Fostering an Environment of Equity and Opportunity
The following slides and images are a summary of a parent presentation from January 23rd, 2017. The images and text are meant as informative.
PURPOSE OF THE PRESENTATION

1. SHARE INFORMATION
2. GATHER INPUT
3. SPARK AN OPEN AND ONGOING DIALOGUE
   • EMAIL FOLLOW-UP QUESTIONS TO:
     • middleschoolday@sd129.org
IMPORTANT REMINDER

• The content of this presentation is the product of a collaborative effort. It is not a final product and parent input is desired to help inform future decisions.

• The earliest this initiative would go into place is 2018-19.
TWO IMPORTANT ITEMS TO REMEMBER

• We are better today than we were three years ago.

• The plan we will discuss is about continuing to improve as a school district.
Part 1: Problem Identification
While 70-75% of West High graduates students are going on to post high school college of some kind, only about 38% of them are graduating from college within 6 years of graduation. This information is shown in graphic form on the next two slides.
Percent of High School Class Who Completed a Degree Within Six Years

Effective Date = August 15, 2016

AVG = 38%

WEST AURORA HIGH SCHOOL
Report Run Date 10/06/2016 11:09 AM

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WHY IS THIS HAPPENING?
Remedial College Course Work

Through publicly available data we saw that high numbers of our graduates were being required to take remedial level college math courses. Taking remedial college course work is a strong predictor that a student will not graduate from college.
• AS A DISTRICT WE INVESTIGATED REASONS WHY SO MANY OF OUR STUDENTS WERE TAKING REMEDIAL LEVEL MATH COURSES IN COLLEGE.

• THE NEXT TWO SLIDES SHOW THE DATA OF THE PERCENTAGE OF INCOMING FRESHMEN OVER THE LAST TWO YEARS WHO HAVE BEEN PLACED INTO REMEDIAL HIGH SCHOOL MATH i.e. SEQUENTIAL ALGEBRA
Freshman Class Math Placements (2015-2016)

- Honors Geometry: 15% (132)
- Algebra I: 38% (340)
- Sequential Algebra: 47% (418)
Freshman Class Math Placement (2016-17)

<table>
<thead>
<tr>
<th>Course</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algebra II Hon</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>Geometry/Geometry H</td>
<td>17%</td>
<td>160</td>
</tr>
<tr>
<td>Algebra I</td>
<td>43%</td>
<td>404</td>
</tr>
<tr>
<td>Sequential Algebra</td>
<td>38%</td>
<td>357</td>
</tr>
</tbody>
</table>
• THE NEXT SLIDE SHOWS THE SEQUENCE BY SCHOOL YEAR OF WHAT BEING PLACED INTO SEQUENTIAL ALGEBRA AS A FRESHMAN HAS ON A STUDENT’S EDUCATION.

• As indicated by the graph, a student placed into Sequential Algebra will not take the math courses that are covered on the SAT or ACT until their Senior year of High School, which is one year after those tests are first administered.
Students Placed in **Sequential Algebra** as Freshmen

- **District 129**

   - **Algebra 2**: 12
   - **Geometry**: 11
   - **Algebra**: 10
   - **Pre Algebra**: 8

   **College Relevant SAT/ACT EXAM**
• BY CONTRAST, THE NEXT SLIDE SHOWS THE SEQUENCE BY SCHOOL YEAR OF WHAT BEING PLACED INTO ALGEBRA 1 AS A FRESHMAN HAS ON A STUDENT’S EDUCATION.

• It should be noted that placement into Algebra 1 as a Freshman allows a student to be exposed to all the pre-requisite math topics covered on the SAT or ACT prior to sitting for those exams.
Students Placed in **Algebra 1** as Freshmen

District 129

<table>
<thead>
<tr>
<th>GRADE LEVEL</th>
<th>Algebra 2</th>
<th>Geometry</th>
<th>Algebra</th>
<th>Pre Algebra</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

College Relevant: SAT/ACT EXAM
• The next slide shows the sequence by school year of what being placed into Geometry as a freshman has on a student’s education. This is the track our most advanced students take.
MATH SEQUENCE (Advanced Students)

