GROUP 5: MATHEMATICS

MATHEMATICS

AIMS

The aims of teaching and learning mathematics are to encourage and enable students to:

- recognize that mathematics permeates the world around us
- appreciate the usefulness, power and beauty of mathematics
- enjoy mathematics and develop patience and persistence when solving problems
- understand and be able to use the language, symbols and notation of mathematics
- develop mathematical curiosity and use inductive and deductive reasoning when solving problems
- become confident in using mathematics to analyse and solve problems both in school and in real-life situations
- develop the knowledge, skills and attitudes necessary to pursue further studies in mathematics
- develop abstract, logical and critical thinking and the ability to reflect critically upon their work and the work of others
- develop a critical appreciation of the use of information and communication technology in mathematics
- appreciate the international dimension of mathematics and its multicultural and historical perspectives

OBJECTIVES

- know and demonstrate understanding of the concepts from the five branches of mathematics (number, algebra, geometry and trigonometry, statistics and probability, and discrete mathematics)
- select and apply appropriate inquiry and mathematical problem-solving techniques, recognize and describe patterns, draw conclusions consistent with findings, justify or prove mathematical relationships and general rules
- to use mathematical language appropriately when communicating mathematical ideas, reasoning and findings—both orally and in writing
- reflect upon findings and problem-solving processes

FRAMEWORK FOR MATHEMATICS

MYP mathematics provides a framework of concepts and skills organized into the following five branches of mathematics.

- **Number**
- **Algebra**
- **Geometry and trigonometry**
- **Statistics and probability**
- **Discrete mathematics**

ASSESSMENT FORMS

- class tests
- examinations
- real-life problems
- investigations
- math crosswords
- math competitions
- presentations