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BACKGROUND

In the fall of 2014 the District established the Math Pathways Team. The purpose of the team included:

1. Clearly define data-driven benchmarks for placement in math pathways
2. Provide clear communication to teachers, students and parents about best instructional placement practices
3. Support and monitor the transition to the implementation of Common Core Math

The process to create the Math Pathways included cross-functional contributions from the elementary and secondary levels, including teachers and principals, as well as district administrators and support staff. Parent focus groups provided valuable feedback on the Math Pathways and the School Board approved the model in March 2015.

It is our standard practice to re-evaluate how effectively students’ needs are being met based on data and feedback. This Math Pathways guide provides parents with information about readiness for acceleration, the data used for Pathway Advancement Requests and learning resources for students interested in accelerating.

This document is also meant to direct schools, students and parents in identifying best practices for math placement success and course completion in both middle and high school.

IMPORTANCE OF EFFECTIVE MIDDLE SCHOOL MATH PLACEMENT

It is important to have an effective process for placing students in middle school mathematics courses so that foundational learning is maximized. Student learning is the primary concern. We want students to master mathematical concepts and practices in order to have success as they grow in their math competence. This sets the foundation for continued confidence and learning in future mathematics courses. Additionally, having an effective process is important since middle school placement may affect courses available to students in high school.

Middle school is an important time of transition—new school, new friends, physical and emotional changes, and increased opportunities to participate in the school community. Our goals are to find the right fit for the whole child, and to provide opportunities for students to move from one pathway to another when appropriate.
MATHEMATICS PATHWAYS

In order to serve all students, the Snoqualmie Valley School District provides multiple pathways for students to complete the mathematics courses that will prepare them for college and career.

Students who pursue the Core Pathway through middle school and then continue through Algebra 1, Geometry, and Algebra 2 will have the opportunity to complete Algebra 3 or Pre-Calculus in high school and will be ready to pursue college-level math courses after graduation. The Core Pathway should not be considered the “low” pathway. Students on the Core Pathway are working at grade level. Separate interventions and classes are available for struggling students.

Students who demonstrate readiness for and pursue the Accelerated Pathway through middle school and complete Pre-Calculus in high school will also be college-ready and will have had an opportunity to complete at least one additional higher level math course such as Calculus or Statistics in the senior year of high school.

For those students who meet requirements for and pursue the Exceptional Pathway through middle school and complete Pre-Calculus as sophomores, there is an opportunity to take at least two additional higher level math courses such as Calculus and Statistics in the junior and senior years of high school.

Students continue with the next math course in their Pathway sequence from grade to grade. However, there are opportunities for middle school students to change Pathways, either for struggling or failing students who would benefit from another year of experience with a course, or for students who demonstrate readiness for more challenge.
Snoqualmie Valley
School District

2020-21 Math Pathways for Middle and High Schools

Core Pathway
- Common Core 6
- Opportunity to advance after 8th grade using the Pathway Advancement Request process

Accelerated Pathway
- Common Core 6/7
- Covers all 6th grade and part of 7th grade standards in one year
- Opportunity to advance after 8th grade (continues from previous year) and all 8th grade standards in one year

Exceptional Pathway
- Common Core 7-8
- Covers all 7th grade and most 8th grade standards in one year

Grade 6
- Common Core 6

Grade 7
- Common Core 7
- Opportunity to advance by taking Geometry and Algebra 2 concurrently (after successful completion of Semester 1 Algebra)

Grade 8
- Common Core 8
- Opportunity to advance by taking Geometry and Algebra 2 concurrently

Grade 9
- Common Core Algebra 1
- Opportunity to advance by taking Geometry and Algebra 2 concurrently (one at school, other online)
- Common Core or Construction in Geometry

Grade 10
- 11th Grade Possible Options
  - Financial Algebra
  - Algebra 2
  - Bridge to College
  - Geometry (if needed)

Grade 11-12
- 12th Grade Possible Options
  - Algebra 2
  - Algebra 3
  - Pre-Calculus
  - AP Statistics

Grade 11
- Advanced Placement
  - AP Statistics
  - Pre-Calculus

Grade 12
- Advanced Placement
  - AP Statistics
  - Pre-Calculus
  - Calculus*
  - AP Calculus*

*Requires completion of Pre-Calculus

Advancement Opportunities
- Pathway Advancement Request
- Student registration choice

Students who are new to the District will be evaluated for placement based on transcript grades, previous assessment scores and may be given additional tests to assess or confirm knowledge and skills.
MATH PLACEMENT CRITERIA—5th TO 6th GRADE TRANSITION

Most students will begin middle school math on the Core Pathway in the Common Core 6 course in order to establish a firm foundation in mathematical concepts and practices. Initial math placement decisions for middle school students entering the Core, Accelerated and Exceptional pathways are based on:

- Student aptitude (as measured by the CogAT) and
- Student achievement (as measured by the ITBS-Math).