District 129

GRADE LEVEL

College Relevant

Graph showing the math sequence for advanced students in District 129 with grades for Algebra 2, Geometry, Algebra, and Pre Algebra.
Go Even Further Back....
As we examined the achievement data of 8th grade students in 2014-15 to their subsequent high school math placement as Freshmen in 2015-16 we noticed that when low percentages of students are at grade level or above (left graph) a high number of them are placed in remedial (Sequential) Algebra (right graph).
Similarly, we found that as 8th grade student achievement rose in 2015-16 (left graph) that placement into Sequential Algebra (right graph) declined significantly.
Conclusions

- Low Achievement in Middle School Math
- Remedial Placement in High School Math
- Remedial Placement in College Math
- Low Levels of College Completion
Solution Identification

The next slide shows the current structure for our students in Middle School through High School in regards to Math courses taken.
**CURRENT MODEL:** AGE/GRADE=MATH COURSE TAKEN

### ON TRACK STUDENT/STRUGGLING STUDENT

<table>
<thead>
<tr>
<th>6TH GRADE</th>
<th>7TH GRADE</th>
<th>8TH GRADE</th>
<th>9TH GRADE</th>
<th>10TH GRADE</th>
<th>11TH GRADE</th>
<th>12TH GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>6TH GRADE MATH</strong></td>
<td><strong>7TH GRADE MATH</strong></td>
<td><strong>8TH GRADE MATH (Pre-Algebra)</strong></td>
<td><strong>ALGEBRA</strong></td>
<td><strong>GEOMETRY</strong></td>
<td><strong>ALGEBRA 2</strong></td>
<td><strong>PRE-CALCULUS/STATISTICS/FINITE MATH</strong></td>
</tr>
<tr>
<td><strong>SEQUENTIAL ALGEBRA 1 A</strong></td>
<td><strong>SEQUENTIAL ALGEBRA 1 B</strong></td>
<td><strong>TECHNICAL GEOMETRY</strong></td>
<td><strong>ALGEBRA 2</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### ET STUDENT

<table>
<thead>
<tr>
<th>6TH GRADE</th>
<th>7TH GRADE</th>
<th>8TH GRADE</th>
<th>9TH GRADE</th>
<th>10TH GRADE</th>
<th>11TH GRADE</th>
<th>12TH GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>6TH GRADE ET MATH (7TH GRADE MATH)</strong></td>
<td><strong>7TH GRADE ET MATH (Pre-Algebra)</strong></td>
<td><strong>ALGEBRA</strong></td>
<td><strong>GEOMETRY</strong></td>
<td><strong>ALGEBRA 2</strong></td>
<td><strong>PRE CALCULUS</strong></td>
<td><strong>AP CALCULUS</strong></td>
</tr>
</tbody>
</table>
PROPOSED MODEL

• COURSE BASED APPROACH TO MATHEMATICS CONSISTING OF 5 COURSES.
  1. MATH 1 (6TH GRADE MATH)
  2. MATH 2 (7TH GRADE MATH)
  3. MATH 3 (8TH GRADE MATH/PRE ALGEBRA)
  4. ALGEBRA
  5. GEOMETRY

• 2 PERIODS OF MATH IN 6TH GRADE AND THEN 2 PERIODS AS NEEDED.
The next slides show a different, more flexible model of delivering Math education to middle school students. These slides show various paths through our proposed Math courses based on student individuality.
For some students they may need 2 periods of math over three consecutive years in order to take Algebra 1 as a Freshman as represented above.
### FOR OTHER STUDENTS

<table>
<thead>
<tr>
<th>6th Grade</th>
<th>7th Grade</th>
<th>8th Grade</th>
<th>Freshman Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math 1</td>
<td>Math 2</td>
<td>Math 3</td>
<td>Algebra I</td>
</tr>
<tr>
<td>Math 1</td>
<td>Math 2</td>
<td>Math 3</td>
<td>Algebra I</td>
</tr>
</tbody>
</table>

Some students may need 2 periods of math only in 6\textsuperscript{th} and 7\textsuperscript{th} grade in order to take Algebra 1 as a Freshman as represented above.
Other students may only need 2 periods of math in their 6th grade year and could be ready for Geometry as a Freshman.
For other students, math classes in their 6th, 7th, and 8th grade years could look like this:

<table>
<thead>
<tr>
<th>6th Grade</th>
<th>7th Grade</th>
<th>8th Grade</th>
<th>Freshman Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math 1</td>
<td>Math 2</td>
<td>Math 3</td>
<td>Algebra I</td>
</tr>
<tr>
<td>Math 1</td>
<td>Math 2</td>
<td>Math 3</td>
<td>Algebra II Honors Or Algebra II</td>
</tr>
<tr>
<td>Math 2</td>
<td>Math 3</td>
<td>Support</td>
<td>Geometry</td>
</tr>
<tr>
<td>Math 3</td>
<td>Algebra</td>
<td>Geometry</td>
<td></td>
</tr>
</tbody>
</table>

Other students may only need 2 periods of math in their 6th grade year and could be ready for Algebra 2 as freshmen.
FOR OTHER STUDENTS

This graphic displays how each of the displayed pathways articulate throughout a student’s high school career.

