Dominican International School

SUBJECT: GRADE 5 MATHEMATICS

GRADE LEVEL: 5 **SCHOOL YEAR: 2022-23**

TEACHERS: Mr. Jonathan Snider **EMAIL: jsnider@dishs.tp.edu.tw**

Mr. Stephen Black **EMAIL: sblack@dishs.tp.edu.tw**

COURSE DESCRIPTION:

This course will help create a foundation for clear mathematics in each student. The course is designed to allow students to master the Common Core State Standards (CCSS) for this grade level. The CCSS aim to provide a consistent, clear understanding in a way that promotes mathematical connections throughout the different units to help emphasize the natural relationships between mathematical concepts. This will help students realize that math is not a series of small disconnected aspects, but a continuum. Balanced instructions will be used to guide students within the realms of making connections, generalizations, and using knowledge effectively. Problem Solving and Mathematical Practice skills are integrated into every unit, prompting students to make sense of problems and persevere in solving them. Students will have opportunities to explain their thinking, justify a solution, express regularity in repeated reasoning, and share their strategies for arriving at results or identify alternative or more efficient strategies.

COURSE OBJECTIVES:

Quarter 1:

In Quarter 1, students will understand concepts based around place value. Students will have knowledge on how to write numbers using exponents. Students will be able to express their understanding by rounding decimals, and using problem-solving skills to add and subtract decimals to the hundredths. Students will be able to show fluency in multiplying multi- digit whole numbers by using mental math to multiply whole numbers by the power of ten. Students will have opportunities to show their understanding by solving word problems involving multiplication.

Quarter 2:

In Quarter 2, students will be able to apply a variety of different models and strategies to multiply decimals. Students will have gained knowledge on different strategies, including estimation to divide whole numbers. Students will be able to show understanding of core concepts related to volume, and be able to solve word problems using this knowledge. Students will have an understanding of how to convert commonly used metric units of length, capacity and mass.

Quarter 3:

In Quarter 3, students will have a greater understanding of operations with fractions. They will have the opportunity to showcase their understanding by being able use equivalent fractions to add and subtract fractions. They will be able to determine common denominators, and use models to add mixed numbers. Students will be able to multiply and divide fractions by whole numbers, as well as fractions.

Quarter 4:

In Quarter 4, students will be able to interpret and represent line data. They will be able to solve word problems using measurement data. Students will be able to show understanding of the order of operations and using reasoning to evaluate expressions. Students will have gained knowledge within graphing points on a coordinate plane, and be able to analyze patterns and relationships. They will also be able to classify two-dimensional figures using geometric measurement.

PRIMARY TEXTBOOK & OTHER RESOURCES:

enVisionMath 2.0 *Pearson*: 2016

ASSESSMENT:

Students will have the opportunity to work individually, in small groups, and in whole class settings. During class time, mini whiteboards will be frequently employed to ensure the teacher can get immediate feedback that can be used to ensure understanding, or to allow the teacher to modify future lessons or teaching strategies for either whole class or individuals. Students will be assessed formatively through their in-class work and homework. There will be final unit and quarterly exams for summative assessment throughout the year.

Essential questions that students will be expected to be able to answer by the end of the year include, but are not limited to;

	Why is mathematics useful and necessary in real life?
Topic 1	How are whole numbers and decimals written, compared, and ordered?
Topic 2	How can sums and differences in decimals be estimated?
	What are the standard procedures for adding and subtracting whole numbers and decimals?
	How can sums and differences be found mentally?
Topic 3	What are the standard procedures for estimating and finding products of multi-digit numbers?
Topic 4	What are the standard procedures for estimating and finding products involving decimals?
Topic 5	What is the standard procedure for division and why does it work?