Smarter Balanced Assessment (SBA) math scores may also be utilized for placement. Beginning Fall 2017, students in the STREAM (Science, Technology, Reading, Engineering, Arts & Mathematics) gifted program will likely be placed in the Accelerated or Exceptional Pathway when entering 6th grade.

The scoring matrix described below is designed to give equal weight to academic achievement (ITBS) and cognitive ability (CogAT). This system is well grounded in research (see Lohman, D. & Renzulli, J. (2007): A simple procedure for combining ability test scores and achievement test scores to identify academically talented children).

Two steps are used to determine each student’s math pathway. Here is an example of how the process works:

1. Determine points based on CogAT Standard Age Score and ITBS Math Percentile Rank scores

<table>
<thead>
<tr>
<th>Sample Exceptional Student</th>
<th>Sample Core Student</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assessment</strong></td>
<td><strong>Score</strong></td>
</tr>
<tr>
<td>CogAT</td>
<td>138 (Standard Age Score)</td>
</tr>
<tr>
<td>ITBS Math</td>
<td>96 (Percentile Rank)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Standard Age Scores</th>
<th>Percentile Ranks</th>
<th>Points Earned</th>
</tr>
</thead>
<tbody>
<tr>
<td>140+</td>
<td>99+</td>
<td>8</td>
</tr>
<tr>
<td>136-139</td>
<td>99</td>
<td>7</td>
</tr>
<tr>
<td>132-135</td>
<td>98</td>
<td>6</td>
</tr>
<tr>
<td>128-131</td>
<td>96-97</td>
<td>5</td>
</tr>
<tr>
<td>124-127</td>
<td>93-95</td>
<td>4</td>
</tr>
<tr>
<td>120-123</td>
<td>89-92</td>
<td>3</td>
</tr>
<tr>
<td>116-119</td>
<td>84-88</td>
<td>2</td>
</tr>
<tr>
<td>113-115</td>
<td>80-83</td>
<td>1</td>
</tr>
<tr>
<td>0-112</td>
<td>0-79</td>
<td>0</td>
</tr>
</tbody>
</table>

Point values are assigned to Standard Age Scores in equal score ranges; percentile rank equivalents reflect the standard curve.
2 Add the Points earned for the CogAT an ITBS Math assessments and find the equivalent Domain Score. Domain score determines Math Pathway.

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Exceptional Points</th>
<th>Core Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>CogAT</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>ITBS Math</td>
<td>+5</td>
<td>+2</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domain Points</th>
<th>Percentile Equivalents</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>100</td>
</tr>
<tr>
<td>13</td>
<td>100</td>
</tr>
<tr>
<td>12 (circled)</td>
<td>99</td>
</tr>
<tr>
<td>11</td>
<td>99</td>
</tr>
<tr>
<td>10</td>
<td>98</td>
</tr>
<tr>
<td>9</td>
<td>97</td>
</tr>
<tr>
<td>8</td>
<td>96</td>
</tr>
<tr>
<td>7</td>
<td>94</td>
</tr>
<tr>
<td>6</td>
<td>92</td>
</tr>
<tr>
<td>5</td>
<td>90</td>
</tr>
<tr>
<td>4</td>
<td>87</td>
</tr>
<tr>
<td>3 (circled)</td>
<td>84</td>
</tr>
<tr>
<td>2 (circled)</td>
<td>80</td>
</tr>
<tr>
<td>1</td>
<td>75</td>
</tr>
<tr>
<td>0</td>
<td>1-72</td>
</tr>
</tbody>
</table>

- Students with a Domain score in the range of 0-3 will be placed in the Core Pathway
- Students with a Domain score in the range of 4-9 will be placed in the Accelerated Pathway
- Students with a Domain score in the range of 10-14 will be placed in the Exceptional Pathway

Interventions and non-Pathway classes are available to assist students in reaching grade-level standards.
MATH PLACEMENT CRITERIA—6th TO 7th GRADE TRANSITION

Students will continue with the next math course in their Pathway sequence when moving from 6th to 7th grade. However, 6th grade students who earn consistently high scores on tests and quizzes, and show strong proficiency with the Mathematical Practices (see page 12) may be good candidates to accelerate to a different pathway.

