



## Attributing Student's Mathematical Ideas

### What is it?

Connecting students' mathematical ideas to the mathematical goal of the lesson and to one another's ideas by using student's names when referring to the idea.

### Why do we use it?

This move highlights the strengths in student thinking by connecting their contributions to a relevant mathematical idea. By using student's names when referring to their ideas you are showing them that the idea is a valuable addition to the mathematical discussion. The goal is to acknowledge that the idea under consideration is "our" idea – we build and refine ideas together not in isolation.

## Attributing Student's Mathematical Ideas...

### Teachers are...

- using student's names to make clear who's idea, strategy, or representation is being referred to
- often following an attribution of a student's idea with an orienting move
- emphasizing important mathematical ideas and encouraging students to make connections among them toward the target goal of the lesson

### Students are...

- explaining and reflecting on their own and other's thinking
- making connections between their own and other's ideas and the mathematical goal of the lesson
- seeing their ideas and their peer's ideas as valued contributions
- developing a positive math identity

**Where is that outcome on Antonio's diagram?**

**Notice how Rob used Cathy's idea in his solution.**

**How does Kim's idea related to what we talked about yesterday?**

**How are Jenna's rule and Kaylen's rule similar? How are they different?**

**Let's call this "Lanre's formula" since it was her idea.**



## Discourse Move: Attributing Student's Mathematical Ideas



Students are active, engaged, and sharing ideas with one another. As a result, students feel capable, empowered, and valued. This is math that students enjoy, want to continue, and see themselves in.



### How do we use it?

**If you are new to providing wait time, try this:** Attributing students' mathematical ideas emphasizes important mathematics and helps to connect individual student ideas to the learning goal of the lesson. Teachers can attribute certain ideas or strategies to the students who authored them by saying “[Student Name’s] process” or “[Student Name’s] diagram.”

This is often used in conjunction with orienting to another’s reasoning.

### An Example of Attributing Student's Mathematical Ideas in Action



**Scenario:** Imagine you have given this task to your students: A restaurant has one table that seats 20 people and a lot more tables that seat 2 people each. If the restaurant can seat 100 people at once, how many total tables are there?

**Teacher:** Take 5 minutes of individual work time to develop a strategy and answer the question. (Students work for 5 minutes while the teacher monitors).

**Teacher:** [Student Name], please share your strategy.

**Student:** I made a table and saw a pattern of adding two each time a new table was added. After a while, I stopped the table and just counted to figure out there would be 41 tables for 100 people.

**Teacher:** Does anyone have any questions about [Student 1’s Name] strategy? (pause for questions). How is [Student 1’s Name] strategy similar to the strategy [Student 2’s Name] used on the last task we did?



### Things to Remember

- This move is very similar to Orienting. However, attributing is specifically naming the author of the idea, while orienting is sense making with another’s idea.
- If you notice an important idea that you want to highlight for everyone, you can ask the student privately if they are willing to share their idea . Then, you can attribute the idea to that student publicly.
- Support multilingual and exceptional students by intentionally attributing a variety of students’ math ideas to ensure everyone is represented, especially those who are historically excluded from class discourse.



### Questions to Consider with Colleagues

- 1 What do you notice about your class culture when you use student names and let the students own the math?
- 2 What other discourse moves do you see in the example above? Are there others that could be used in the discussion afterwards?
- 3 How do you see Attributing Student’s Mathematical Ideas relating to the Standards for Mathematical Practice? Consider SMP 1 and specifically.

**Note:** This resource is being co-designed by the NC math education community. We welcome feedback to inform its refinement at <https://forms.gle/8PBWGsVqJQzcdtCF8> Check the website ([nc2ml.org/high-school-teachers](https://nc2ml.org/high-school-teachers)) for the most up to date resources.

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