

**DELEDDA INTERNATIONAL SCHOOL**

**SUBJECT GROUP OVERVIEW**  
Content

Unit Title	Key Concepts	Related Concepts	Global Context and Explorations	Statement of Inquiry	Content	Objectives	ATL Beta
<b>Mathematics (MYP1)</b>							
MYP 1 - Maths UNIT 2: Logic Set Theory 2025-2026		Representation, Models.	Identities and relationships	The representation of the surrounding world with the use of a symbolic Language through the concept of set can sharpen the perception about ourselves and Others and identities.	<ul style="list-style-type: none"> <li>- Sets and Their Elements;</li> <li>- Subsets;</li> <li>- The Intersection of Sets;</li> <li>- The Union of Sets;</li> <li>- Venn Diagrams</li> <li>- Real-life situation represent by Sets and their relationship</li> </ul> <p>Objectives: Ability to visually organize informations. Perception about ourselves and Others and our identity. Understand the application of Sets it in many contexts</p>	<p><b>D: Applying mathematics in real-life contexts</b></p> <ul style="list-style-type: none"> <li>i. identify relevant elements of authentic real-life situations</li> <li>ii. select appropriate mathematical strategies when solving authentic real-life situations</li> <li>iii. apply the selected mathematical strategies successfully to reach a solution</li> <li>iv. explain the degree of accuracy of a solution</li> <li>v. describe whether a solution makes sense in the context of the authentic real-life situation</li> </ul>	Communication
MYP 1 - Maths UNIT A: Relationship Statistics - 2025-2026	Relationships	Representation, Validity.	Orientation in space and time	Graphs and Data are a way to Represent and identify Relationships, Frequency and Validity of elements in the world.	<p>The number plane Cartesian plane and quadrants x and y Coordinate of a point Graph of point and vertical and horizontal line in the Cartesian plane Samples and Populations Categorical Data Graphs of Categorical Data Numerical Data Mean or Average Mode and Median Definitions and topics</p> <ul style="list-style-type: none"> <li>- Points and Lines;</li> <li>- Angles (Angles at a Point or on a Line);</li> <li>- Measuring and classify Angles</li> <li>- Property of Angles</li> <li>- Vertically Opposite Angles;</li> <li>- Bisecting Angles;</li> <li>- Parallel and perpendicular lines</li> <li>- parallel lines cut by a transversal;</li> <li>- Triangles;</li> <li>- Angles of Triangles</li> </ul> <p>Objectives: Ability to measure and classify Angles Ability to recognize couples of special Angles</p>	<p>Will be assessed :</p> <ul style="list-style-type: none"> <li>- Ability to represent points in the Cartesian plane</li> <li>- Ability to read and interpret data in a variety of graphs</li> <li>- Recognize the different meaning and importance of mean mode and median</li> </ul> <p>All the assessments in this units will be formative.</p>	Research - Use an organised process for conducting research
MYP 1 - Maths UNIT B: Form Paper and Pencil - 2025-2026		Representation, Space.	Orientation in space and time	Geometry is the study of Forms Represented in Space and establishes Orientation in Space.	<ul style="list-style-type: none"> <li>- Points and Lines;</li> <li>- Angles (Angles at a Point or on a Line);</li> <li>- Measuring and classify Angles</li> <li>- Property of Angles</li> <li>- Vertically Opposite Angles;</li> <li>- Bisecting Angles;</li> <li>- Parallel and perpendicular lines</li> <li>- parallel lines cut by a transversal;</li> <li>- Triangles;</li> <li>- Angles of Triangles</li> </ul> <p>Objectives: Ability to measure and classify Angles Ability to recognize couples of special Angles</p>	<p>CRITERIA A AND C</p> <p><b>A: Knowing and understanding</b></p> <ul style="list-style-type: none"> <li>i. select appropriate mathematics when solving problems in both familiar and unfamiliar situations</li> <li>ii. apply the selected mathematics successfully when solving problems</li> <li>iii. solve problems correctly in a variety of contexts</li> </ul> <p><b>C: Communicating</b></p> <ul style="list-style-type: none"> <li>i. use appropriate mathematical language (notation, symbols and terminology) in both oral and written statements</li> <li>ii. use different forms of mathematical representation to present information</li> <li>iii. communicate coherent mathematical lines of reasoning</li> <li>iv. organize information using a logical structure</li> </ul>	Communication

