

# Number Talks Early Stage One

Term 2, 2019

Purpose	Targeted Discussion Structure	
<p>In Kindergarten, we are using Number Talks to develop student's number sense. Our purpose, is for students to grow in their understanding of how numbers and number patterns work, what they mean, how they relate to one another and to the world around us. Each student's role is to work on explaining their own thinking clearly, and to listen to other's explanations as well.</p>	Compare and Connect	To compare similarities and differences among strategies
	Why? Let's Justify	To generate justifications for why a particular strategy works
	What's Best and Why?	To determine most efficient solution strategy
	Define and Clarify	To define and discuss appropriate ways to use mathematical models, tools, vocabulary, or notion
	Troubleshoot and Revise	To reason through which strategy produces a correct solution or figure out where a strategy went awry.

The key components of successful Number Talks:	Dialogic talk
<p>✓ <i>A safe and accepting classroom environment and mathematical community, where incorrect answers are valued and are used as a basis for mathematical reasoning.</i></p> <ol style="list-style-type: none"> <li>1. Teacher provides the Number Talk.</li> <li>2. Teacher provides students opportunity to work out mentally what they see.</li> <li>3. Students show a visual cue when they are ready with a solution. Students signal if they have solved it in more than one way too. (Quiet form of acknowledgement allows time for students to think, while the process continues to challenge those that are already have an answer)</li> <li>4. Students share strategies and justifications with peers (turn and talk).</li> <li>5. Teacher calls for answers. S/he collects all answers- correct and incorrect and records answers.</li> </ol>	<p>"What does this remind you of?"            "What do you see?"            "How do you see it?"            "Why did you choose to do it that way?"            "Can you add to that?"            "How could you solve this using our focus strategy?"            "What other ways could you solve this?"            "What other ways can we show this?"            "Would someone like to add to this?"            "Do you agree?"            "Do you disagree?"</p>

Resources
<ol style="list-style-type: none"> <li>1. Number talk for the day- (low floor high ceiling)</li> <li>2. Number talks hand signals posters</li> <li>3. Butchers paper or whiteboard for recording</li> </ol>



I AM READY AND THINKING



I HAVE THE ANSWER



I HAVE MULTIPLE STRATEGIES



I AGREE

## Possible Number Talk Closing Scenarios

**Scenario 1:** Most students get a right answer, but with varying strategies, at least some are efficient...

**Goal:** Exposure to multiple ways of thinking, particularly nudging students with less efficient thinking to more efficient

**Suggested Teacher Language:**

*Which strategies today took longer to get a right answer than others?*

*I'd like you to quickly try \_\_\_\_\_'s strategy with this exit problem to see if it fits and results in a quick answer (this is where you might have students try out a strategy that was presented that was very efficient with a quick, easier, exit problem).*

**Scenario 3:** Some students get a right answer, but there are several wrong answers as well

**Goal:** Convincing ALL students of the correct answer

**Suggested Teacher Language:**

*Which answers were closest to the correct answer?*

*Which strategies were close to the correct answer?*

*Which strategies left the most space for error? Why is that?*

**Scenario 2:** Most students get a right answer, but with the same strategy or inefficient ones, none are desirable

**Goal:** Exposure to multiple ways of thinking, particularly nudging the class as a whole to more sophisticated thinking

**Suggested Teacher Language:**

*I am glad that we all agree on the right answer today. I want to show you today how \_\_\_\_\_ solved this problem (make up a student or use your name). \_\_\_\_\_ solved it this way.... (insert the desired strategy, i.e. making ten or using a friendly number)*

*I'd like you to quickly try \_\_\_\_\_'s strategy.*

**Scenario 4:** Lots of incorrect answers, some may be very unreasonable

**Goal:** Convincing ALL students of a reasonable answer

**Suggested Teacher Language:**

*Which of the answers made most sense? Least sense?*

*What about today's Number Talk made it more difficult? (i.e. did it involve larger numbers, etc.)*

**\*NOTE: Lots of wrong answers could mean that the problem was too difficult for the Number Talk space.**