Topic 7	How can sums and differences of fractions and mixed numbers be estimated?
	What are standard procedures for adding and subtracting fractions and mixed numbers?
Topic 8	What does it mean to multiply whole numbers and fractions?
	How can multiplication with whole numbers and fractions be shown using models and symbols?
Topic 9	How are fractions related to division?
	How can you divide with whole numbers and unit fractions?
Topic 10	What is the volume of a solid? How can the volume of a rectangular prism be found?
Topic 11	What are metric measurement units and how are they related?
Topic 12	How can line plots be used to represent data and answer questions?
Topic 13	How is the value of a numerical expression found?
Topic 14	How are points plotted? How are relationships shown on a graph?
Topic 15	How can number patterns be analyzed and graphed?
	How can number patterns and graphs be used to solve problems?
Topic 16	How can triangles and quadrilaterals be described, classified, and named?

ADDITIONAL INFORMATION: - See Google Classroom for more information

Please check Google Classroom regularly for information on specific lessons and assignments. Please note that all set assignments are expected to be completed to the best of one's ability, and on time. Students who cannot meet the expected standards, cannot submit work on time, or do not routinely bring the required materials to class, may find the course challenging. Completing work on time allows students to reflect on and take pride on their own work when given positive feedback, as well as to use the guidance given by the teacher to work on their own areas for development. Students who have not turned the work in on time will not be able to benefit from such advice. As students always have at least 3 days to complete basic homework or class work tasks, and at least two weeks to prepare and work on bigger projects, failure to turn work in on time without reasonable reason means the assessment grade will be capped at a maximum of 70%.

Class code: 27vzf2e (Mr. Black) TO BE UPDATED

Class code: 3hntu7r (Mr. Snider) TO BE UPDATED

(NB: Depending on time and interest, the teacher may delete and/or add other selections.)	
Week / Date	Topic / Projects / Assessments
Week 1 **Aug 10th to 12th** **3 Days of Class** *10~ First Day / Orientation Day*	Getting to Know You Activities and Introduction to Course Expectations
Week 2 **Aug 15th to 19th** *Opening Mass*	Lesson 1.1 Patterns with Exponents and Powers of 10 p5-10 Lesson 1.2 Understand Whole-Number Place Value p11-16 Lesson 1.3 Decimals to Thousandths p17-22
Week 3 **Aug 22nd to 26th**	Lesson 1.4 Understand Decimal Place Value p23-28 Lesson 1.5 Compare Decimals p29-34 Lesson 1.6 Round Decimals p35-40
Week 4 **Aug 29th to Sep 2nd**	**Topic 1 Test** Lesson 2.1 Mental Math p59-64 Lesson 2.2 Estimate Sums and Differences p65-70 Lesson 2.3 Use Models to Add and Subtract Decimals p71-76
Week 5 **Sep 5th to 9th** **4 Days of Class** *8~ Mass &Birthday Mother Mary* *9th – Moon Festival*	Lesson 2.4 Add Decimals p77-82 Lesson 2.5 Subtract Decimals p83-88 Lesson 2.6 Add and Subtract Decimals p89-94
Week 6 **Sep 12th to 16th** FYI – Pre-Exam Days	**Topic 2 Test** Lesson 3.1 Multiply Greater Numbers by Powers of 10 p113-118 Lesson 3.2 Estimate Products p119-124
Week 7 **Sep 19th to 23rd**	Lesson 3.3 Multiply 3-Digit by 2-Digit Numbers p125-130 Lesson 3.4 Multiply Whole Numbers with Zeros p131-136 Lesson 3.5 Multiply Multi-Digit Numbers p137-142
Week 8 **Sep 26th to 30th** **2 Days of Class** *28-30 ~Teacher's Conference*	Lesson 3.6 Solve Word Problems Using Multiplication p143-148 **Topic 3 Test**
Week 9 **Oct 3rd to 7th** **3 Days of Class** *6-7 ~Q1 Exams*	**Quarter Review & QUARTER EXAM**

2nd QUARTER – TENTATIVE COURSE CONTENT

(NB: Depending on time and interest, the teacher may delete and/or add other selections.)