MYP 1 - Maths UNIT1: Number Systems and Rules in Mathematics 2025-2026	Relationships	Equivalence, Quantity.	Personal and cultural expression	Rules build a language used to establish relationships among quantities that are calculated and obtained in equivalent ways.	History of Number Systems The set of natural numbers	<p><b>A: Knowing and understanding</b></p> <ul style="list-style-type: none"> <li>i. select appropriate mathematics when solving problems in both familiar and unfamiliar situations</li> <li>ii. apply the selected mathematics successfully when solving problems</li> <li>iii. solve problems correctly in a variety of contexts</li> </ul> <p><b>B: Investigating patterns</b></p> <ul style="list-style-type: none"> <li>i. apply mathematical problem-solving techniques to recognize patterns</li> <li>ii. describe patterns as relationships or general rules consistent with correct findings</li> <li>iii. verify whether the pattern works for other examples</li> </ul> <p><b>C: Communicating</b></p> <ul style="list-style-type: none"> <li>i. use appropriate mathematical language (notation, symbols and terminology) in both oral and written statements</li> <li>ii. use different forms of mathematical representation to present information</li> <li>iii. communicate coherent mathematical lines of reasoning</li> <li>iv. organize information using a logical structure</li> </ul>	Communication. Self-management
MYP 1 - Maths UNIT3: Tutti d'un pezzo! (or maybe not) - 2025-2026	Form	Patterns, Representations.	Scientific and technical innovation	The discovery that Numbers are organized following specific Patterns, that do not depend on the Form we decide to use to represent them, will lead to better define the power of numbers.	<p>Significance and properties of the sum, subtraction, multiplication and division (with remainder).</p> <p>Example of applications of properties in order to perform mind calculations.</p> <p>Formulae and identities: how do we write rules in mathematics? How do we describe them?</p> <p>Difference between an instance of a general rule (an example), its symbolic formula, and its general description in words.</p> <p>The order of operations and its importance.</p> <p>The definition of power with non-negative integer base and exponent.</p> <p>Properties (laws) or powers (indices).</p> <p>Example of properties that do NOT hold for some operations and how to prove them.</p> <p>Divisibility Tests Factors, Prime Factors Prime and Composite Numbers Multiples of natural numbers Highest common factor (HCF) Lowest common multiple (lcm)</p> <p>Objectives: Use of different Divisibility tests on Natural Numbers - Find HCF using Divisibility test and prime factors - Find LCM using Divisibility test and prime factors - Represent number in different forms</p>	<p><b>B: Investigating patterns</b></p> <ul style="list-style-type: none"> <li>i. apply mathematical problem-solving techniques to recognize patterns</li> <li>ii. describe patterns as relationships or general rules consistent with correct findings</li> <li>iii. verify whether the pattern works for other examples</li> </ul>	
MYP 1 - Maths UNIT4: Be Rational! - 2025-2026	Relationships	Equivalence, Quantity.	Scientific and technical innovation	The same Quantity might be represented in different (but Equivalent!) ways, these principles can lead to a better understanding of the relationship between different Areas of Mathematics.	<p>Fractions: - Fractions as Divisions; - Fractions of Quantities; - Fractions on a Number Line; - Equal Fractions; - Comparing Fractions; - Adding and Subtracting Fractions; - Multiplying and Dividing Fractions. - Converting Between Decimals and Fractions (only if there is time)</p> <p>Objectives: - Adding and Subtracting Fractions; - Multiplying and Dividing Fractions. - The Ability to recognize the same number in different forms - Finding equivalent fractions.</p>	<p><b>A: Knowing and understanding</b></p> <ul style="list-style-type: none"> <li>i. select appropriate mathematics when solving problems in both familiar and unfamiliar situations</li> <li>ii. apply the selected mathematics successfully when solving problems</li> <li>iii. solve problems correctly in a variety of contexts</li> </ul> <p><b>D: Applying mathematics in real-life contexts</b></p> <ul style="list-style-type: none"> <li>i. identify relevant elements of authentic real-life situations</li> <li>ii. select appropriate mathematical strategies when solving authentic real-life situations</li> <li>iii. apply the selected mathematical strategies successfully to reach a solution</li> <li>iv. explain the degree of accuracy of a solution</li> <li>v. describe whether a solution makes sense in the context of the authentic real-life situation</li> </ul>	

