PARKWAY CHRISTIAN SCHOOL

MATH CURRICULUM (HS)

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- The Pre-Algebra course focuses on introductory algebra topics in order to provide students with the foundation in Algebra, Geometry, and problem solving that they will need in the advanced courses. Educators design the course to facilitate the students' transition from the concrete concepts of arithmetic to the abstract concepts of algebra. Teachers present all mathematics from a Biblical Worldview perspective while meeting the framework of the Common Core Standards.

Textbook

- *Algebra 1/2, Saxon 3rd Edition*

MATH CURRICULUM (HS)

- Educators organize the content of Algebra 1 around families of functions, with special emphasis on linear and quadratic functions. As students learn about each family of functions, they will learn to represent them in multiple ways: verbal descriptions, equations, tables, and graphs. Students will also learn to model real-world situations using functions in order to solve problems arising from those situations. Teachers present mathematical concepts from a Biblical Worldview perspective while meeting the framework of the Common Core Standards.

Textbook

- *Algebra 1, Larson Boswell Kanold Stiff, McDougal Littell 2007*

MATH CURRICULUM (HS)

- This class focuses on plane and solid figures and their properties. A major emphasis is on properties and relationships of triangles as well as using postulates and theorems to solve problems. Educators also introduce coordinate graphing, slope, and linear equations. Students develop "reasoning and problem-solving skills" as they "study topics such as congruence and similarity, and apply properties of lines, triangles, quadrilaterals, and circles." They also "develop 8 problem-solving skills by using length, perimeter, area, circumference, surface area, an volume to solve real-world problems" (McDougal Littell, 2007). Teachers present all mathematical concepts from a Biblical Worldview perspective while meeting the framework of the Common Core Standards.

Textbook

- *Geometry, Larson Boswell Kanold Stiff, McDougal Littell 2007*

MATH CURRICULUM (HS)

- This class focuses on plane and solid figures and their properties. A major emphasis is on properties and relationships of triangles as well as using postulates and theorems to solve problems. Educators also introduce coordinate graphing, slope, and linear equations. Students develop "reasoning and problem-solving skills" as they "study topics such as congruence and similarity, and apply properties of lines, triangles, quadrilaterals, and circles." They also "develop problem-solving skills by using length, perimeter, area, circumference, surface area, and volume to solve real-world problems" (McDougal Littell, 2007). Students in the honors course move at an accelerated pace and with greater conceptual depth. Teachers present all mathematical concepts from a Biblical Worldview perspective while meeting the framework of the Common Core Standards.

Textbook

- *Geometry, Larson Boswell Kanold Stiff, McDougal Littell 2007*

MATH CURRICULUM (HS)

- Educators organize the content of Algebra 2 around families of functions, including linear, quadratic, exponential, logarithmic, radical, and rational functions. As students study each family of functions, students will learn to represent them in multiple ways: verbal descriptions, equations, tables, and graphs. Students also learn to model real-world situations using functions in order to solve problems arising from those situations. Students in the honors level course move at an accelerated pace and with greater conceptual depth. Teachers present all mathematical concepts from a Biblical Worldview perspective while meeting the framework of the Common Core Standards.

Textbook

- *Algebra 2, Larson Boswell Kanold Stiff, McDougal Littell 2007*

MATH CURRICULUM (HS)

- Educators organize the content of Algebra 2 around families of functions, including linear, quadratic, exponential, logarithmic, radical, and rational functions. As students study each family of functions, students will learn to represent them in multiple ways: verbal descriptions, equations, tables, and graphs. Students also learn to model real-world situations using functions in order to solve problems arising from those situations. Students in the honors level course move at an accelerated pace and with greater conceptual depth. Teachers present all mathematical concepts from a Biblical Worldview perspective while meeting the framework of the Common Core Standards.

Textbook

- *Algebra 2, Larson Boswell Kanold Stiff, McDougal Littell 2007*

MATH CURRICULUM (HS)

- Pre-Calculus is a college preparatory course. Students continue to build upon the problem solving foundation built in Algebra 1 & 2 and Geometry. Educators place focus on strengthening algebra skills and understanding functions of all types: linear, quadratic, exponential, logarithmic, cubic, higher order polynomials and rational functions. Additionally, the course spends extensive time building strong trigonometry skills. Through the study of mathematics, students understand that God developed mathematics and that it is the language of science. Teachers present all mathematical concepts from a Biblical Worldview perspective while meeting the framework of the Common Core Standards.

Textbook

- *Pre Calculus 7th Edition, Larson and Hostetler*

MATH CURRICULUM (HS)

- Honors Pre-Calculus is a college preparatory course. Students continue to build upon the problem-solving foundation built in Algebra 1 & 2 and Geometry. Topics include functions of all types, trigonometry, conic sections, counting principles, and an introduction to calculus by covering limits and derivatives. Honors Pre-Calculus students move through the content at a brisk pace, and educators expect students to solve the most difficult level of problems. Through the study of mathematics, students understand that God developed mathematics and that it is the language of science. Teachers present all mathematical concepts from a Biblical Worldview perspective while meeting the framework of the Common Core Standards.

Textbook

- *Pre Calculus 7 th Edition, Larson and Hostetler*

MATH CURRICULUM (HS)

- Educators expects students to know the graphs of basic functions; basic trig functions, e^x, ln(x); and simple polynomials. Students will use their familiarity of the graphs' properties in order to find points of intersection, areas, and volumes of solids of revolution. Students will recognize an unknown point on the graph, for example: (x, f(x)), and use the unknown point in solving problems. They will use the graphs of both common and uncommon functions and their understanding of calculus to predict and explain observed local and global behavior. Teachers hold students accountable for the mechanical processes as well as the conceptual meaning behind limits, derivatives, and integration and present mathematical concepts from a Biblical Worldview perspective while meeting the framework of the Common Core Standards.

Textbook

- *Calculus of a Single Variable, Larson Hostetler Edwards, 8th Edition*