Grade 5

Course Outlines

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**Course Outline**

**Mathematics 5**

**There are 4 strands within the mathematics curriculum:**

**Numbers –** to develop number sense:

Number Concepts: Students will demonstrate a number sense for whole numbers and explore fractions and decimals.

Number Operations: Students will apply arithmetic operations on whole numbers and decimals, and illustrate their use in creating and solving problems.

**Patterns and Relations** – Use patterns to describe the world and solve problems.

Students will construct, extend and summarize patterns, using rules, charts, mental math, and calculators, to continue the sequence or solve unknowns (preliminary algebra) within the number sequence.

**Shape and Space**

Measurement: Students will use measurement concepts, use appropriate tools, and results of measurement to solve problems in everyday contexts.

3-D Objects & 2-D Shapes: Students will describe the characteristics of 3-D objects & 2-D shapes and analyze the relationships among them. Students will solve problems related to spatial relations.

Transformations: Students will describe and analyze the motion in terms of slide, a turn, or a flip and use coordinates to describe the positions of the objects in two dimensions.

**Statistics and Probability**

Data Analysis: Students will develop and implement a plan for the collection, display and interpretation of data to solve problems.

Chance and Uncertainty: Students will predict outcomes, conduct experiments and communicate the probability of events.

**The four strands of the mathematics curriculum general outcomes are broken down into 8 different units within the textbook:**

**Unit 1:** Patterns and Equations- Students discover number patterns, and then use these patterns (rules) to continue the sequence or solve the unknowns within the number sequence.

**Unit 2:** Whole Numbers – Students discover numbers to One Million as well as use benchmarks to help with estimation.

**Unit 3:** Multiplying and Dividing Decimals – Students discover patterns within multiplying and dividing and develop strategies for multiply and dividing whole numbers.

**Unit 4:** Measurement – Students explore measuring length, finding perimeter and area, as well as volume.

**Unit 5:** Fractions and Decimals – Students discover equivalent fractions, comparing and ordering decimals and well as fraction benchmarks. Students will also discover the place value of decimals, comparing and ordering decimals, adding and subtracting decimals. They also discover how fractions and decimals are related.

**Unit 6:** Geometry – Students will discover perpendicular sides, attributes of quadrilaterals and how to draw objects.

**Unit 7:** Statistics and Probability – Students will explore how to interpret graphs, conduct and design their own experiments, and learn the language of probability.

**Unit 8:** Transformations – Students will discover how to translate, rotate, and reflect an object or shape.

**Evaluation:**

Marks will be given for the completion of worksheets in each unit (assignment mark), quizzes and unit tests.

The questions in the textbook and use of manipulative will be used as a formative assessment.

**Marks Breakdown:**

 45% ……. Number Sense

 25% ……. Shape and Space

 15%....... Patterns and Relations

 15% ……. Statistics and Probability

**Materials:**

Pearsons Math Makes Sense 5 Textbook

Manipulatives

Various supplementary books

All marks will be cumulative.

**For more information about the Grade 5 Math Curriculum, you can go online at:**

[**http://www.education.alberta.ca/media/445763/pub5.pdf**](http://www.education.alberta.ca/media/445763/pub5.pdf)