**Mathematics (MYP2)**

MYP 2 - Maths UNIT 1: Relationship Be Rational- 2025/2026	Equivalence Representati on.	Scientific and technical innovation The discovery of different but equivalent representations of a number can leads to a better understanding of relationship between different Areas of Mathematics.	<ul style="list-style-type: none"> <li>- Fractions and place value (review)</li> <li>- Converting between decimals and fractions</li> <li>- Rounding decimal numbers</li> <li>- Placing decimal numbers on a number line</li> <li>- Comparing decimal numbers</li> <li>- Adding and Subtracting decimal numbers</li> <li>- Multiplying and dividing by powers of 10</li> <li>- Multiplying and dividing decimal numbers</li> <li>- Understanding percentages</li> <li>- One quantity as a percentage of another</li> <li>- Finding a percentage of a quantity</li> <li>- Percentage increase or decrease</li> <li>- Relationship between percentages, fractions and decimal numbers</li> <li>- Graphical representation of percentages</li> <li>- Real-life applications of percentages (statistics)</li> <li>- Interchanging number form</li> <li>- Ratio and Proportion.</li> <li>- property of Proportions, proportion calculation,</li> <li>- Direct and Inverse proportional quantities.G105</li> </ul>	<p><b>A: Knowing and understanding</b></p> <ul style="list-style-type: none"> <li>i. select appropriate mathematics when solving problems in both familiar and unfamiliar situations</li> <li>ii. apply the selected mathematics successfully when solving problems</li> <li>iii. solve problems correctly in a variety of contexts</li> </ul> <p><b>B: Investigating patterns</b></p> <ul style="list-style-type: none"> <li>i. select and apply mathematical problem-solving techniques to discover complex patterns</li> <li>ii. describe patterns as relationships and/or general rules consistent with findings</li> <li>iii. verify and justify relationships and/or general rules</li> </ul> <p><b>C: Communicating</b></p> <ul style="list-style-type: none"> <li>i. use appropriate mathematical language (notation, symbols and terminology) in both oral and written explanations</li> <li>ii. use appropriate forms of mathematical representation to present information</li> <li>iii. move between different forms of mathematical representation</li> <li>iv. communicate complete and coherent mathematical lines of reasoning</li> <li>v. organize information using a logical structure</li> </ul> <p><b>D: Applying mathematics in real-life contexts</b></p> <ul style="list-style-type: none"> <li>i. identify relevant elements of authentic real-life situations</li> <li>ii. select appropriate mathematical strategies when solving authentic real-life situations</li> <li>iii. apply the selected mathematical strategies successfully to reach a solution</li> <li>iv. explain the degree of accuracy of a solution</li> <li>v. explain whether a solution makes sense in the context of the authentic real-life situation</li> </ul>	Communication - Take effective notes. Research - Use an organised process for conducting research
MYP 2 - Maths UNIT 2: Form Integer, Power and Roots!- 2025/2026	Quantity, Representati on.	Orientation in space and time Being able to represent different forms of quantities has helped humans explore and describe natural and human landscape and resources.	<p>POSITIVE AND NEGATIVE NUMBERS: Integer</p> <ul style="list-style-type: none"> <li>- Opposites</li> <li>- Adding and subtracting negatives</li> <li>- Multiplying and dividing negatives</li> <li>- Combined operations</li> <li>- Performing the operation of multiplication, division, addition and subtraction with integer</li> </ul> <p>POWERS AND ROOTS:</p> <ul style="list-style-type: none"> <li>- Powers and Roots</li> <li>- How to find the square root of a number by hand</li> <li>- Properties of roots</li> <li>- Negative powers</li> </ul>	<p><b>A: Knowing and understanding</b></p> <ul style="list-style-type: none"> <li>i. select appropriate mathematics when solving problems in both familiar and unfamiliar situations</li> <li>ii. apply the selected mathematics successfully when solving problems</li> <li>iii. solve problems correctly in a variety of contexts</li> </ul> <p><b>D: Applying mathematics in real-life contexts</b></p> <ul style="list-style-type: none"> <li>i. identify relevant elements of authentic real-life situations</li> <li>ii. select appropriate mathematical strategies when solving authentic real-life situations</li> <li>iii. apply the selected mathematical strategies successfully to reach a</li> </ul>	Thinking - Analyse complex information
MYP 2 - Maths UNIT A: Logic Pythagoras's Scribbles 2025/2026	Space, Equivalence .	Orientation in space and time Pythagoras's theorem is the proof that logical reasoning can give us higher understanding of equivalence and measurement of the Natural space around us.	<p>POLYGONS:</p> <ul style="list-style-type: none"> <li>- Triangles</li> <li>- Quadrilaterals</li> <li>- Angles of a quadrilateral</li> <li>- Areas of polygons</li> <li>- Areas of composite figures</li> </ul> <p>PYTHAGORAS'S THEOREM:</p> <ul style="list-style-type: none"> <li>- Pythagoras Theorem</li> <li>- Inverse and direct proportions (scaling)</li> <li>- Errors and approximations</li> <li>- Euclid's Theorems (introduction)</li> </ul> <p>Objectives: Find the perimeter and area of different 2-dimensional shapes</p> <ul style="list-style-type: none"> <li>- Solving problems with 2-dimensional shapes</li> <li>- Applying correctly the Pythagorean theorem</li> <li>- understanding the difference between inverse and direct proportion.</li> </ul>	<p>Criteria A and D.</p> <p><b>A: Knowing and understanding</b></p> <ul style="list-style-type: none"> <li>i. select appropriate mathematics when solving problems in both familiar and unfamiliar situations</li> <li>ii. apply the selected mathematics successfully when solving problems</li> <li>iii. solve problems correctly in a variety of contexts</li> </ul> <p><b>D: Applying mathematics in real-life contexts</b></p> <ul style="list-style-type: none"> <li>i. identify relevant elements of authentic real-life situations</li> <li>ii. select appropriate mathematical strategies when solving authentic real-life situations</li> <li>iii. apply the selected mathematical strategies successfully to reach a solution</li> <li>iv. explain the degree of accuracy of a solution</li> <li>v. describe whether a solution makes sense in the context of the authentic real-life situation</li> </ul>	Communication and Thinking

