Mathematics 8
Course Outline
Fairview High School
2022-2023

INSTRUCTOR: Miss K. Wyness, wynessk@prsd.ab.ca

RESOURCE: Math Links Eight, McGraw-Hill Rhyerson, 2008

COURSE OBJECTIVE:

The main goals of mathematics education are to prepare students to:
- use mathematics confidently to solve problems
- communicate and reason mathematically
- appreciate and value mathematics
- make connections between mathematics and its applications
- commit themselves to lifelong learning
- become mathematically literate adults, using mathematics to contribute to society.

Students who have met these goals will:
- gain understanding and appreciation of the contributions of mathematics as a science, philosophy and art
- exhibit a positive attitude toward mathematics
- engage and persevere in mathematical tasks and projects
- contribute to mathematical discussions
- take risks in performing mathematical tasks
- exhibit curiosity

GENERAL EXPECTATIONS:
- **REGULAR ATTENDANCE** – Attendance is one of the most important factors for academic success. If an absence is unavoidable, it is YOUR responsibility to catch up on work that you missed. Please make arrangements with me or a classmate to obtain missed materials. If you miss a test due to an excused absence, you may write the test at lunch or in class on the first day back.
- **ARRIVE ON TIME** – When the bell goes, I expect you to be in your desk, with your books open and phone put away, ready to start class. If lateness is unavoidable, please enter the classroom with a minimum of disruption.
- **COME PREPARED** – Please bring books, pencils, calculators, etc. to class each day. All math is to be done in **pencil**. All handouts, quizzes, assignments, and exams are to be kept in order in a binder. These will assist you as a study guide.

- **ASSIGNMENTS** – All assignments are due at the beginning of class, on or before the due date. If you need extra time for an assignment please make arrangements with me prior to the due date.
- **WORK HABITS** – It is expected that students use class time to the best of their abilities for the whole period every class. While I am providing instruction, I expect you to be listening and **NOT** talking. You may of course raise your hand to ask questions or make comments. Mature, respectful behaviour is a necessity for all members of the class.

TEACHING METHODOLOGY:

Students will be taught through a variety of different instructional methods and strategies including, but not limited to: lecture, questions and answer discussion, small group work, independent learning, individual tutorials, use of manipulatives, and technological means including the use of a Smartboard, videos, online tools, and where appropriate personal owned devices.

ELECTRONIC DEVICES:
- Cell phones and other electronic devices may only be used at times indicated by the teacher. Please refrain from using them to make calls or text message during class time. If consistently used inappropriately, they will be placed in the main office.
- All electronic devices must be placed on the teacher's desk during quizzes and exams.

COURSE OUTLINE: *Dates are approximate*

UNIT	TOPIC (Chapter)	TIMELINE
1.	Representing Data (Ch 1)	Sept. 6 – Sept. 22

- advantages and disadvantages of different graphs
- misrepresenting data

2.	Integers (Ch 8)	Sept. 26 – Oct. 14

- review rules of addition and subtraction of integers
- multiplication and division of integers
- solving problems involving integers
- order of operations with integers

3.   Ratios, Rates and Proportions (Ch 2)   Oct. 17 – Nov. 4

- equivalent ratios and proportion
- rate, unit rates, and unit prices

4.   Squares and Square Roots (Ch 3)   Nov. 7 – Nov. 18

- squares and square roots
- estimating square roots

5.   Understanding Percents (Ch 4)   Nov. 21 – Dec. 16

- representing % pictorially
- finding the percent
- converting fractions to % to decimals
- applications and problems involving percent

6.   Pythagorean Relationship (Ch 3)   Jan. 9 – Jan. 27

- Pythagorean theorem
- applications and problems Pythagorean theorem

7.   Fraction Operations (Ch 6)   Jan. 31 – Feb. 16

- review addition and subtraction of fractions
- multiplication of fractions
- division of fractions
- applications of the above skills
- order of operations involving fractions

8.   Probability (Ch 11)   Feb. 21 – Mar. 8

- collecting data
- making predictions
- probability and independent events

9.   Linear Relations and Solving Linear Equations (Ch 9 & 10)   Mar. 13 – Apr. 21

- creating a table of values from a graph
- determining a table of values from an equation
- solving two step equations with parentheses
- using equations to solve problems
- writing equations
- solving one step and two step equations
- using equations to solve problems

10.   Surface Area (Ch 5)   Apr. 24 – May. 11

- review basic area formulas
- names of different 3D solids
- label and draw 3D shapes and objects
- label and draw nets of 3D objects
- surface area of right prisms and cylinders
- problems involving the above skills

11.   Volume (Ch 7)   May 15 – June 2

- determining volume of rectangular prisms, triangular prisms and right cylinders

- problems involving the above skills

12.   Tessellations (Ch 12)   June 5 – June 9

- transformations
- demonstrating congruency with regular and irregular polygons

Review   June 12 – June 16

Finals   June 19 – June 23

EVALUATION:

45%   Assignments/Quizzes

30%   Unit Exams

25%   Final Examination

Keep track of your marks as they will be posted online regularly. Regular attendance and consistent work habits are the key to your success in this course. Extra help is available at noon hour and after school and it is your responsibility to ask. IF you do your homework, review your work and study for quizzes/exams; you should be successful in Math 8! Your success depends on YOU! Have a great year and have fun!