Week / Date	Topic / Projects / Assessments
Week 1 (10) **Oct 10th to 14th** **4 Days of Class** *10 – Double 10 Holiday*	Lesson 4.1 Multiply Decimals by Powers of 10 p165-170 Lesson 4.2 Estimate the Product of a Decimal and a Whole Number p171-176 Lesson 4.3 Use Models to Multiply a Decimal and a Whole Number p177-182
Week 2 (11) **Oct 17th to 21st**	Lesson 4.4 Multiply a Decimal by a Whole Number p183-188 Lesson 4.5 Use Models to Multiply a Decimal and a Decimal p189-194 Lesson 4.7 Use Properties to Multiply Decimals p201-206
Week 3 (12) **Oct 24th to 28th** *25-27 – Book Fair* *28- Masquerade Night* *TBA-Holy Rosary Mass*	Lesson 4.8 Use Number Sense to Multiply Decimals p207-212 Lesson 4.9 Multiply Decimals p213-218 **Topic 4 Test**
Week 4 (13) **Oct 31st to Nov 4th** *1-All Saint's Day Mass*	Lesson 5.1 Use Patterns and Mental Math to Divide p239-244 Lesson 5.2 Estimate Quotients with 2-Digit Divisors p245-250 Lesson 5.3 Use Models to Divide with 2-Digit Divisors p251-256
Week 5 (14) **Nov 7th to 11th**	Lesson 5.5 Divide by Multiples of 10 p263-268 Lesson 5.6 Use Estimation to Place the First Digit of the Quotient p269-274 Lesson 5.7 Divide by 2-Digit Divisors p275-280
Week 6 (15) **Nov 14th to 18th**	**Topic 5 Test** Lesson 10.1 Model Volume p587-592 Lesson 10.2 Develop a Volume Formula p593-598 Lesson 10.3 Volume of Prisms p599-604
Week 7 (16) **Nov 21st to 25th** *25 - YSC Contest* *25-Gr.12 Q2 Exam*	Lesson 10.4 Combine Volumes of Prisms p605-610 Lesson 10.5 Solve Word Problems Using Volume p611-616 **Topic 10 Test**
Week 8 (17) **Nov 28th to Dec 2nd** FYI – Pre-Exam Days *28-Gr.12 Q2 Exam*	Lesson 11.4 Convert Metric Units of Length p657-662 Lesson 11.5 Convert Metric Units of Capacity p663-668 Lesson 11.6 Convert Metric Units of Mass p669-674
Week 9 (18) **Dec 5th to 9th** 8 - Foundation Day Celebrations	**Topic 11 Test** Quarter Review
Week 10 (19) **Dec 12th to 16th** **3 Days of Class** *15-16 ~Q2 Exams*	**QUARTER EXAM** and Christmas Activities
Dec 19th to Jan 2nd	**Christmas Break**

3rd QUARTER – TENTATIVE COURSE CONTENT

(NB: Depending on time and interest, the teacher may delete and/or add other selections.)