MYP 2 - Maths UNIT B: Relationship Mathematics: Statistics 2025/2026	Models, Representations	Identities and relationships	Communities can be represented through mathematical modelling able to describe their lifestyle.	Mainly: measurements, absolute, relative and percentage error.	Only formative assessments	Research - Use an organised process for conducting research
<b>Mathematics (MYP3)</b>						
MYP 3 - Maths Unit 1: Arithmetic 2025/2026	Form	Change, Quantity.	Scientific and technical innovation	Values of quantities can be changed from one form to another, allowing one to describe systems in more convenient and intuitive ways.	- sets of numbers - understanding the differences between natural, integer, rational and irrational numbers - operations with Fractions and BEDMAS - properties of powers and roots - scientific notation and metric multipliers - performing calculations involving big and small numbers without calculator	<b>A: Knowing and understanding</b> i. select appropriate mathematics when solving problems in both familiar and unfamiliar situations ii. apply the selected mathematics successfully when solving problems iii. solve problems correctly in a variety of contexts
MYP 3 - Maths Unit 2: Algebra, equations and functions 2025/2026	Relationships	Generalization, Models.	Orientation in space and time	Models frame specific problems into the general broad picture, thus allowing one to understand relationships and predict the evolution of systems.	- Monomials and polynomials - operations on monomials and polynomials - Special products of binomials - linear equations - systems of linear equations and pure quadratic equations - functions - Understanding the power of creating models using variables instead of numbers - Moving between different form of representation using algebra - Translating real-life problems into mathematical problems - Understanding the relation between variables - Predicting the evolution of the dependent variable knowing its functional form	<b>A: Knowing and understanding</b> i. select appropriate mathematics when solving problems in both familiar and unfamiliar situations ii. apply the selected mathematics successfully when solving problems iii. solve problems correctly in a variety of contexts <b>B: Investigating patterns</b> i. select and apply mathematical problem-solving techniques to discover complex patterns ii. describe patterns as relationships and/or general rules consistent with findings iii. verify and justify relationships and/or general rules <b>C: Communicating</b> i. use appropriate mathematical language (notation, symbols and terminology) in both oral and written explanations ii. use appropriate forms of mathematical representation to present information iii. move between different forms of mathematical representation iv. communicate complete and coherent mathematical lines of reasoning v. organize information using a logical structure
MYP 3 - Maths Unit 3: Probability 2025/26	Logic	Models, Patterns.	Globalization and sustainability	The analysis of patterns in data can drive decision making towards logical solutions.	Experimental VS theoretical probability - Independent VS dependent events - Calculating probability of combined events - understand whether two events are dependent or Independent according to The specific situation. - using probability to model Real-life situations - Interpreting charts and tree diagrams - using different representations to perform statistical analysis	<b>A: Knowing and understanding</b> i. select appropriate mathematics when solving problems in both familiar and unfamiliar situations ii. apply the selected mathematics successfully when solving problems iii. solve problems correctly in a variety of contexts