The pathway for 6th Grade includes:
- Math 1
- Math 2
- Math 1
- Math 2
- Math 3
- Algebra
- Support
- Math 3
- Algebra
- Geometry
- Algebra II Honors
- Algebra II

The pathway for 7th Grade includes:
- Math 2
- Math 3
- Algebra
- Geometry
- Algebra II Honors
- Algebra II

The pathway for 8th Grade includes:
- Math 3
- Algebra
- Geometry
- Algebra II Honors
- Algebra II

The pathway for Freshman Year includes:
- Algebra I
- Geometry
- Algebra 2
- Pre-Calculus

The pathway for Sophomore Year includes:
- Geometry
- Algebra 2
- Pre-Calculus
- AP Calculus or AP Statistics

The pathway for Junior Year includes:
- Algebra 2
- Pre-Calculus
- AP Calculus or AP Statistics

The pathway for Senior Year includes:
- Pre-Calculus
- AP Calculus
- *Multi-Variable Calculus
STUDENT SCHEDULES

The following slides offer a perspective on what a current 6th, 7th, 8th grade schedule look like now as compared to the proposed changes.
RESTRUCTURE OFFERING TO PROVIDE 2 PERIODS OF MATH

CURRENT 6TH GRADE SCHEDULE
1. ELA 1
2. ELA 2
3. SCIENCE
4. MATH
5. Intervention / Support or Enrichment Period
6. LUNCH
7. PE
8. SOCIAL STUDIES
9. ELECTIVE

PROPOSED 6TH GRADE SCHEDULE
1. ELA 1
2. ELA 2
3. SCIENCE
4. MATH 1 (ET=MATH2)
5. MATH 2 (ET=MATH3)
6. LUNCH
7. PE
8. SOCIAL STUDIES
9. ELECTIVE
Restructure offering to provide 2 periods of math *if necessary*

### Current 7th Grade Schedule

1. ELA 1  
2. ELA 2  
3. SCIENCE  
4. MATH  
5. Intervention / Support or Enrichment Period  
6. LUNCH  
7. PE  
8. SOCIAL STUDIES  
9. ELECTIVE

### Proposed 7th Grade Schedule

1. ELA 1  
2. ELA 2  
3. SCIENCE  
4. MATH 2 / ELECTIVE* / Intervention  
5. MATH 3 (ET=ALGEBRA)  
6. LUNCH  
7. PE  
8. SOCIAL STUDIES  
9. ELECTIVE
RESTRUCTURE OFFERING TO PROVIDE 2 PERIODS OF MATH IF NECESSARY

CURRENT 8TH GRADE SCHEDULE
1. ELA 1
2. ELA 2 or World Language
3. SCIENCE
4. MATH
5. Intervention / Support or Enrichment Period
6. LUNCH
7. PE
8. SOCIAL STUDIES
9. ELECTIVE

PROPOSED 8TH GRADE SCHEDULE
1. ELA 1
2. ELA 2
3. SCIENCE
4. ALGEBRA/GEOMETRY
5. ELECTIVE* / Intervention
6. LUNCH
7. PE
8. SOCIAL STUDIES
9. ELECTIVE
WHAT THIS MEANS FOR FUTURE STUDENTS
6TH GRADE:
EVERYONE HAS 2 PERIODS OF MATH;
1 ELECTIVE PERIOD
NO INTERVENTION PERIOD

7TH GRADE:
EVERYONE HAS 1 ELECTIVE PERIOD (At least)
WORLD LANGUAGE IS AN ELECTIVE OPTION
MATH AND READING SCORES DETERMINE IF A STUDENT HAS A SECOND PERIOD OF MATH OR A READING INTERVENTION. IF NEITHER ARE NEEDED THEN A SECOND ELECTIVE IS TAKEN

8TH GRADE:
ALL STUDENTS HAVE TWO PERIODS OF LANGUAGE ARTS
WORLD LANGUAGE IS AN ELECTIVE OPTION
MATH AND READING SCORES DETERMINE IF A STUDENT NEEDS A SECOND PERIOD OF MATH OR A READING INTERVENTION. IF NEITHER ARE NEEDED THEN A SECOND ELECTIVE IS TAKEN
LOCAL EVIDENCE OF THIS PRACTICE

One of our four middle schools was able to use Federal grant dollars to run a pilot in which 21 students took 2 periods of Math during second semester last school year. The next slide shows the results.
Results from the pilot show that on average students grew by 22 National Percentile Points. This means that a student who was in the 50th percentile of students their age at the start of the semester would on average finish the semester at the 72nd percentile.