A goal of the District is to have more students, each year, prepared to advance from the Core Pathway to the Accelerated Pathway between 6th and 7th grade. Teachers and administrators believe the academic foundation built by students during the Common Core 6 course will allow additional students to be successful in a compacted, faster-paced course on the Accelerated Pathway as 7th graders.

Interested parents are encouraged to evaluate the Social and Emotional Readiness questions (see page 7) with their child and to submit a Pathway Advancement Request. See page 8 for more information about the process.

If a student in the Accelerated Pathway does not maintain a satisfactory grade they may be recommended to adjust pathways. Student learning is our primary concern. We want students to master mathematical concept and practices in order to have success as they grow in their math competence. Parents can also make this request through the school counselor.
STUDENT SOCIAL & EMOTIONAL READINESS TO ACCELERATE

Sometimes it can be difficult to determine if acceleration is the right decision for students. Parents who believe their child might benefit by accelerating to a faster paced, compacted pathway should discuss these readiness questions with their child.

☐ Does my child have a natural affinity for math? Or, does my child have to work hard to understand math?
☐ Does my child want to accelerate? What are my child’s reasons?
☐ Does my child take ownership for his/her learning? Does my child do homework without teacher or parent prompting?
☐ Does my child turn work in on time without reminders?
☐ Does my child have good time management skills?
☐ Is my child organized?
☐ Can my child balance school work and extra-curricular activities while caring for physical and emotional health?
☐ Does my child use effective coping skills when frustrated?
☐ What additional demands for time might my child face in high school that might impact a decision to accelerate in middle school (work, sports, community involvement)?
☐ Does my child consistently score well on assignments and assessments without retakes or extraordinary effort?
☐ Does my child have excellent attendance?
☐ Is my child able to complete math homework and prepare for tests with minimal help outside of school?
☐ For the Exceptional Pathway: Are my student and family willing to spend time during summer vacation to learn and master skills/concepts that will be skipped as a result of accelerating?

The authors of the Common Core Mathematic standards recommend that students should be accelerated using compacted (faster paced) curriculum rather than skipping content. The District agrees there is risk to student learning when content is skipped and strongly encourages parents to help students overcome any deficits before school starts.

Parents should be mindful of the timing for high school courses when making choices about middle school courses. For example, pre-calculus is an option for students on all pathways, but would be taken as a senior for a Core Pathway student, as a junior for an Accelerated Pathway student, and as a sophomore for an Exceptional Pathway student (see Pathways Map, page 3).
ADVANCEMENT REQUEST PROCESS—5TH AND 6TH GRADE STUDENTS

Parents who believe their child has been placed in a Math Pathway that is too difficult should simply contact their middle school Principal to request a different pathway. Parents who feel their child would benefit from a faster paced, compacted placement can submit a Pathway Advancement Request. An online Advancement Request form is available on the middle school websites under the Parents & Students tab. A sample Math Pathways Advancement Request form is available in the Appendix.

Parents of 5th may submit a Pathway Advancement Request to move from Core to Accelerated, or from Accelerated to the Exceptional Pathways. Typically, the Exceptional Pathway is for students who have been previously identified as highly capable in Math.

Parents of 6th grade students may submit a Pathway Advancement Request to move from the Core pathway to the Accelerated Pathway.

Advancement Requests will be considered if submitted within 10 working days after parent notification of the student’s math placement (five days for transfer students). See the Appendix for a sample Math Pathways Advancement Request form. Decisions on an Advancement Requests will consider a variety of data points which may include, but are not limited to, scores from the CogAT, ITBS-Math, STAR, SBAC, attendance, grades, teacher feedback on Mathematical Practices (see page 12) and parent feedback on Social and Emotional Readiness (see page 7).

Outside assessments will not be considered for math placement. Students who are new to the District will be evaluated for placement based on transcript grades, previous district assessment scores and may be given additional tests to assess or confirm knowledge and skills.

Algebra for All in Eighth Grade: What’s the Rush?

“Algebra in eighth grade should pass the same tests of quality that mathematicians and mathematics educators have consistently recommended for calculus in high school. Such ‘early’ courses should be offered only by well-prepared teachers to well-prepared and highly motivated students under circumstances that will enable every student who works hard to master the course at the same level as those who take it a year later. The most effective way to make ‘algebra for all’ a reality is for students to take it when they are ready—some in eighth grade, some in ninth, and some in tenth. What matters is not when students study algebra, but that they learn it well.”

