Angie Heisel
Improving Math Outcomes
Through formative assessment, it was evident to me that students struggled with word problems. Upon observation, I noticed that students were not really reading the problems, but finding the numbers and performing random operations. My intention was for students to focus on what the problem was asking of them (the action verb) – “what do we need to find,“?

Problem statement: All students will score at least 80% on problem solving assessments.
THEORY

Accountable Leader(s): Dr. Dawn Williams

Global Aim
Educate all students with rigor and care in a culture of excellence to develop engaged citizens who are prepared for life and upon graduation from high school are enrolled, enlisted, or employed.

SMART AIM
Aligning with CPS District strategic goals:
- Increase math outcomes as evidenced by OST & EDC (K – 3rd – 6th – 9th grade);
- Close the academic gap between African American, Latino and Caucasian students in above outcomes.

We will increase math outcomes by 10 percentage points, from 59.5% to 69.3% (1731) for 3rd grade, 44.1% to 54.6% (1206) for 6th grade, 25.0% to 36.9% (303) for 8th & 51.5% to 61.8% (153) for 9th grade by May 2020.

We will decrease the academic gap between African American & Caucasians from X to Y, for K, from 30% to 20% for 3rd grade; 43% to 33% for 6th grade; and 53% to 42% for 9th grade Algebra I students by May 2020.

We will decrease the academic gap between Latinx & Caucasians from X to Y, for K, from 37% to 27% for 3rd grade; 49% to 36% for 6th grade; and 74% to 64% for first time 9th grade by May 2020.

Within 8th grade math, we will increase % of African American & Latinx: students scoring proficient on OST from 22% to 52% by May 2020 and decrease the achievement gap between African American & Caucasians from 43% to 38% and Latinx & Caucasians from 50% to 40% by May 2020, using Annual Measurable Objectives (AMO) as a guide.

Drivers
Activated Students & Families
Instructional Practices – Learning is Visible (John Hattie’s Research)
Safe and Healthy Culture for Learning
On Grade Level Work
Data-Informed Decision Making for Instruction

Interventions
Implement Teaching Lab “Inquiry Cycle” Model for 8th & 9th Grade Teachers (SEP, NOV, JAN)
- Provide instructional support
- Increase content knowledge
- Integrate QI w/ math content (Tier I)

Utilize Math Specialists (Tier I & II)
Strategically Deploy Math Coaches (Tier I & II)
Adopt Standardized Math Curriculum (Tier I)
Develop a Reliable 8th Grade Math Program as a Foundation for Success in 9th Grade Algebra (Tier I)
Analyze & Utilize MAP Growth Assessment Data for Improvement (Growth Measure) (Tier I)
Utilize Data Dashboard for Improvement (Tier I)
Build QI Capability / Knowledge w/ Math Teachers:
- Conduct teacher QI Training
- QI knowledge assessment (Tier I)

Utilize an On-Grade Level & Effective Instruction Guide / Observation Tool for Teacher Coaching & Feedback (Tier I)

Student / Parent Feedback Mechanism (Tier I)
LEARNING CYCLES

Plan:
100% of Mrs. Heisel’s students will score 80% or better on problem solving assessments by focusing on the action verb and what the question is asking.

Do:
We will practice word problems daily (“problem of the day”), focusing on the action (What operation is the question asking us to perform?).

Study:
We will assess each week and track our progress individually in our data folders and as a class.

Act:
We will evaluate where we need to improve and celebrate when we reach our goal.
**Smart Aim:**
To increase the OST math scores of 3rd grade students at Midway Elementary from 51.4% to at least 61.4%.

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**Midway Mathies**

**How will we do our better?**

**Mrs. Haisel will...**
- Set goals
- Snack student progress
- Give feedback
- Guide instruction
- Differentiate
- Set objectives

**Students will...**
- Have meaningful math discussions
- Use models to solve
- Always give their best effort
- Work together and independently
- Show/explain our work
- Track progress

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**Plan:**
100% of the students will score 80% or better on problem solving assessments by focusing on the action verb and what the question is asking us to do.

**Do:**
ex-practice word problems daily ("problem of the day"). Focusing on the action verb (what operation is the question asking us to perform?).

**Study:**
We will assess each student and teach our progress individually in our data folders and as a class.

**Act:**
We will evaluate where we need to improve and celebrate when we reach our goal.

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**When we reach our goals we will CELEBRATE!!**
RESULTS
3rd Grade Problem Solving Data

Assessment Week

% of students with 80% or better on weekly assessment

Week 1 n=45
Week 2 n=46
Week 3 n=40
Week 4 n=43
Week 5 n=37

Used models to solve

Read problems together and looked for important information before we began.
I am most proud of how my students took ownership of the project. They were excited each week to “do their better.” I could see their confidence grow and if they happened to decrease, they genuinely thought about why and how they could improve for next time.
GREATEST CHALLENGE

For me the greatest challenge was accepting that I would not see results instantly. I need to remember that small growth is still growth. Looking back at the run chart though, I see how much my students have truly grown through this process.
Thank You!

TEAM MEMBER
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