**Challenger Middle School Course Syllabus Course Name: Project Math Grade: 8**

**Quarter 1 Start Date: August 30, 2023 Quarter 1 End Date: November 3, 2023**

**Quarter 2 Start Date: November 6, 2023 Quarter 2 End Date: January 30, 2024**

**Quarter 3 Start Date: January 31, 2024 Quarter 3 End Date: Apr 12, 2024**

**Quarter 4 Start Date: Apr 15, 2024 Quarter 4 End Date: Jun 14, 2024**

**7th/8th Grade Project Math**

**CEDARS Course Code:**

**Course Code:**

**Certificated Teacher: Allison Sampson**

**Grading:** A, B, C, D, F

**Course Description:**

Project based support and intervention of seventh and 8th grade math skills using manipulatives and real world examples. Review and application of fractions, decimals, unit rates, percentages, and equivalency. Applying skills to kitchen measurements and cooking as well as budgeting based on a set income and cost of living, to include credit: exploring mortgages, loans and credit cards. Hands on labs to allow for practice of skills in real situations and help students to see the relevance of their learning.

**Text/Resources Provided:**

**Online resources:**

Career database

Google drive

**Fractions**

-equivalent fractions

-adding and subtracting fractions

-multiplying and dividing fractions

-mixed numbers and fractions

**Equivalent Units**

-decimals, percentages, fractions

**Kitchen Math**

-fractions

-volume

-parts to whole (ex. 4 qrts to 1 gallon)

-application/lab

**Adulting**

-application of unit rates, percentages

-interest

-budgeting

-reading a pay stub

-differences in bank accounts

-bank loans

-credit cards

-cost of living

**7th Grade Math Standards Supported by Project Math**

7.MP1 Make sense of problems and persevere in solving them

7.MP2 Reason abstractly and quantitatively.

7.MP4 Model with mathematics.

7.MP5 Use appropriate tools strategically.

7.MP6 Attend to precision.

7.MP7 Look for and make use of structure.

7.MP8 Look for and express regularity in repeated reasoning.

7.NS.A Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers.

-7.NS.A.1 Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.

-7.NS.A.2 Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.

-7.NS.A.3 Solve real-world and mathematical problems involving the four operations with rational numbers.

7.EE.A Use properties of operations to generate equivalent expressions.

7.EE.B Solve real-life and mathematical problems using numerical and algebraic expressions and equations.

7.G.B Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.

7.SP.A Use random sampling to draw inferences about a population.

7.SP.B Draw informal comparative inferences about two populations.

7.SP.C Investigate chance processes and develop, use, and evaluate probability models.

7.RP.A Analyze proportional relationships and use them to solve real-world and mathematical problems.

7.G.A Draw, construct and describe geometrical figures and describe the relationships between them.

**8th Grade Math Standards Supported by Project Math**

8.MP1 Make sense of problems and persevere in solving them.

8.MP2 Reason abstractly and quantitatively.

8.MP3 Construct viable arguments and critique the reasoning of others.

8.MP4 Model with mathematics.

8.MP5 Use appropriate tools strategically.

8.MP6 Attend to precision.

8.MP7 Look for and make use of structure.

8.MP8 Look for and express regularity in repeated reasoning.

8.NS.A Know that there are numbers that are not rational, and approximate them by rational numbers.

**8.EE.5** Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways.

**8.EE.7** Solve linear equations in one variable.

b. Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions.

**8.G.7** Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.

**8.G.8** Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.

8.SP.A Investigate patterns of association in bivariate data.