Lynn Arthur Steen

(Retrieved from www.stolaf.edu/people/steen/Papers/algebra.html on 2/4/15)
Advancement Requests will be reviewed by a Multi-Disciplinary Advisory Team consisting of a math instructional coach and math Specialist, middle school Principals, several middle school math teachers (including all 6th grade math teachers), and the Director of Secondary Instruction. Parents with questions or concerns about placement decisions are invited to schedule time with the Director of Secondary Instruction to review the information used in their student’s Advancement Request review process.
**ONLINE ALTERNATIVES TO MATH PATHWAYS**

Middle school students may, at parent request, be placed into an online math class when an equivalent class is **not** available within the school. The Snoqualmie Valley School District will not register students, fund, or proctor an online math class when space is available in a class offered by the school. Parents can register their student, at their own cost, in an accredited online math program to be completed outside of school hours.

Parents who choose to register and pay for their student to take an online class will want to consider that movement between online math classes and ‘brick and mortar’ math classes may cause disruption in some students’ math pathways. The District has found that online providers’ curriculum does not typically mirror the Snoqualmie Valley School District curriculum; this is especially true for algebra instruction.

**ADDITIONAL ADVANCEMENT POSSIBILITY**

Students can advance by taking a Geometry class at the same time as an Algebra course. To access this option, students must have successfully completed 1st semester Algebra 1. There are several different configurations of this option (see below). Families are advised to contact school counselors to learn about the different options and choose the most appropriate one. Any online coursework needs to be provided by an [OSPI accredited provider](#).

<table>
<thead>
<tr>
<th>Alg 1 Sem 1</th>
<th>Alg 1 Sem 2</th>
<th>Summer</th>
<th>Alg 2 Sem 1</th>
<th>Alg 2 Sem 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geo Sem 1</td>
<td>Geo Sem 2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alg 1 Sem 1</th>
<th>Alg 1 Sem 2</th>
<th>Summer</th>
<th>Alg 2 Sem 1</th>
<th>Alg 2 Sem 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geo Sem 1</td>
<td>Geo Sem 2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alg 1 Sem 1</th>
<th>Alg 1 Sem 2</th>
<th>Summer</th>
<th>Alg 2 Sem 1</th>
<th>Alg 2 Sem 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geo Sem 1</td>
<td>Geo Sem 2</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Alg 1 Sem 1</th>
<th>Alg 1 Sem 2</th>
<th>Summer</th>
<th>Alg 2 Sem 1</th>
<th>Alg 2 Sem 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geo Sem 1</td>
<td>Geo Sem 2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
HIGH SCHOOL MATHEMATICS GRADUATION REQUIREMENTS

Current state and district requirements for high school graduation include three credits of math including: Algebra 1, Geometry, and a third math course that is either Algebra 2 or a rigorous high school level math course that will serve the student’s education and career goals.

A student who chooses to pursue a course other than Algebra 2 or a higher mathematics course for the third credit may meet with a high school counselor and his/her parent/guardian to discuss the student’s High School and Beyond Plan and the course that is more appropriate for the student’s education and career goals. For example, certain Career and Technical Education (CTE) classes, such as AP Computer Science, may serve as mathematics equivalency courses for the third math credit. A student with an Individual Education Plan (IEP) will meet the math graduation requirements prescribed by the IEP.

MATHEMATICS FOR CAREER AND COLLEGE READINESS

In preparation for college entrance, students will earn a minimum of three math credits including Algebra 1, Geometry, Algebra 2 and/or higher level math courses. Admission to a public four-year Washington state college or university also requires that a student complete a senior year math-based quantitative course if the student has not already completed a course of this level (e.g., Bridge to College, Pre-Calculus, Calculus, Statistics, Algebra 3, AP Physics, AP Chemistry, or AP Computer Science). High school course selections that will align with a student’s college plans should be reviewed with the high school counselors.
As noted in research, students who complete mathematics courses beyond Algebra 2 have more success in pursuing post-secondary degrees and in their career options. To provide opportunities for students to complete higher level mathematics courses that will positively impact their college and career success, careful consideration should be given to placements (and possible acceleration) that allow students opportunities to establish timelines permitting study of higher levels of mathematics. All Snoqualmie Valley School District mathematics pathways allow students to go beyond Algebra 2.