Week / Date	Topic / Projects / Assessments
Week 1 (20) **Jan 5 to 6th** **2 Days of Class**	Lesson 7.1 Estimate Sums and Differences of Fractions p371-376
Week 2 (21) **Jan 9th to 13th**	Lesson 7.2 Find Common Denominators p377-382 Q3 Week 21 Lesson 7.3 Add Fractions with Unlike Denominators p383-388 Lesson 7.4 Subtract Fractions with Unlike Denominators p389-394
Week 3 (22) **Jan 16th to 20th**	Lesson 7.5 Add and Subtract Fractions p395-400 **Topic 7.1 - 7.5 Test** Lesson 7.6 Estimate Sums and Differences of Mixed Numbers p401-406
Jan 23rd to 27th	**Chinese New Year**
Week 4 (23) **Jan 30th to Feb 3rd**	Lesson 7.8 Add Mixed Numbers p413-418 Lesson 7.10 Subtract Mixed Numbers p425-430 Lesson 7.11 Add and Subtract Mixed Numbers p431-436 **Topic 7.6 - 7.11 Test**
Week 5 (24) **Feb 6th to 10th**	Lesson 8.1 Use Models to Multiply a Whole Number by a Fraction p457-462 Lesson 8.2 Use Models to Multiply a Fraction by a Whole Number p463-468 Lesson 8.3 Multiply Fractions and Whole Numbers p469-474
Week 6 (25) **Feb 13th to 17th**	Lesson 8.4 Use Models to Multiply Two Fractions p475-480 Lesson 8.5 Multiply Two Fractions p481-486 Lesson 8.7 Multiply Mixed Numbers p493-498 **Topic 8 Test**
Week 7 (26) **Feb 20th to 24th** *20-24 ~IOWA* *22 ~ Ash Wednesday Mass* *21-23 ~ Pre-Exam Days*	Lesson 9.1 Fractions and Division p527-532 Lesson 9.2 Fractions and Mixed Numbers as Quotients p533-537
Week 8 (27) **Feb 27th to March3rd** **3 Days of Class** 27-28 ~ 228 Memorial Day Holiday	Lesson 9.3 Use Multiplication to Divide p538-544 Lesson 9.4 Divide Whole Numbers by Unit Fractions p545-550 Lesson 9.5 Divide Unit Fractions by Non-Zero Whole Numbers p551-556 Lesson 9.6 Divide Whole Numbers and Unit Fractions p557-562
Week 9 (28) **March 6th to 10th** **4 Days of Class** *11 – Q3 Exams*	**Topic 9 Test** **QUARTER EXAM**

4th QUARTER – TENTATIVE COURSE CONTENT

(NB: Depending on time and interest, the teacher may delete and/or add other selections.)

Week / Date	Topic / Projects / Assessments
Week 1 (29) **March 13th to 17th** **4 Days of Class** *13 – Q3 Exams* *14~ Q4 Begins*	Lesson 12.1 Analyze Line Plots p699-704 Lesson 12.2 Make Line Plots p705-710 Lesson 12.3 Solve Word Problems Using Measurement Data p711-716
Week 2 (30) **March 20th to 24th** *20 ~ Fire Drill*	Lesson 12.4 Critique Reasoning p717-722 **Topic 12 Test** Lesson 13.1 Order of Operations p735-740
Week 3 (31) **March 27th to 31st**	Lesson 13.2 Evaluate Expressions p741-746 **Topic 13 Test** Lesson 14.1 The Co-ordinate System p777-782 Lesson 14.2 Graph Data Using Ordered Pairs p783-788
Apr 3rd to 14th	**Easter Break**
Week 4 (33) **Apr 17th to 21st**	Lesson 14.3 Solve Problems Using Ordered Pairs p789-794 Lesson 15.1 Numerical Patterns p813-818 Lesson 15.2 More Numerical Patterns p819-824
Week 5 (34) **Apr 24th to 28th** 24-28 ~ AP Mock Exams	Lesson 15.3 Analyze and Graph Relationships p825-830 **Topic 14 & 15 Test** Lesson 16.1 Classify Triangles p851-856
Week 6 (35) **May 1st to 5th** *2-4~ Pre-Exam* *1-5~ Final Exams (K, 5, 8, 12 only)* *1-5 ~ AP Exams*	Lesson 16.2 Classify Quadrilaterals p857-862 Lesson 16.3 Continue to Classify Quadrilaterals p863-868 **Topic 16 Test**
Week 7 (36) **May 8th to 12th** *8-12~ Final Exams(K, 5, 8, 12 only)* *1-5 ~ AP Exams*	**Quarter Review**
Week 8 (37) **May 15th to 19th** **3 Days of Class** *18-19~ Q4 Exams*	**QUARTER EXAM**
Week 9 (38) **May 22nd to 26th** **4 Days of Class** *22~ Record Day* *23-26 ~ Student Clearance*	Graduating & Promoting Classes - no lessons
Week 10 (39) **May 29th to June 2nd** **4 Days of Class** *1 ~ Students Last Day* *2~ Teachers/Staff Meeting*	Graduating & Promoting Classes - no lessons