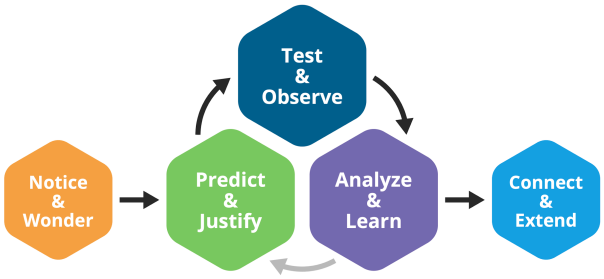
ST MATH PUZZLE TALK

MODEL REFLECTION

TEACHER RESOURCE



PROBLEM SOLVING PROCESS

NOTICE & WONDER

Focus **students' thinking about the problem.**

- What do you notice?
- What do you wonder?
- What question is the problem asking?

PREDICT & JUSTIFY

Uncover **students' thinking around how they plan to address the problem.**

- What is your prediction?
- What strategy will you use to test it?
- What do you think will happen when you test your prediction and why?

TEST & OBSERVE

Encourage **students to observe and process the results of testing their hypothesis.**

- Test your hypothesis.
- Describe what happened.

ANALYZE & LEARN

Facilitate **students in analyzing the feedback/results.**

- How does this compare to what you thought would happen?
- What did you learn?
- How will you use what you learned?

CONNECT & EXTEND

Stretch **students' thinking.**

- How does what you learned support your understanding of [the concept]?
- What would happen if_____?
- How would you apply this concept to [this] situation?

What did you notice about how the facilitator used the Problem Solving Process? (see bookmark on left)

What engagement strategies did you observe?

How did the facilitator foster mathematical connections and deep understanding?

NEXT STEPS: Set a Puzzle Talk goal for yourself!

☐ Complete my first/next Puzzle Talk.

Date: _____

☐ Try a new engagement strategy to foster discourse.

Strategy: _____

☐ Use a new resource to connect or deepen understanding.

Resource: _____

PUZZLE TALK JOURNEY | TEACHER RESOURCE

ST Math

STEP 1 >> EXPLORE

- **Open and explore a Puzzle Talk.**
  - Curriculum Tab > Puzzle Talks
- **Review the Puzzle Talk Overview page on ST Math Help.**
  - Support Tab > ST Math Help (help.stmath.com)
  - Instructional Practices tile > Puzzle Talks section
  - Or visit: stmath.link/puzzletalk

STEP 2 >> TRY

- **Try out a Puzzle Talk.**
  - Curriculum Tab > Puzzle Talks
- **Foster math discourse with a new facilitation strategy.**
  - See bookmark →

STEP 3 >> CONNECT

- **Connect a Puzzle Talk to your core curriculum.**
  - Support Tab > ST Math Help (help.stmath.com)
  - Search "Textbook Correlations"
- **Embed a Puzzle Talk in your lesson plans using our short links.**
  - Support Tab > ST Math Help (help.stmath.com)
  - Search "Share links or embed Puzzle Talks in curriculum"

STEP 4 >> ENHANCE

- **Use a Game Mat, Math Mat, or Sentence Stems.**
  - Support Tab > ST Math Help (help.stmath.com)
  - Search "Game Mat", "Math Mat", or "The Problem Solving Process"
- **Use any game for a Puzzle Talk.**
  - Support Tab > ST Math Help (help.stmath.com)
  - Search "How can I use any game for a Puzzle Talk?"

MATH DISCOURSE FACILITATION STRATEGIES

ST Math

to support Puzzle Talks

DISCUSSION HAND SIGNALS


I'm thinking.


I agree..


I have an answer.


I disagree.


I have more than one strategy.


I can add to that idea.

ENCOURAGE DEEP THINKING


Explain solutions:
How did you figure that out? Show me.


Justify solutions:
Why do you think that is the answer?


Define math vocabulary:
What do you mean by [*math term*]?


Connect to core curriculum:
Where have you seen this before?

RESPOND THOUGHTFULLY

- Restate without affirming, redirecting, or "rounding up" responses to improve them.
- Try a variety of solutions, not just the ones that could be successful.
- Use incorrect solutions or misconceptions as learning opportunities.
- Pause the animation and use the annotation tools to support observations and understanding.

EXTEND THINKING

What if...	What if the order of the numbers changed?
Limiting Factor	Solve it without using _____ .
Multiple Models	Show two ways to solve it. Compare them.
Word Problems	Create a word problem for this puzzle.
Real-world	How would a [*profession*] use this concept?