Access to higher level mathematics is essential and students are encouraged to take on challenging coursework. The Snoqualmie Valley School District has several high school math options to provide students increased opportunities for mathematical experiences that extend critical thinking and reasoning. The Algebra 3 course is intended for juniors who wish to take Pre-Calculus during their senior year and for college-bound seniors who desire to strengthen their essential algebra and Trigonometry skills. This course will enhance the higher level thinking skills developed in Algebra II through a more in-depth study of those concepts and exploration of some Pre-Calculus concepts. Algebra 3 is an NCAA approved course.

The Bridge to College Math course is intended for students who wish to strengthen crucial foundational skills before taking Algebra II and college-bound students who scored a Level 2 on the Math SBA. This course is designed around essential career and college readiness expectations to ensure that students passing the course are fully prepared for college-level coursework. Bridge to College Math is not NCAA approved, but does meet CADR requirements as a 4th year of math or quantitative reasoning course.

Near the end of the academic year, Algebra, Geometry and Algebra 2 students will receive a letter outlining future course options. The letter will include guidance for parents and students to help them select the best fit for them to prepare for the high school registration process.
COMMON CORE STATE STANDARDS FOR MATH (CCSS-M)

Washington is one of forty-three states that have adopted the CCSS-M that were developed to provide clarity and specificity to mathematics instruction, both in terms of content and practice. For kindergarten through eighth grade, there are standards defined around mathematical domains for each grade level. For high school mathematics, the standards are organized by conceptual themes (number and quantity, algebra, functions, modeling, geometry, and statistics and probability).

Besides content standards there are Mathematical Practice Standards that address “processes and proficiencies” tied to developing competencies in mathematics. These mathematical practices span all grade levels and emphasize proficiencies in problem solving, reasoning, communication, and strategic competence that should be developed in all students.

To access the Common Core State Standards for Math visit http://www.corestandards.org/Math/.

STANDARDS FOR MATHEMATIC AL PRACTICES

The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education.

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

MIDDLE SCHOOL MATHEMATICS COURSE DESCRIPTIONS*

*Although the focus of each course will remain the same, the content covered will be appropriately adjusted during the 2020-2021 school year in response to potential instructional gaps resulting from the Covid-19 school closure.

6TH GRADE MATH COURSES

COMMON CORE 6

Common Core 6 addresses all of the 6th grade standards as outlined by the Common State Core Standards. This course emphasizes rigor and real world relevance while teaching the Standards for Mathematical Practice. In the Common Core 6 course, students will study content in the following areas:

- Exponents and Order of Operations
- Multi-Digit Computation, Factors, and Multiples
- Fraction Operations
- Decimal Operations
- Algebraic Expressions and Properties
- Equations and Inequalities
- Area of Polygons
- Volume and Surface Area
- Ratios, Rates, and Proportional Reasoning
- Rational Numbers
- Statistics and Measures of Center and Variability
- Statistical Displays and Their Attributes

COMMON CORE 6/7

Common Core 6/7 addresses all of the 6th grade standards and the first part of the 7th grade standards as outlined by the Common State Core Standards. This course emphasizes rigor and real world relevance while teaching the Standards for Mathematical Practice. In the Common Core 6/7 course, students will study content in the following areas:

- Numerical Expressions and Factors
- Fractions and Decimals
- Algebraic Expressions and Properties
- Areas of Polygons
- Ratios and Rates
- Integers and the Coordinate Plane
- Equations and Inequalities
- Surface Area, Volume, and Nets
- Statistical Measurements
- Data Displays
- Integers
- Rational Numbers
- Proportions and Percentages

COMMON CORE 7 • 8

Common Core 7-8 addresses most of the 7th grade standards, and most of the 8th grade standards as outlined by the Common State Core Standards. This course emphasizes rigor and real world relevance while teaching the Standards for Mathematical Practice. In the Common Core 7-8 course, students will study content in the following areas:

- Integers
- Rational Numbers
- Expressions and Equations
- Inequalities
- Ratios, Proportions and Percentages
- Constructions and Scale Drawings
- Circles
- Surface Area and Volume of all solids
- Probability and Statistics
- Transformations, Angles, and Triangles
- Graphing Linear Equations
- Real Numbers and the Pythagorean Theorem
- Data Analysis and Displays
7th Grade Math Courses

**COMMON CORE 7**

Common Core 7 addresses all of the 7th grade standards as outlined by the Common State Core Standards. This course emphasizes rigor and real world relevance while teaching the Standards for Mathematical Practice. In the Common Core 7 course, students will study content in the following areas:

- Integers
- Rational Numbers
- Expressions and Equations
- Inequalities
- Ratios, Proportions and Percentages
- Constructions and Scale Drawings
- Circles
- Surface Area and Volume
- Probability and Statistics

**COMMON CORE 7 • 8**

There are two Common Core 7 • 8 classes taught in the middle schools and each uses a different textbook. Both courses prepare students to take Algebra 1. One course accommodates students changing Pathways between 6th and 7th grade (completed CC 6) so that early 7th grade content isn’t skipped. This class (coded as CC 7-8) addresses all 7th grade standards and most 8th grade standards. Students will study content in the following areas:

- Integers
- Rational Numbers
- Expressions and Equations
- Inequalities
- Ratios, Proportions and Percentages
- Constructions and Scale Drawings
- Circles
- Surface Area and Volume of all solids
- Probability and Statistics
- Transformations, Angles, and Triangles
- Graphing Linear Equations
- Real Numbers and the Pythagorean Theorem
- Data Analysis and Displays

The other Common Core 7 • 8 class is for students continuing on the Accelerated Pathway (completed CC 6/7) and addresses the second part of the 7th grade standards, and all of the 8th grade standards as outlined by the Common State Core Standards. In this course (CC 7/8), students will study content in the following areas:

- Integers
- Rational Numbers
- Expressions and Equations
- Inequalities
- Ratios, Proportions and Percentages
- Constructions and Scale Drawings
- Circles
- Surface Area and Volume of all solids
- Probability and Statistics
- Transformations, Angles, and Triangles
- Graphing Linear Equations
- Systems of Linear Equations
- Functions
- Real Numbers and the Pythagorean Theorem
- Data Analysis and Displays
7th Grade Math Courses (cont.)

**ALGEBRA 1**

Topics in the Algebra 1 course are aligned with the Common Core State Standards for Mathematics. Instruction emphasizes the Common Core Standards for Mathematical Practices that are integral to the coherence, focus and rigor necessary to develop students’ ability to make sense of problem situations. In the Algebra 1 course, students will study content in the following areas:

- Solving linear equations and inequalities and systems of linear equations and inequalities
- Exponential Functions
- Polynomial Equations and Factoring
- Graphing and Solving Quadratic Functions
- Radical Functions (if time permits)
8th Grade Math Courses

COMMON CORE 8
Common Core 8 addresses all of 8th grade standards as outlined by the Common State Core Standards. It also provides 8th grade students with a study of Linear Equations and Functions, preparing them for a full Algebra 1 course in 9th grade. This course emphasizes rigor and real world relevance while teaching the Standards for Mathematical Practice. In the Common Core 8 course, students will study content in the following areas:

- Surface Area and Volume of all solids
- Equations
- Probability and Statistics
- Transformations, Angles, and Triangles
- Graphing Linear Equations
- Systems of Linear Equations
- Functions
- Real Numbers and the Pythagorean Theorem
- Data Analysis and Display

ALGEBRA 1
Topics in the Algebra course are aligned with the Common Core State Standards for Mathematics. Instruction emphasizes the Common Core Standards for Mathematical Practices that are integral to the coherence, focus and rigor necessary to develop students’ ability to make sense of problem situations. In the Algebra 1 course, students will study content in the following areas:

- Solving linear equations and inequalities and systems of linear equations and inequalities
- Exponential Functions
- Polynomial Equations and Factoring
- Graphing and Solving Quadratic Functions
- Radical Functions (if time permits)

GEOMETRY
Topics in the Geometry course are aligned with the Common Core State Standards for Mathematics. Instruction emphasizes the Common Core Standards for Mathematical Practices that are integral to the coherence, focus and rigor necessary to develop students’ ability to make sense of problem situations. In the Geometry course, students will study content in the following areas:

- Congruence and Similarity
- Construction
- Proofs
- Right Triangle Trigonometry
- Circumference, Area, and Volume
- Quadrilaterals and other Polygons
- Connecting Algebra and Geometry through Coordinates
HIGH SCHOOL MATHEMATICS COURSE DESCRIPTIONS*

* Although the focus of each course will remain the same, the content covered will be appropriately adjusted during the 2020-2021 school year in response to potential instructional gaps resulting from the Covid-19 school closure.