MYP 3 - Maths Unit A : Form 2D Geometry: Circles 2025/2026

Representati on, Space. Scientific and technical innovation

The representation in space of a specific form will lead to understand principles and human discoveries

- definition of radius
- length of a circumference
- pi
- area of a circle
- arc length
- area of a sector

**A: Knowing and understanding**

- i. select appropriate mathematics when solving problems in both familiar and unfamiliar situations
- ii. apply the selected mathematics successfully when solving problems
- iii. solve problems correctly in a variety of contexts

**C: Communicating**

- i. use appropriate mathematical language (notation, symbols and terminology) in both oral and written explanations
- ii. use appropriate forms of mathematical representation to present information
- iii. move between different forms of mathematical representation
- iv. communicate complete and coherent mathematical lines of reasoning
- v. organize information using a logical structure

**D: Applying mathematics in real-life contexts**

- i. identify relevant elements of authentic real-life situations
- ii. select appropriate mathematical strategies when solving authentic real-life situations
- iii. apply the selected mathematical strategies successfully to reach a solution
- iv. explain the degree of accuracy of a solution
- v. explain whether a solution makes sense in the context of the authentic real-life situation

Communication  
Communicating information and ideas effectively using appropriate style

MYP 3 - Maths Unit B: Solid shapes 2025/2026

Relationships

Generalizati on, Representati on. Scientific and technical innovation

Generalizing relationships between forms can help analyze, generate, and represent models of products, processes and solutions leading to scientific and technical innovation.

- Three-dimensional shapes, surface area and volume:
- Cube
  - Rectangular Solids or Cuboids
  - Prism
  - Pyramid
  - Cylinder
  - Cone
  - Sphere
  - Composite shapes
  - Weight and Specific weight
  - Calculating the surface area and volume of 3D shapes and composite shapes
  - Applying mathematical strategies to solve problems involving 3D shapes

**A: Knowing and understanding**

- i. select appropriate mathematics when solving problems in both familiar and unfamiliar situations
- ii. apply the selected mathematics successfully when solving problems
- iii. solve problems correctly in a variety of contexts

**D: Applying mathematics in real-life contexts**

- i. identify relevant elements of authentic real-life situations
- ii. select appropriate mathematical strategies when solving authentic real-life situations
- iii. apply the selected mathematical strategies successfully to reach a solution
- iv. explain the degree of accuracy of a solution
- v. explain whether a solution makes sense in the context of the authentic real-life situation

Communication  
Take effective notes

MYP 3 - Maths unit C: Coordinates 2025/2026

Relationships

Models, Representati on. Orientation in space and time

Relationship between values and exact positions of points allows to represent in a graph geometrical shapes and to communicate positions in order to be oriented in space and represent natural and human landscape

- Cartesian coordinates
- Distance Between Two Points
- Formulae for the areas of triangles and quadrilaterals.
- Midpoint of a segment
- Equation of a Straight Line
- Being able to decompose complicated shapes into simple ones.
- Understand how to draw how to draw the graph of a line, find some points, check if the line passes through a given point, and interpret geometrically the slope and the cutoff.

**B: Investigating patterns**

- i. select and apply mathematical problem-solving techniques to discover complex patterns
- ii. describe patterns as relationships and/or general rules consistent with findings
- iii. verify and justify relationships and/or general rules

Self-management

**Mathematics (MYP4)**

MYP 4 - Maths - 2025- Form  
2026 - Unit 1:  
Arithmetic and Algebra

Models,  
Patterns.

Personal and  
cultural  
expression

The process of finding  
hidden patterns gives  
form to models which are  
able to describe a variety  
of situations.

- review of sets of numbers and properties of powers
- review of Set Theory
- integer and rational indexes
- radicals and surds (Extended: proof that square root of 2 is irrational)
- revision monomials and polynomials
- expansion laws
- factorization of polynomials
- algebraic fractions
- rearranging formulae
- Solving linear equations.

