Instructional Model of Math Mastery
IM3
OIP

Presented by Chase
STEMM Academy
KID SNIPPETS: MATH CLASS
We identified our Subgroups as a critical need and the lack of evidence based math instruction
2016 - 2017 Report Card for
Chase STEM Academy

SCHOOL GRADE
Coming in 2018

Achievement
The Achievement component represents the number of students who passed the state tests and how well they performed on them.

- Performance Index: 46.1%  F
- Indicators Met: 0.0%  F

Component Grade: F

Progress
The Progress component looks closely at the growth that all students are making based on their past performances.

- Value Added: Overall: C
- Gifted: NR
- Students with Disabilities: D
- Lowest 20% in Achievement: D

Component Grade: C

Gap Closing
The Gap Closing component shows how well schools are meeting the performance expectations for our most vulnerable populations of students in English language arts, math, and graduation.

- Annual Measurable Objectives: 0.2%  F

Component Grade: F

Graduation Rate
The Graduation Rate component looks at the percent of students who are successfully finishing high school with a diploma in four or five years.

- Graduation Rates: Not Rated

Component Grade: Not Rated

Educator and principal data may be incomplete due to local reporting error. Contact district for more information.
Why do we give the best part of learning away?
OIP Process Mastery

Step 2
Research and Select

1 IDENTIFY Critical Needs

2 RESEARCH and Select Evidence-Based Strategies

3 PLAN for Implementation

4 IMPLEMENT and MONITOR

5 EXAMINE, Reflect, Adjust

Supporting Implementation
John Hattie
(Meta-Analysis)

Please rank these practices from most effective to least effective on your handout.

.4 is the benchmark growth metric.
Ranking of Top 10

#10  Using Manipulatives  .30

#9  High Classroom Expectations  .43

#8  Providing Worked Examples  .57
And the top 5 are...

#5 Mastery Based Learning .63
#4 Spaced Practice Vs Mass .71
#3 Teacher/Student Relationships .72
Step 3
Plan for Implementation

1. IDENTIFY Critical Needs
2. RESEARCH and Select Evidence-Based Strategies
3. PLAN for Implementation
4. IMPLEMENT and MONITOR
5. EXAMINE, Reflect, Adjust
What does the IM3 model look like?

A mixture of guided instruction and independent student work drives the learning on Level 2 and Level 3.
Implementation

With Who and When...
Step 4
Implement and Monitor

1 IDENTIFY Critical Needs
2 RESEARCH and Select Evidence-Based Strategies
3 PLAN for Implementation
4 IMPLEMENT and MONITOR
5 EXAMINE, Reflect, Adjust

SUPPORTING Implementation
Resource 25A: Recording and Reporting Monitoring Data Template: TBT 5-Step Process

Teacher-based teams (TBTs) can use the form aligned to the 5-Step Process for reporting to the BLT at the end of the process and/or they can summarize the data on the form according to a schedule prescribed by the BLT.

Building Name/Grade:  

Content Area:  

Strategy Focus:  

Step 1: Collect and Chart Data to Identify How Students are Performing/Progressing (after common formative pre-assessment has been given)

<table>
<thead>
<tr>
<th>Instructions: Each teacher comes to the TBT meeting with these sections completed for their class.</th>
<th>Learning Target (Standard/Indicator) =  Note: Students with IEPs are underlined. Students with multiple-risk factors are in bold.</th>
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<tbody>
<tr>
<td>Teacher</td>
<td># Students who took test</td>
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</table>
Level 1, Level 2 or Level 3

Depth of Knowledge questioning is way too overwhelming for students and educators.
Sample Problems

Each table will be given an envelope that contains a level 1, level 2 and level 3 math question for one grade level.

As a table, decide which level you think each question would be and discuss your reasoning.

Once complete, see if your guess was correct by checking your answer card that is also inside of your envelope!
The Proof our Mastery Model (IM3) Works

Step 5
Examine, Reflect, Adjust

- Step 1: Identify Critical Needs
- Step 2: Research and Select Evidence-Based Strategies
- Step 3: Plan for Implementation
- Step 4: Implement and Monitor
- Step 5: Examine, Reflect, Adjust
Gap Closing

The Gap Closing component shows how well schools are meeting the performance expectations for our most vulnerable populations of students in English language arts, math, and graduation. It also measures how schools are doing in helping English learners to become proficient in English.

Annual Measurable Objectives

Annual Measurable Objectives (AMOs) compare the performance of each student group to the expected performance goals for that group to determine if gaps exist. These charts show how well each group compares to the state average in ELA, math and graduation. A fourth AMO measures whether English Learners are making progress towards becoming proficient in English. The ultimate goal is for all groups to achieve at high levels.

Grade Key

A = 90.0 - 100.0%
B = 80.0 - 89.9%
C = 60.0 - 79.9%
D = 60.0 - 69.9%

Performance Index by Subgroup
Progress

The Progress component looks closely at the growth that all students are making based on their past performances.

For more detailed data on Progress and Value-Added, [click here.](#)

### Overall
This measures the progress for all students in math, ELA, and science using tests in grades 4-8 and some end-of-course exams.

### Gifted Students
This measures the progress for students identified as gifted in reading, math, science, and/or superior cognitive ability.

### Students in the Lowest 20% in Achievement
This measures the progress for students identified as the lowest 20% statewide in reading, math, or science achievement.

### Students with Disabilities
This measures the progress for students with disabilities.

#### Progress Details
These tables show the Progress scores by test grade and subject for students in grades 4-8 and some end-of-course tests, and includes up to three years of data as available.

<table>
<thead>
<tr>
<th>Test Grade</th>
<th>Progress</th>
<th>Progress</th>
<th>Progress</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>English Language Arts</td>
<td>Mathematics</td>
<td>Science</td>
<td>All Tests</td>
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<tr>
<td>All Grades</td>
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<td>4th Grade</td>
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<td>5th Grade</td>
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<td>6th Grade</td>
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<td>7th Grade</td>
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<td>8th Grade</td>
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<thead>
<tr>
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<th>Progress</th>
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<th>Progress</th>
<th>Progress</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>English I</td>
<td>English II</td>
<td>Algebra</td>
<td>Geometry</td>
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<tr>
<td>High</td>
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</table>
This chart compares the school to its district and to the state as a whole for each test.
Each student subgroup has its own interim goal. Meeting the subgroup goals is one of the ways to meet Annual Measurable Objectives. Subgroups with fewer than 25 students are not rated and do not appear on the graphs.

This chart compares the school to its district and to the state as a whole for each test.
Gifted

- Served by ELA and Math grades 4-8 and subject and whole grade acceleration
- Report card Value Added A (3 years)
- Matching gifted ID testing to student population (Naglieri and MAP)
- \( \frac{1}{3} \) gifted served students economically disadvantaged and minorities
- Enrichment program implementation
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