Topics in the Algebra and Geometry courses are aligned with the Common Core State Standards for Mathematics. Instruction emphasizes the Common Core Standards for Mathematical Practices that are integral to the coherence, focus and rigor necessary to develop students’ ability to make sense of problem situations.

ALGEBRA 1

In the Algebra 1 course, students will study content in the following areas:

• Solving linear equations and inequalities and systems of linear equations and inequalities
• Exponential Functions
• Polynomial Equations and Factoring
• Graphing and Solving Quadratic Functions
• Radical Functions (if time permits)

GEOMETRY

In the Geometry course, students will study content in the following areas:

• Congruence and Similarity
• Construction
• Proofs
• Right Triangle Trigonometry
• Circumference, Area, and Volume
• Quadrilaterals and other Polygons
• Connecting Algebra and Geometry through Coordinates

ALGEBRA 2

In the Algebra 2 course, students will study content in the following areas:

• Graph, solve, and apply linear and absolute value equations within the context of Parent Functions
• Graph and apply Quadratic Functions
• Quadratic Equations and Complex Numbers
• Polynomial and Radical Functions
• Exponential and Logarithmic Functions and Inverses
• Trigonometric Ratios and Functions
• Probability or Sequences and Series (if time permits)
HIGH SCHOOL MATHEMATICS COURSE DESCRIPTIONS (CONT.)

ALGEBRA 3
Topics for the Algebra 3 course reinforce some content from Algebra 2 and prepares students for the Pre-Calculus course. In the Algebra 3 course, students will study content in the following areas:

- Graph, solve, manipulate and apply Parent Functions: Linear, Absolute Value, Quadratic, Polynomial, Radical, Rational, Exponential, And Logarithmic
- Trigonometric Ratios and Functions
- Conic Sections: Parabolas, Circles, Ellipses and Hyperbolas
- Sequences and Series

PRE-CALCULUS
Pre-Calculus combines the trigonometric, geometric, and algebraic techniques needed to prepare students for the study of calculus, and strengthens students’ conceptual understanding of problems and mathematical reasoning in solving problems. In the Pre-Calculus course, students will study content in the following areas:

- College Algebra
- Advanced Trigonometry: Unit Circle, Basic Functions, Reciprocal Functions, Graphs, Identities, and Modeling
- Analysis of all Elementary Functions and Curve-Sketching
- Limits

Bridge to College
This course is designed for students to improve their readiness for college-level math courses through building conceptual understanding, reasoning and mathematical skills. The course emphasizes modeling with mathematics and the Standards for Mathematical Practice found within Washington K-12 Mathematics Learning Standards (the Common Core State Standards, CCSS-M).
Financial Algebra
Students study algebra through real life financial concepts as it applies to business interests and personal financial management. Topics include:

- How to purchase a dream car and insure it
- How the student’s credit score can save them money
- Understanding the paycheck, managing income taxes, preparing a budget and making money work for them on the stock market
- Participate in hands-on stock market simulation, calculating profit and loss on investments
- Focus on achieving financial independence

*If a student enrolls in this class to satisfy a math requirement for graduation, the parent/guardian must sign a document acknowledging that they understand this course does not satisfy college-entrance math requirements, but it does meet the Washington State High School graduation requirement for a 3rd year math class.

Course descriptions for other higher level math courses can be found on the Mount Si High School website.
High School Course Map

Mathematics Courses

Math Pathways

3 Math Credits Required for Graduation
3-4 Recommended Math Credits for Competitive College Admissions

Grade 8th to 9th Transition

- Common Core 8
  - Algebra

- Algebra
  - Geometry / Geo in Construction

- Geometry
  - Algebra II

Grades 10th - 12th

Algebra

Geometry or Geo in Construction

Algebra II

11-12th Only
Financial Algebra *

11-12th Only
Triage to College Mathematics *

Pre-Calculus or CHS Pre-Calculus

AP Calculus AB

AP Statistics

* FINANCIAL ALGEBRA & BRIDGE TO COLLEGE MATHEMATICS - Enrollment in FINANCIAL ALGEBRA is by counselor recommendation only. Both courses fulfill the high school 3rd year math requirement but do not meet college admissions requirements for 4-year colleges and are not NCAA approved courses.
APPENDIX

SAMPLE ACCELERATION REQUEST FORM
Online form available on middle school websites under the Parents & Students tab.
Social and Emotional Readiness to Accelerate

Sometimes it can be difficult to determine if acceleration is the right decision for students. Parents who believe their child would benefit by accelerating to a faster paced, compacted pathway should discuss and answer these readiness statements with their child. Please be honest and feel free to provide additional information to clarify your responses.