Extended only:

- definition of set, Power set, intersection, Union, Cartesian product, Operations, infinite unions and intersections of sets
- rational exponents
- divisions between polynomials
- complex numbers (hints)
- Ruffini's rule for factorization
- Solving both quadratic (with factorization) and rational equations.

Objectives:

- being able to classify numbers
- being able to solve, verify and prove exercises across topics
- understanding the connection between powers and radicals
- proving statements right or wrong
- using algebra to provide general models

Criteria: A, B, C.

**A: Knowing and understanding**

- select appropriate mathematics when solving problems in both familiar and unfamiliar situations
- apply the selected mathematics successfully when solving problems
- solve problems correctly in a variety of contexts

**B: Investigating patterns**

- select and apply mathematical problem-solving techniques to discover complex patterns
- describe patterns as general rules consistent with findings
- prove, or verify and justify, general rules

**C: Communicating**

- use appropriate mathematical language (notation, symbols and terminology) in both oral and written explanations
- use appropriate forms of mathematical representation to present information
- move between different forms of mathematical representation
- communicate complete, coherent and concise mathematical lines of reasoning
- organize information using a logical structure

Communication. Self-  
management.  
Thinking.

MYP 4 - Maths - 2025- Logic  
2026 - Unit 2:  
Geometry

Models,  
Representati  
on.

Scientific and  
technical  
innovation

Efficient theoretical  
models represent the  
problem and organize the  
process to reach a  
solution in a logic and  
rigorous way.

- knowledge of the 2D coordinate system
- distance between two points
- midpoint, gradient, intercept
- equation of a line
- parallel and perpendicular lines
- distance between a point and a line
- Vectors: definition, properties and operations.

Objectives:

- Being able to model real-life phenomena with equations of lines and to represent them graphically
- Familiarizing with online and offline graphic calculators (Geogebra, GDC)
- Exploiting coordinate geometry to investigate real-life problems in groups
- understanding how straight lines can be used to represent physical phenomena which are described by linearly dependent variables

Criterion D:

D: Applying mathematics in real-life contexts

- identify relevant elements of authentic real-life situations
- select appropriate mathematical strategies when solving authentic real-life situations
- apply the selected mathematical strategies successfully to reach a solution

Communication

MYP 4 - Maths - 2025- Relationship  
2026 - Unit 3: Relations s  
and functions

Quantity,  
Systems.

Orientation in  
space and time

Exploring and  
understanding the  
relationships between  
quantities may predict  
future evolution of  
different systems.

- Cartesian product of two sets
- Relations between quantities and their representations
- Domain and range of relations
- From relations to functions
- Function notation
- Composite functions
- Inverse function
- Special functions: constant, direct, linear, quadratic and inverse proportionality

Objectives:

- Identifying dependent and independent variables
- Moving between different forms of representations and mathematical notations
- Being able to select and use software to analyse data
- Representing and solving real-life problems with functions
- Predicting the evolution of systems using functions

Criteria: A and D

**A: Knowing and understanding**

- select appropriate mathematics when solving problems in both familiar and unfamiliar situations
- apply the selected mathematics successfully when solving problems
- solve problems correctly in a variety of contexts

**D: Applying mathematics in real-life contexts**

- select appropriate mathematics when solving authentic real-life situations
- select appropriate mathematical strategies when solving authentic real-life situations
- apply the selected mathematical strategies successfully to reach a solution
- justify the degree of accuracy of a solution
- justify whether a solution makes sense in the context of the authentic real-life situation

Communication. Self-  
management.  
Thinking.

