Argyle Secondary School Math Department
Mathematics 9 Course Outline

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Mathematics 9 (https://curriculum.gov.bc.ca/curriculum/mathematics/9)

BIG IDEAS

The principles and processes underlying operations with numbers apply equally to algebraic situations and can be described and analyzed.	Computational fluency and flexibility with numbers extend to operations with rational numbers.	Continuous linear relationships can be identified and represented in many connected ways to identify regularities and make generalizations.	Similar shapes have proportional relationships that can be described, measured, and compared.	Analyzing the validity, reliability, and representation of data enables us to compare and interpret.

CURRICULAR COMPETENCIES:

Students are expected to be able to do the following:

Reasoning and modeling
☐ Develop thinking strategies to solve puzzles and play games
☐ Explore, analyze, and apply mathematical ideas using reason, technology, and other tools
☐ Estimate reasonably and demonstrate fluent, flexible, and strategic thinking about number
☐ Model with mathematics in situational contexts
☐ Think creatively and with curiosity and wonder when exploring problems

Understanding and solving
☐ Develop, demonstrate, and apply conceptual understanding of mathematical ideas through play, story, inquiry, and problem solving
☐ Visualize to explore and illustrate mathematical concepts and relationships
☐ Apply flexible and strategic approaches to solve problems
☐ Solve problems with persistence and a positive disposition
☐ Engage in problem-solving experiences connected with place, story, cultural practices, and perspectives relevant to local First Peoples communities, the local community, and other cultures

Communicating and representing
☐ Explain and justify mathematical ideas and decisions in many ways
☐ Represent mathematical ideas in concrete, pictorial, and symbolic forms
☐ Use mathematical vocabulary and language to contribute to discussions in the classroom
☐ Take risks when offering ideas in classroom discourse

Connecting and reflecting
☐ Reflect on mathematical thinking
☐ Connect mathematical concepts with each other, with other areas, and with personal interests
☐ Use mistakes as opportunities to advance learning
☐ Incorporate First Peoples worldviews, perspectives, knowledge, and practices to make connections with mathematical concepts

CONTENT:

Students are expected to know the following:
- operations with rational numbers (addition, subtraction, multiplication, division, and order of operations)
- exponents and exponent laws with whole-number exponents
- operations with polynomials, of degree less than or equal to 2
- two-variable linear relations, using graphing, interpolation, and extrapolation
- multi-step one-variable linear equations
- spatial proportional reasoning
- statistics in society
- financial literacy —simple budgets and transactions

RESOURCE MATERIALS:

Our Textbook this year is **MathLinks 9**

A direct entry scientific calculator is necessary for this course. It is entirely likely that your child may have one from last year. If so, this will be adequate for all sciences, and will get them through until math 12/calculus.

MARKS ASSIGNMENT: You will be evaluated both summatively and formatively. Formative assessment involves practice, and allows you to freely make mistakes, learn from them and show growth without being graded. Summative assessment is to show that you have met the learning outcomes, and a grade will be assigned.

POLICIES AND PROCEDURES:

1) PREPARATION FOR CLASS

It is the student's responsibility to arrive for each class **on time** with their notebook, pencils, calculator, and textbook. Good work habits, effort, regular attendance, and completion of assignments contribute to successful achievement.

2) ABSENCES

Obviously, missing classes for any reason will have an impact on learning, assessment, and evaluation. Students absent from class, whether excused or unexcused, are solely responsible for obtaining and completing any missed assignments, work, or homework. **I am not required to make special arrangements for unexcused absences.**

a. Students absent for illness, medical appointments, and other emergencies **must** contact me **on the day they return to school** to submit overdue assignments, schedule missed assessments, and to receive missed work.

b. Students absent for school related activities (ex. field trips, work experience, sports trips, etc.), **must** inform me of this absence **well in advance** of the activity, in order to receive specific instructions on work that will be missed and the rescheduling of missed assessments.

c. Students absent for any other reason, including family vacations, are considered **unexcused.** Any work or assessments missed for these absences may result in receiving a **zero** for that activity unless you can show that you can meet the learning outcomes.

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(Student signature)   (Parent / Guardian signature)