

Mathematics 10 Course Outline

Textbook: Mathematical Modeling Book 1 (Replacement cost \$54.45)

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Materials Needed:

- A three-ring binder with lots of lined paper
- A ruler, graph paper, pencils, erasers
- Scientific calculator
- Duotang or letter-size file folder (to be left in the classroom)
- Graphing calculators will be provided for class use

General Outcomes:

1. Students will be expected to demonstrate number sense and apply number theory concepts.
2. Students will be expected to demonstrate operation sense and apply operation principles and procedures in both numeric and algebraic situations.
3. Students will be expected to explore, recognize, represent, and apply patterns and relationships, both formally and informally.
4. Students will be expected to demonstrate and understanding or and apply concepts and skills associated with measurement.
5. Students will be able to demonstrate spatial sense and apply geometric concepts, properties and relationships.
6. Students will solve problems involving the collection, display and analysis of data.

Topics Covered in Mathematics 10:

Chapter 3 - Patterns, Relations, and Equations

(25 classes)

- Describing patterns
- Solving equations
- Calculating intersection points
- Exploring rational exponents
- Linear functions of the form $y = mx + b$
- Factoring

Chapter 7 - Linear Programming

(7 classes)

- Inequalities
- Feasible Regions
- Solving Systems of Equations using substitution and elimination
- Solving problems using linear programming

Chapter 4 - Modeling Functional Relationships

(25 classes)

- Factoring
- Tables, graphs and connections
- Relations and functions
- Equipping your function toolkit
- Algebraic models

Chapter 5 - Properties of Triangles and Trigonometry (15 classes)

- Ratios based on right triangles
- Pythagorean Theorem
- Square roots and their properties
- Defining trigonometric ratios
- Applications of trigonometry

Chapter 1 - Data Management (10 classes)

- Variables and relationships
- Interpreting measurements
- Describing data
- Defining data spread
- The normal curve
- Interpreting data and making predictions

Chapter 6 - Geometry of packaging (15 classes)

- volume
- surface area
- economy of packaging

Chapter 2 - Networks and Matrices

- Network graphs
- Digraphs and Adjacency Matrices

Assessment:

Tests: If you are absent for a test, a written excuse from a parent or guardian must be provided. Be prepared to write any missed tests on the day you return to class.

Quizzes: Individual quizzes provide you with opportunities to assess your ongoing progress and determine if extra help is needed.

Assignments: Assignments are due at the beginning of class. If you have class before lunch, you can submit your assignment without penalty before 12:45 pm on the due date (extra help room 237, 11:55 to 12:45). Late assignments will be considered for marks on an individual basis, as extensions may be granted by the teacher.

Journals: Journals involve writing about your learning in Math class. You will be asked to complete a journal assignment at the end of every chapter. You will also be asked to write about certain important Mathematical concepts throughout the term.

Homework Probe & Class work These consist of individual assignments completed during class, pairs quizzes, and small quizzes that assess your understanding of assigned homework problems. The purpose of these small but frequent assessments is to update you on your progress and indicate where extra help is needed.

Evaluation:

Exam	30%
Tests & Quizzes	30%
Assignments	25%
Portfolio	8%
Homework Probes & Class work	7%

Attendance:

Regular attendance is essential. Come **on time** and **prepared**. If you are absent, have a parent/ guardian write a note or call the main office (497-4612). Students who miss class or arrive late are reminded of the J.L. Ilsley attendance and late policies. The late sign in sheet will be at the front of the room, please enter quietly and sign in. It is **your** responsibility to keep track of any missed work due to lateness and or absenteeism. I will call _____ at # _____ to get the work I miss.

Extra Help:

Extra help is always available with me and/or during lunch periods (Monday to Thursday) in the Math Workroom (Room 237). There are always math teachers on duty in room 237 at lunch to answer your questions.

Textbook Id Number

Signature of Student