MATH MINDSET

<table>
<thead>
<tr>
<th>Board Approval Date: June 20, 2019</th>
<th>Course Length: 3 Trimesters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grading: Pass/Fail</td>
<td>Credits: N/A</td>
</tr>
<tr>
<td>Proposed Grade Level(s): 6, 7, 8</td>
<td>Subject Area: Mathematics</td>
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<td></td>
<td>Elective Area (if applicable):</td>
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<tr>
<td>Prerequisite(s): N/A</td>
<td>Corequisite(s): Concurrent enrollment in grade level math course</td>
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CTE Sector/Pathway:

Intent to Pursue ‘A-G’ College Prep Status: No

A-G Course Identifier:

Graduation Requirement: No

Course Intent:
Program (if applicable):

**COURSE DESCRIPTION:**

This course is recommended for students performing two or more years below grade level on their i-Ready math diagnostic. Students will take this course concurrently with their grade level math course. The purpose of the course is to provide targeted intervention on the concepts and skills students are deficient in to bring them up to grade level. The course will focus on the essential math content standards necessary to master grade level standards in the major cluster areas. Upon teacher recommendation and diagnostic assessments, students may show enough growth to exit this course at the end of a grading period.
## Detailed Units of Instruction:

<table>
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<tr>
<th>Unit Number/Title</th>
<th>Unit Essential Questions</th>
<th>Examples of Formative Assessments</th>
<th>Examples of Summative Assessment</th>
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</thead>
</table>
| 1. Multiplicative Thinking | How does multiplicative thinking help with problem solving?                                | "Do Nows" that encourage thinking, develop the mathematical thinking, and make connections between topics.  
  *Embedded Formative Assessment with Exit Tickets that require students to justify their reasoning in writing. | "MATH 180 includes a comprehensive suite of high-quality assessment tools and reports to monitor progress and differentiate instruction.  
  *Performance tasks that help prepare students for the Next Generation Assessments. |
| 2. The Distributive Property | How do area models relate to multiplication?                                              | "Do Nows" that encourage thinking, develop the mathematical thinking, and make connections between topics.  
  *Embedded Formative Assessment with Exit Tickets that require students to justify their reasoning in writing. | "MATH 180 includes a comprehensive suite of high-quality assessment tools and reports to monitor progress and differentiate instruction.  
  *Performance tasks that help prepare students for the Next Generation Assessments. |
| 3. Division                | How are multiplication and division related?                                              | "Do Nows" that encourage thinking, develop the mathematical thinking, and make connections between topics.  
  *Embedded Formative Assessment with Exit Tickets that require students to justify their reasoning in writing. | "MATH 180 includes a comprehensive suite of high-quality assessment tools and reports to monitor progress and differentiate instruction.  
  *Performance tasks that help prepare students for the Next Generation Assessments. |
| 4. Fraction Concepts       | How can visual models be used to compare fractions?                                       | "Do Nows" that encourage thinking, develop the mathematical thinking, and make connections between topics.  
  *Embedded Formative Assessment with Exit Tickets that require students to justify their reasoning in writing. | "MATH 180 includes a comprehensive suite of high-quality assessment tools and reports to monitor progress and differentiate instruction.  
  *Performance tasks that help prepare students for the Next Generation Assessments. |
| 5. Fraction Relationships | How can visual models help solve problems involving fractions? | "Do Nows" that encourage thinking, develop the mathematical thinking, and make connections between topics. *Embedded Formative Assessment with Exit Tickets that require students to justify their reasoning in writing. | MATH 180 includes a comprehensive suite of high-quality assessment tools and reports to monitor progress and differentiate instruction. *Performance tasks that help prepare students for the Next Generation Assessments. |
| 6. Fraction Multiplication and Division | What patterns help to explain the relationship between multiplying and dividing? | "Do Nows" that encourage thinking, develop the mathematical thinking, and make connections between topics. *Embedded Formative Assessment with Exit Tickets that require students to justify their reasoning in writing. | MATH 180 includes a comprehensive suite of high-quality assessment tools and reports to monitor progress and differentiate instruction. *Performance tasks that help prepare students for the Next Generation Assessments. |
| 7. Decimals and Place Value | How does repeated reasoning help me be an effective problem solver? | "Do Nows" that encourage thinking, develop the mathematical thinking, and make connections between topics. *Embedded Formative Assessment with Exit Tickets that require students to justify their reasoning in writing. | MATH 180 includes a comprehensive suite of high-quality assessment tools and reports to monitor progress and differentiate instruction. *Performance tasks that help prepare students for the Next Generation Assessments. |
| 8. Decimal Operations | How do we compare decimals? How do we use decimals in the real world? | "Do Nows" that encourage thinking, develop the mathematical thinking, and make connections between topics. *Embedded Formative Assessment with Exit Tickets that require students to justify their reasoning in writing. | MATH 180 includes a comprehensive suite of high-quality assessment tools and reports to monitor progress and differentiate instruction. *Performance tasks that help prepare students for the Next Generation Assessments. |
| 9. Both Sides of Zero | How do graphs and data help us better understand | "Do Nows" that encourage thinking, develop the | MATH 180 includes a comprehensive suite of |
the world in which we live? mathematical thinking, and make connections between topics. *Embedded Formative Assessment with Exit Tickets that require students to justify their reasoning in writing. high-quality assessment tools and reports to monitor progress and differentiate instruction. *Performance tasks that help prepare students for the Next Generation Assessments.

