Math Mindset Resource	Non-curricular Tasks	BTC Focus	Reflections
Video: Brains Grow and Change	How many 7s?	• Defront • Give thinking tasks • Visibly random groupings • Use VNPS	Reflection: Brains Grow and Change Teacher Check-in: Your Math History
Video: Speed and Math	Four 4's (Jamboard File)	• Give task standing and verbally • Answer only keep thinking questions	Reflection: Speed and Math Teacher Check-in: Take your Time
Video: Mistakes	1001 Pennies	• Mobilize knowledge • Asynchronously use hints/ extensions to maintain flow	Reflection: Mistakes Teacher Check-in: Mistakes
Video: The Importance of Struggle	Oh Hail The Elephant (Jamboard File)	• Maintain flow • Consolidate from the bottom	Reflection: The Importance of Struggle Teacher Check-In: Why Struggle?
Video: Strategies for Learning Mathematics	Split 25	• Maintain flow • Consolidate • Create meaningful notes	Reflection: Strategies for Learning Mathematics
Video: Fixed vs. Growth Mindset	Four Numbers	• Maintain flow • Consolidate • Create meaningful notes	Reflection: Fixed vs. Growth Mindset

Non-Curricular Tasks

Building Thinking Classrooms in Mathematics:

The following tasks are directly from Peter's book.

How many 7s? (p. 69)

"If I were to write the numbers from 1 to 1000, how many times would I use the digit 7?"

For grade 9, from 1 to 1000 is more appropriate than 1 to 100. This is an excellent first day activity because everyone can participate.

As an extension, change the problem slightly and ask ***"..., how many numbers would have at least one 7 in them?, ..., how many numbers have at least two 7s in them?"***

1,001 Pennies (modified) (p. 206)

"There are 1001 pennies lined up on a table. How much money do I have?

a) Starting at one end of the line, I replace every second coin with a nickel. How much money is on the table?"

b) I then go back to the beginning of this new line and replace every third coin with a dime. How much money is on the table?

c) Finally, I go back to the beginning of this new line and replace every fourth coin with a quarter. How much money is on the table?

**Note that in part b) most students want to say that the coins go penny-nickel-dime-penny -nickel-dime. But that is not true.

While Peter gives this whole problem in one step, it is a bit overwhelming for your struggling students and English Language Learners or students from other countries unfamiliar with our money.

Split 25 (p. 69)

"Decompose 25 using addition. For example, 25 = 10 + 15, 25 = 10 + 10 + 5, 25 = 3 + 3 + 3 + 16 What is the biggest product you can make if you multiply the addends together?"

(Note: The examples bias an assumption that the addends must be whole numbers. However, the instructions do not specify this. Let this fact emerge after they have found a maximum for whole numbers.)

While you would want to give this task verbally, it is probably necessary to show these examples for students to understand the word "addends".

Four Numbers (p. 81)

"Select four numbers from 1 to 9 at random. Using these four numbers and any operations, make the values from 1 to 30."

While this activity is similar to the "Four 4s" activity, it is a nice transition into curricular tasks. You could use this opportunity to work on meaningful notes related to order of operations.

Icebreakers

1. Where were you born? – country, city, area, and any info you would like to share about that place.

2. Pets – that I have, did have, would like to have…

3. My family – siblings, parents, other adults

4. Favorite place to visit – could be a local attraction, something in the province/country, or somewhere international.

5. Where I dream of traveling and why.

6. Are there any specific animals you are afraid of? Why?

7. If you could only eat one item of food for the rest of your life, what would you eat?

8. What is the weirdest food you've ever eaten?

9. What is your favorite thing to do by yourself?

10. If you could have a superpower, what would it be and why?

11. Favorite TV series/movie/book?

12. What is your favorite thing about technology? Least favorite?

13. What two things do you consider yourself to be very good at?

14. What two things do you consider yourself to be very bad at?

15. What is your favorite candy or treat?

16. If you could meet any person (current or past) who would it be and why?