

Yes, you can do



Growth Mindsets

Participant's Workbook





**West Virginia Board of Education
2019-2020**

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Goals

- » Understand growth mindset.
- » Learn strategies to promote a growth mindset in students.
- » Explore resources for use in classrooms.

Agenda

<i>Focus</i>	<i>Agenda Items</i>
Launch	<ul style="list-style-type: none">» Welcome» Goals» Agenda» Mindset K-W-L
Explore	<ul style="list-style-type: none">» Jo Boaler mindset video» Positive Norms in Math Class» Exploring youcubed.org
Summarize	<ul style="list-style-type: none">» Reflection» Revisiting the K-W-L

Mindset K-W-L

**What do you
already KNOW?**

**What do you
WANT to know?**

**What have you
LEARNED?**

Jo Boaler Mindset Video – Notes

Positive Mathematics Norm

Negative Mathematics Norm at Odds with the Positive Norm

Main Idea of Positive Mathematics Norm

Supporting Detail 1

Supporting Detail 2

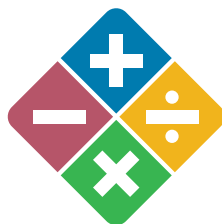
*One Way to Implement
in the Classroom*

*Second Way to Implement
in the Classroom*

*Third Way to Implement
in the Classroom*

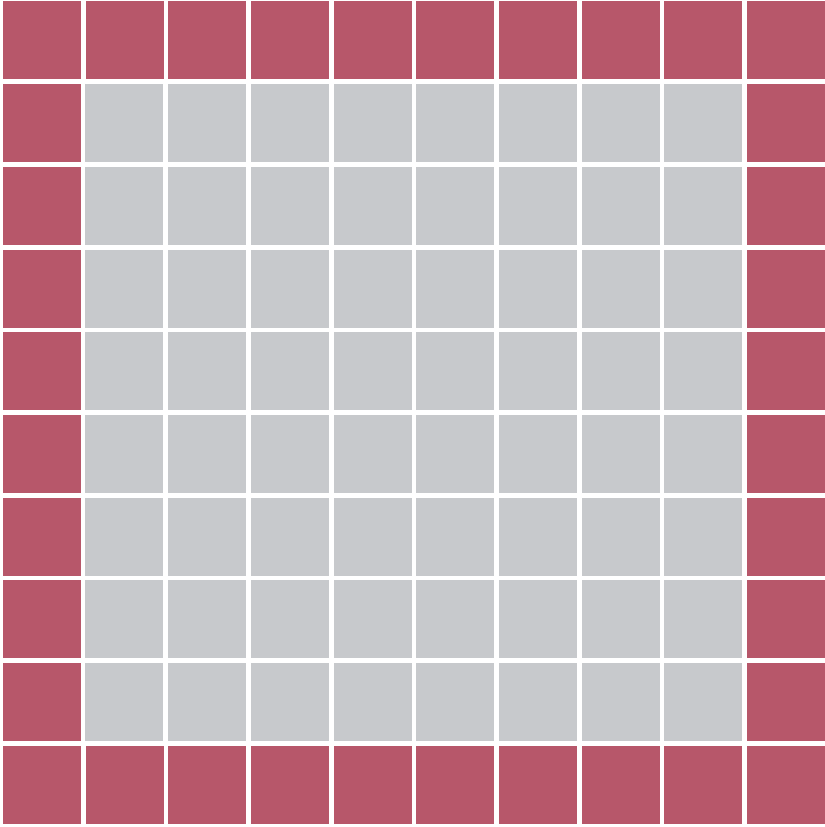
Positive Norms in Math Class

- » **Everyone can learn math to the highest levels.** Encourage students to believe in themselves. There is no such thing as a “math” person. Everyone can reach the highest levels they want to, with hard work.
- » **Mistakes are valuable.** Mistakes grow your brain! It is good to struggle and make mistakes.
- » **Questions are really important.** Always ask questions, always answer questions. Ask yourself: why does that make sense?
- » **Math is about creativity and making sense.** Math is a very creative subject that is, at its core, about visualizing patterns and creating solution paths that others can see, discuss, and critique.
- » **Math is about connections and communicating.**
Math is a connected subject and a form of communication. Represent math in different forms, e.g. words, a picture, a graph, an equation, and link them. Color code!
- » **Depth is much more important than speed.**
Top mathematicians, such as Laurent Schwartz, think slowly and deeply.
- » **Math class is about learning not performing.** Math is a growth subject. It takes time to learn and is all about effort.



— Jo Boaler

Making Mathematical Connections



Four 4's

Can you find every number between 1 and 20 using only four 4's and any operation?

Notes



W. Clayton Burch
West Virginia Superintendent of Schools