that are internal
- Incorporates beliefs, attitudes, and feelings

# I Am

- The resilient person:
  - Is sure that everything will be okay
  - Take responsibility for their actions
  - Show care and love to others
  - Has respect for both themselves and others

# I Can

- These factors incorporate social and interpersonal skills
- These skills are learned by interacting with others and from those who teach them

# I Can

- The resilient person:
  - Talks to others when they feel scared or bothered by something
  - Problem solve
  - Finds help when needed
  - Determines when it is a good time to stop and talk with someone or to act
  - Has self control when they feel like doing something that isn't right

# Resilience

Many teachers are challenged to think differently about the teaching and learning of mathematics. Finding the courage and energy to push through the challenges despite how hard it is, requires resilience.
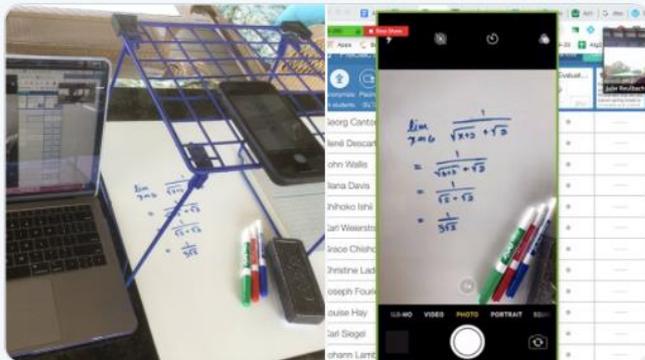
# Resilience

Resilience can be view as a multi-dimensional process of positive adaptation in which an individual uses resources available in any given setting to further development of knowledge.

# Twelve Habits to Strengthen Emotional Resilience

1.  Know Yourself: Take time to understand and reflect on your emotions, identities, core values, and personality.

2.  Understand Emotions: How do your emotions influence our thinking (and vice versa)?

3.  Tell Empowering Stories: What empowering stories will we tell about this moment in time?

4.  Build Community: Where is my community? What am I actively doing to learn with and from my community?

5.  Be Here Now: How am I present in the moment, without judgment? How do I show up fully present in any given moment?

6.  Take Care of Yourself: What am I doing for self-care? How do I center myself?

Aguilar, E. (2018). *Onward: Cultivating emotional resilience in educators*. John Wiley & Sons.

# Twelve habits to Strengthen Emotional Resilience

7. Focus on the Bright Spots: What am I doing now that I will continue to do when things return to "normal?"

8. Cultivate Compassion: What are the differences between pity, empathy, sympathy, and compassion? How do I have compassion for myself and others?

9. Be a learner: What have you learned, or what are you learning in the current context about teaching mathematics?

10. Play + Create: Play and creativity serve as de-stressors. How are you incorporating play and creativity as a regular part of your life?

11. Ride the Wave of Change: What strategies are you using to ride this wave?

12. Celebrate + Appreciate: How are you finding ways to engage in daily moments of gratitude?

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# Types of Presences

a. **Cognitive presence:** Students and teacher interacting with the content

b. **Social presence:** Students interacting with each other and the teacher

c. **Teaching presence:** Teacher interactions with students and content (Garrison & Cleveland-Innes, 2005).

Garrison, D. R., & Cleveland-Innes, M. (2005). Facilitating cognitive presence in online learning: Interaction is not enough (pdf, 69k). *American Journal of Distance Education 19*(3), 133-148.

# Cognitive Presence

- Cognitive presence reflects the quality and quantity of critical thinking, collaborative problem-solving, and construction of meaning occurring in student-to-student and student-to-teacher interactions.

- Cognitive presence is based on the iterative relationship between personal understanding and shared dialogue.
  - Cognitive presence provides a means to access the acquisition of knowledge.

# Cognitive Presence

**Cognitive presence:** Students and teacher interacting with the content

1. Tasks, problems, or questions that can serve as a triggering event for exploration and understanding.

2. Students (and teachers) explore the available information and alternatives to make sense of the problem and connect this new information to previously learned information.

