Why Mathematical Discourse Matters
And How It Can Help Your Students!

It helps students:
- Reflect on their own understanding
- Make sense of and critique others’ work
- Link prior knowledge to current understanding
- Connect and extend conceptual knowledge
- Avoid mathematical solipsism
- Stay engaged, focused, and motivated

It helps teachers:
- Evaluate what students understand and their misconceptions
- Be aware of gaps in students’ knowledge
- Guide students to discuss concepts precisely
- Monitor math language development

How Do You Nurture a Discourse-Rich Classroom?

- Students and teachers acknowledge and discuss errors and the reasons behind them, in addition to correct answers and strategies.
- Students question each other and explain their reasoning using mathematical language.
- Students reach and justify conclusions based on their own mathematical knowledge, without relying on the authority of teachers.
- Students engage in productive schedule with appropriate scaffolds for support.

What Does Mathematical Discourse Look Like?

**Teacher**
In a fraction, what does the denominator—the bottom number—tell us?

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**Julie**
The total number of parts or sections.

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**James**
She said the denominator tells the total number of parts, but all the parts have to be the same size.

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**Nicole**
She's right, the denominator tells us the total number of equal-sized parts.

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**Nicole**
Can you say that again using some of the math words we've been learning?

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**Nicole**
The bottom number, I mean, the denominator, tells us the total number of equal-sized parts.

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**Julie**
Thank you, Nicole.

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**Julie**
Can you say that again using some of the math words we’ve been learning?

---

**Julie**
The bottom number, I mean, the denominator, tells us the total number of equal-sized parts.

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**Nicole**
Thank you, Nicole.

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**Julie**
Thank you, James. Can someone else say that differently?

---

**Nicole**
She said the denominator tells the total number of parts, but all the parts have to be the same size.

---

**Nicole**
Thank you, James. Can someone else say that differently?

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**Nicole**
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**Nicole**
Can you say that again using some of the math words we’ve been learning?

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**Nicole**
The bottom number, I mean, the denominator, tells us the total number of equal-sized parts.

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**Julie**
Thank you, Nicole.

---

**Julie**
Can you say that again using some of the math words we’ve been learning?

---

**Julie**
The bottom number, I mean, the denominator, tells us the total number of equal-sized parts.

---

**Nicole**
Thank you, Nicole.

---

**Nicole**
Can you say that again using some of the math words we’ve been learning?

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**Nicole**
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**Julie**
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**Julie**
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