1) My child has a natural affinity for math. *
   - Yes
   - Not really
   - Other:

Optional: Provide additional information

Your answer

2) My child has to work hard to understand math. *
   - Almost always
   - Sometimes
   - Almost never
   - Other:

Optional: Provide additional information

3) My child wants to accelerate. *
   - Yes
   - Not really
   - Other:

My child’s reasons for wanting to accelerate (or not) include: *

Your answer

4) My child takes ownership for his/her learning. *
   - Almost always
   - Sometimes
   - Almost never
   - Other:

Optional: Provide additional information

Your answer

5) My child does homework without teacher or parent prompting. *
   - Almost always
   - Sometimes
   - Almost never
   - Other:

Optional: Provide additional information

Your answer

6) My child turns work in on-time, without reminders. *
   - Almost always
   - Sometimes
   - Almost never
   - Other:

Optional: Provide additional information

Your answer
7) My child has good time management skills
   - Almost always
   - Sometimes
   - Almost never
   - Other: ____________________

   Optional: Provide additional information
   Your answer

8) My child is organized.
   - Almost always
   - Sometimes
   - Almost never
   - Other: ____________________

   Optional: Provide additional information
   Your answer

9) My child can balance school work and extra-curricular activities while caring for physical and emotional health.
   - Yes, no concerns
   - Most of the time
   - This is a challenge
   - Other: ____________________

   Optional: Provide additional information
   Your answer

10) My child uses effective coping skills when frustrated.
    - Almost always
    - Sometimes
    - Almost never
    - Other: ____________________

    Optional: Provide additional information
    Your answer

11) My child has excellent attendance.
    - Yes (fewer than 5 absences each year)
    - Attendance is average (between 6-11 absences each year)
    - Attendance can be a challenge (12 or more absences each year)
    - Other: ____________________

    Optional: Provide additional information
    Your answer

12) My child is able to complete math homework with minimal help.
    - Almost always
    - Sometimes
    - Almost never
    - Other: ____________________

    Optional: Provide additional information
    Your answer
13) My child is able to prepare for math tests with minimal help.
   *
   - Almost always
   - Sometimes
   - Almost never
   - Other:  

   Optional: Provide additional information

14) My child consistently scores well on assignments and assessments without retakes or extraordinary effort. *
   - Yes
   - Sometimes
   - No
   - Other:  

   Optional: Provide additional information

15) For students requesting advancement to the Exceptional Pathway: My student and family are willing to spend time during summer vacation to learn and master skills/concepts that will be skipped as a results of accelerating. *
   - Yes, not a problem
   - This might not be possible
   - No
   - Doesn't apply--I am requesting that my child advance to the Accelerated Pathway
   - Other:  

   Optional: Provide additional information

   Your answer
EXCEPTIONAL PATHWAY PLACEMENT—RESOURCES FOR LEARNING MISSED CONTENT

Fifth grade students who are placed on the Exceptional Pathway will skip an entire year of math instruction of the 6th grade Common Core State Standards. Families are responsible for creating a plan for their student to learn this material before class starts in the fall.

Follow these instructions to access the online textbook used in the Common Core 6 course (for 5th grade students placed on the Exceptional Pathway).

2. Click on “Looking for Easy Access Materials” just under the login prompt.
4. Choose the textbook with the green background and hot air balloon.
BIG IDEAS TEXTBOOKS USED IN VARIOUS MIDDLE SCHOOL MATH PATHWAY COURSES

These textbooks can be found under Easy Access Materials at www.bigideasmath.com. Algebra 1 and Geometry are High School Common Core texts; all others are Common Core 2014 publications.

Core Pathway

6th Grade

7th Grade

8th Grade

Accelerated Pathway

6th Grade

7th Grade

8th Grade

Exceptional Pathway

6th Grade

7th Grade

8th Grade
OUR MISSION
Educate all Snoqualmie Valley children to prepare them for college, career, and citizenship.

OUR VISION
To become the best school district in Washington State by any measure.

WE VALUE
• A focus on success for all students
• A clear and open communications environment
• Collaboration at all levels
• Dedication to continuous improvement and best practice
• Mutual respect
• Positive relationships
• High quality instruction
• Honesty and integrity
• Leadership
• Striving for innovation and excellence
• Transparent governance

EXPECT THE BEST: FROM OUR STUDENTS • OF OUR STAFF • FOR OUR COMMUNITY