**ESSENTIAL STANDARDS:**

**Operations and Algebraic Thinking 3.OA**

Major Clusters
- Represent and solve problems involving multiplication and division. (3.OA.1–4)
- Understand properties of multiplication and the relationship between multiplication and division. (3.OA.5–6)
- Multiply and divide within 100. (3.OA.7)
- Solve problems involving the four operations, and identify and explain patterns in arithmetic. (3.OA.8–9)

**Number and Operations—Fractions 3.NF**

Major Clusters
- Develop understanding of fractions as numbers. (3.NF.1–3)

**Measurement and Data 3.MD**

Major Clusters
- Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects. (3.MD.1–2)
- Geometric measurement: understand concepts of area and relate area to multiplication and to addition. (3.MD.5–7)

**Operations and Algebraic Thinking 4.OA**

Major Clusters
- Use the four operations with whole numbers to solve problems. (4.OA.1–3)

**Number and Operations in Base Ten 4.NBT**

Major Clusters
- Generalize place-value understanding for multi-digit whole numbers. (4.NBT.1–3)
- Use place-value understanding and properties of operations to perform multi-digit arithmetic. (4.NBT.4–6)

**Number and Operations—Fractions 4.NF**

Major Clusters
- Extend understanding of fraction equivalence and ordering. (4.NF.1–2)
- Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. (4.NF.3–4)
- Understand decimal notation for fractions, and compare decimal fractions. (4.NF.5–7)

**Number and Operations in Base Ten 5.NBT**

Major Clusters
• Understand the place-value system. (5.NBT.1–4)
• Perform operations with multi-digit whole numbers and with decimals to hundredths. (5.NBT.5–7)

Number and Operations—Fractions 5.NF
Major Clusters
• Use equivalent fractions as a strategy to add and subtract fractions. (5.NF.1–2)
• Apply and extend previous understandings of multiplication and division to multiply and divide fractions. (5.NF.3–7)

Measurement and Data 5.MD
Major Clusters
• Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition. (5.MD.3–5)

RELEVANT STANDARDS AND FRAMEWORKS, CONTENT/PROGRAM SPECIFIC STANDARDS:

Link to Common Core Standards (if applicable):
Educational standards describe what students should know and be able to do in each subject in each grade. In California, the State Board of Education decides on the standards for all students, from kindergarten through high school. https://www.cde.ca.gov/be/st/ss/documents/ccssmathstandardaug2013.pdf

Link to Framework (if applicable):
Curriculum frameworks provide guidance for implementing the content standards adopted by the State Board of Education (SBE). Frameworks are developed by the Instructional Quality Commission, formerly known as the Curriculum Development and Supplemental Materials Commission, which also reviews and recommends textbooks and other instructional materials to be adopted by the SBE. https://www.mydigitalchalkboard.org/cogniti/content/file/resources/documents/b7/b771959c/b771959c9673c5764ed5c7222d6d009e8221158f/MathFrameworks_chalkboard.pdf

Link to Subject Area Content Standards (if applicable):
Content standards were designed to encourage the highest achievement of every student, by defining the knowledge, concepts, and skills that students should acquire at each grade level.

Link to Program Content Area Standards (if applicable):
Program Content Area Standards applies to programs such as International Baccalaureate, Advanced Placement, Career and Technical Education, etc.
**TEXTBOOKS AND RESOURCE MATERIALS:**

**Textbooks**

<table>
<thead>
<tr>
<th>Board Approved</th>
<th>Pilot Completion Date (If applicable)</th>
<th>Textbook Title</th>
<th>Author(s)</th>
<th>Publisher</th>
<th>Edition</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>We are currently piloting this material</td>
<td>5/31/2019</td>
<td>Math 180, Course 1</td>
<td>Ball, Berkmann, Dokterman, and Hasselbring</td>
<td>Scholastic</td>
<td>1st</td>
<td>1/1/2014</td>
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**Other Resource Materials**

- You Cubed: https://www.youcubed.org/
- 3 Act Math: https://whenmathhappens.com/3-act-math/
- Open Middle: http://www.openmiddle.com/

**Supplemental Materials**

Board approved supplemental materials (Including but not limited to: Film Clips, Digital Resources, Supplemental texts, DVDs, software programs (Pebble Creek, DBQ, etc.)

I-Ready online instruction