3. Students take action to solve the problem or answer the question based on their newly integrated understanding.

# Orange Problem
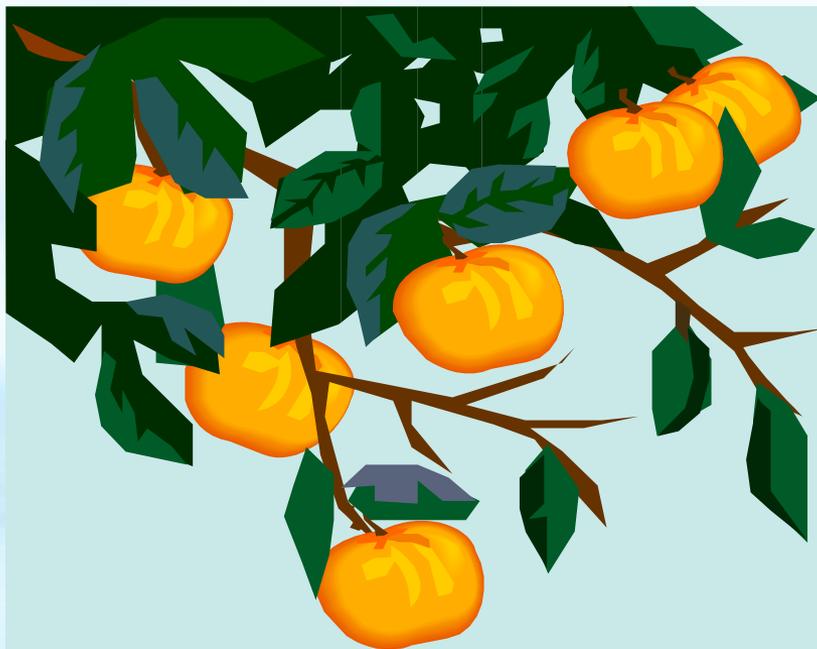
# Orange Problem

A grocer was asked how many oranges he had sold that day. He replied:

- "My first customer said I'll buy half your oranges and half an orange more."

- He then said, "My second customer said the same thing...I'll buy half your oranges and half an orange more."

- Then he stated, "My third customers said the same thing... I'll buy half your oranges and half an orange more."

When all three orders were filled he was sold out and did not have to cut a single orange all day." How many oranges had the grocer sold in all?

# Orange Problem: What do you Notice and Wonder?

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# Orange Problem: Think Time & Work

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When all three orders were filled he was sold out and did not have to cut a single orange all day.

How many oranges had the grocer sold in all?

# Rough Draft Talk

- Explicitly tagging initial discussions as rough drafts:
  - encourages in-progress thinking
  - reduces the threat of being right or wrong
  - promotes learning through refining ideas
  - expands on what counts as a valuable contribution.
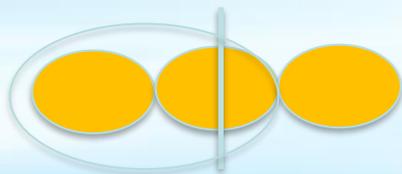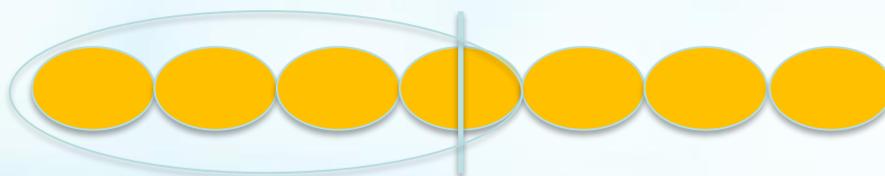
# Share Out: Rough Draft Talk

# Orange Problem

- "There has to be an odd number of oranges."

- "The last customer will get one orange."

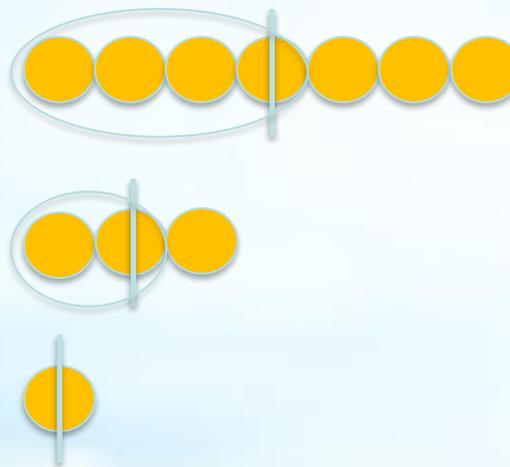- "If the last person gets one orange, then it is times two plus one."
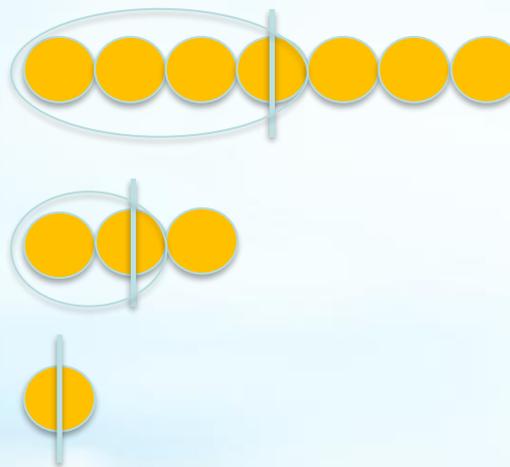
# Orange Problem

# Orange Problem

| Number of Customers | Number of Oranges Sold |
|:---:|:---:|
| 1 | 1 |
| 2 | 3 |
| 3 | 7 |
| 4 | |
| 5 | |
| 10 | |
| n | |

Suppose there were 5 customers, 10 customers, or n customers?