<table>
<thead>
<tr>
<th>Student</th>
<th>Grade</th>
<th>NPR MOY</th>
<th>NPR EOY</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student 1</td>
<td>Grade 7</td>
<td>69</td>
<td>88</td>
<td>19</td>
</tr>
<tr>
<td>Student 2</td>
<td>Grade 7</td>
<td>53</td>
<td>71</td>
<td>18</td>
</tr>
<tr>
<td>Student 3</td>
<td>Grade 7</td>
<td>81</td>
<td>94</td>
<td>13</td>
</tr>
<tr>
<td>Student 4</td>
<td>Grade 7</td>
<td>35</td>
<td>34</td>
<td>-1</td>
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<tr>
<td>Student 5</td>
<td>Grade 7</td>
<td>54</td>
<td>66</td>
<td>12</td>
</tr>
<tr>
<td>Student 6</td>
<td>Grade 7</td>
<td>60</td>
<td>96</td>
<td>36</td>
</tr>
<tr>
<td>Student 7</td>
<td>Grade 7</td>
<td>38</td>
<td>64</td>
<td>26</td>
</tr>
<tr>
<td>Student 8</td>
<td>Grade 7</td>
<td>62</td>
<td>95</td>
<td>33</td>
</tr>
<tr>
<td>Student 9</td>
<td>Grade 7</td>
<td>62</td>
<td>93</td>
<td>31</td>
</tr>
<tr>
<td>Student 10</td>
<td>Grade 7</td>
<td>26</td>
<td>70</td>
<td>44</td>
</tr>
<tr>
<td>Student 11</td>
<td>Grade 7</td>
<td>48</td>
<td>80</td>
<td>32</td>
</tr>
<tr>
<td>Student 12</td>
<td>Grade 7</td>
<td>66</td>
<td>91</td>
<td>25</td>
</tr>
<tr>
<td>Student 13</td>
<td>Grade 7</td>
<td>63</td>
<td>90</td>
<td>27</td>
</tr>
<tr>
<td>Student 14</td>
<td>Grade 7</td>
<td>58</td>
<td>83</td>
<td>25</td>
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<tr>
<td>Student 15</td>
<td>Grade 7</td>
<td>67</td>
<td>71</td>
<td>4</td>
</tr>
<tr>
<td>Student 16</td>
<td>Grade 7</td>
<td>57</td>
<td>96</td>
<td>39</td>
</tr>
<tr>
<td>Student 17</td>
<td>Grade 7</td>
<td>70</td>
<td>64</td>
<td>-6</td>
</tr>
<tr>
<td>Student 18</td>
<td>Grade 7</td>
<td>47</td>
<td>91</td>
<td>44</td>
</tr>
<tr>
<td>Student 19</td>
<td>Grade 7</td>
<td>47</td>
<td>81</td>
<td>34</td>
</tr>
<tr>
<td>Student 20</td>
<td>Grade 7</td>
<td>45</td>
<td>66</td>
<td>21</td>
</tr>
<tr>
<td>Student 21</td>
<td>Grade 7</td>
<td>54</td>
<td>55</td>
<td>1</td>
</tr>
</tbody>
</table>

| Avg. Growth | 22.71429 |
PROPOSED TIMELINE

9/28/16: First Meeting of Middle School Day Committee.

10/17/16: Update to Board of Education on our Status and Next Steps.

November-December 2016: Listening Tour of Internal Stakeholders.

January-March 2017: Listening to External Stakeholders.

Spring 2017: Based Upon Feedback Seek Board of Education Approval.


2019-2020: Implementation of Grade 6, & Grade 7.

Your Opportunity for Feedback

• QUESTION CARDS

• EMAILS

• PHONE CALLS
Send Questions/Suggestions/Ideas to:
middleschoolday@sd129.org