# Orange Problem

| Number of Customers | Number of Oranges Sold | Oranges per customer |
|---|---|---|
| 1 | 1 | 1 |
| 2 | 3 | $1 + 2$ |
| 3 | 7 | $1 + 2 + 4$ |
| 4 | | |
| 5 | | |
| 10 | | |
| n | | |

# Orange Problem

| Number of Customers | Number of Oranges Sold | Oranges per Customer |
|---|---|---|
| 1 | 1 | 1 |
| 2 | 3 | 1 + 2 |
| 3 | 7 | 1 + 2 + 4 |
| 4 | 15 | 1 + 2 + 4 + 8 |
| 5 | 31 | 1 + 2 + 4 + 8 + 16 |
| 10 | | |
| n | | |

# Orange Problem

| Number of Customers | Number of Oranges Sold | Oranges per Customer | Exploring Patterns |
|---|---|---|---|
| 1 | 1 | 1 | |
| 2 | 3 | 1 + 2 | |
| 3 | 7 | 1 + 2 + 4 | |
| 4 | 15 | 1 + 2 + 4 + 8 | |
| 5 | 31 | 1 + 2 + 4 + 8 + 16 | |
| 10 | | | |
| n | | $2^n - 1$ | |

# Social Presence

Social presence is the ability to project their personal characteristics into the community and present themselves as real people.

# **Social Presence**

Social presence creates the community and sense of connectivity. It can be positioned as an equity issue.

- How are you and your students present in online/remote spaces?

- What tools are accessible to be present in these spaces?

- How are you and your students supported in presenting their whole selves in these spaces?

# Teaching Presence

Teaching presence is the design, facilitation, and direction of cognitive and social presences to realize meaningful and educationally worthwhile learning outcome.
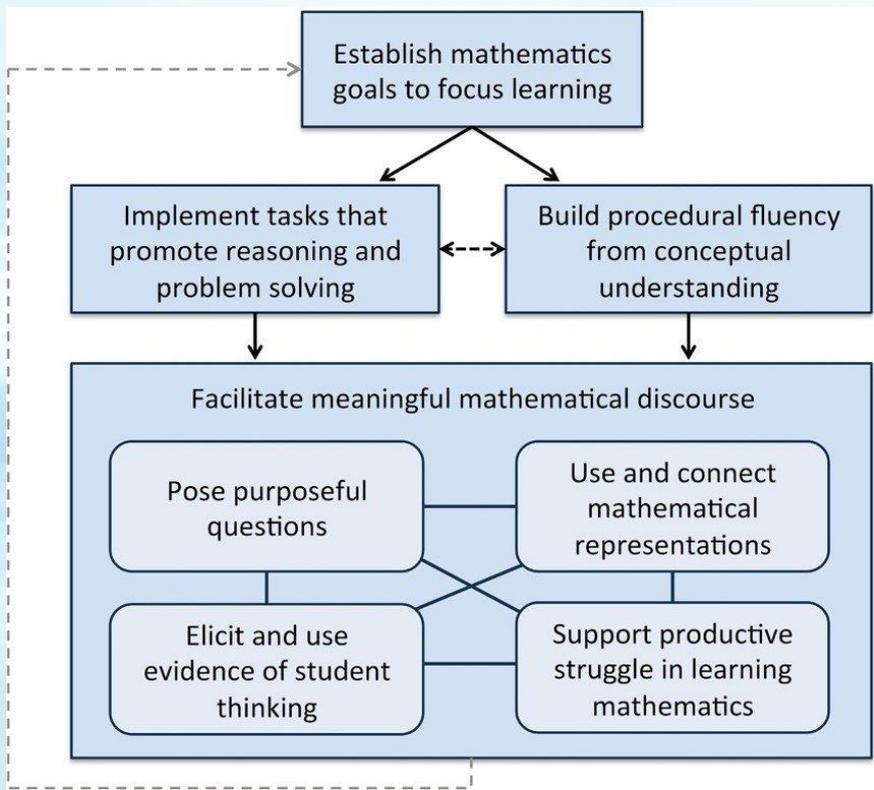
# Teaching Presence



The Mathematics Teaching Framework is where we can design and facilitate the intersections between cognitive and social presences.

– Cognitive Presence
– Social Presence

# Questions, Comments, & Thoughts