MYP 4 - Maths 2025-2026 - Unit: ICT & Statistics	Global Interactions	Models, Representations, Patterns.	Globalization and sustainability	The impact of human action in a globalized world can be represented using mathematical models to understand and predict its consequences on the environment.	<p>Categorising data  Calculating quartiles, the range and the interquartile range  Giving a five-point summary of a set of data  Constructing box-and-whisker diagrams  Identifying outliers  Comparing distributions  Finding the mean, median, mode and range from a grouped frequency table  Representing grouped data in a cumulative frequency curve  Finding the five-point summary from a cumulative frequency curve  Constructing a box-and-whisker diagram frequency curve  Constructing and interpreting frequency and relative frequency histograms with equal class widths  Constructing and interpreting frequency density histograms with unequal class widths  Describing skewness and spread of data  Preparing data to calculate the standard deviation with a formula and GDC  Making inferences about data, given the mean and standard deviation.</p>	Only formative assessments.	Communication. Thinking.
<b>Mathematics (MYP5)</b>							
MYP 5 - Maths - 2025-2026 - Unit 1 - Geometry	Form	Patterns, Representations.	Personal and cultural expression	Understanding form and shape patterns enhance creativity and gives access to representation of Nature's beauty.	<p>Part One - PARABOLAS IN THE CARTESIAN PLANE</p> <p>Definition of a parabola as a conic section;  definition of a parabola as a geometric locus of points;  standard equation of a parabola with axis parallel to the y-axis in the Cartesian plane  concavity of a parabola,  coordinates of the focus of a parabola,  coordinates of the vertex of a parabola,  equation of the directrix of a parabola,  equation of the axis of symmetry of a parabola,  coordinates of the point of intersection of a parabola and the y-axis,  coordinates of the point(s) of intersection of a parabola and the x-axis  graphing a parabola in the Cartesian plane  quadratic inequalities: a graphical approach;  mutual position of a straight line and a parabola:  condition of tangency  equation of the two straight lines tangent to a parabola and passing through a point external to the parabola itself,  equation of the straight line tangent to a parabola at a point of the parabola itself  families of parabolas;  coordinate geometry direct and inverse problems involving parabolas/straight lines;  real-world applications of parabolas.</p> <p>Part Two - CIRCUMFERENCES IN THE CARTESIAN PLANE</p>	<p>Criterion A - EX (Class Test: Parabolas)  Criterion A - ST (Class Test: Parabolas)  Criterion A - ST (Class test: Trigonometry)  Criterion B - EX (Class Test: Circumferences in the cartesian plane)  Criterion B - ST (Class Test: Trigonometry)  Criterion C - EX (Class Test: Trigonometry)  Criterion C - ST (Class Test: Parabolas)  Criterion D - EX (Class Test: Modelling with Trigonometry)  Criterion D - ST (Class Test: Modelling with Parabola)</p>	<p>Self-management and thinking:  Self-management:  In order for students to be able to reach the objective of Criterion A students have to submit a number of activities meeting different deadlines.</p> <p>Thinking:  In order for students to identify relevant elements of authentic real-life situations and select appropriate mathematical strategies when solving authentic real-life situations they will make unexpected or unusual connections between objects and/or ideas.</p>

MYP 5 - Maths - 2025-2026 - Unit 2 - Algebra	Relationships	Equivalence, Generalization.	Scientific and technical innovation	Models represent generalizations of equivalences and the relationships between variables.	<p>Part One - QUADRATIC EQUATIONS (in R)</p> <p>Discriminant (<math>\Delta</math>) of a quadratic trinomial and real solutions of a quadratic equation via quadratic formula;  solutions of special polynomial equations of degree higher than two via null product law;  real-life applications of quadratic equations (see Unit 1, Part Two).</p> <p>Part Two - REAL INTERVALS, INEQUALITIES AND SETS OF SIMULTANEOUS INEQUALITIES, DOMAINS OF FUNCTIONS</p> <p>Real Intervals:  formal definition of interval: examples and counterexamples;  classification of intervals (left/right open/closed, bounded/unbounded);  set-builder notation vs interval notation;  graphical representation of intervals on the real line;  union and intersection of (two or more) intervals.  Inequalities in R:  addition, subtraction, multiplication and division properties of inequalities;  equivalent inequalities.  linear inequalities: algebraic and graphical approach;  quadratic inequalities: algebraic and graphical approach (see Unit 1, Part Two);  inequalities of degree higher than two via signs diagram.  Systems of (two or more) simultaneous inequalities.  Domain of functions of one real variable:  conditions of existence for rational functions;  conditions of existence for irrational functions;</p>	<p>Criterion A and C - EX (Quadratic and rational functions)</p> <p>Criterion A - ST (Quadratic equations and Inequalities)</p> <p>Criterion B - EX (Investigating a quadratic pattern)</p> <p>Criterion B - EX (inequalities)</p> <p>Criterion B - ST (Investigating sign diagrams)</p> <p>Criterion D - EX (Quadratic equations in real life)</p> <p>Criterion C - ST (Quadratic equations in real-life)</p> <p>Criterion D ST - (Quadratic equations in real life)</p>	<p>Communication and self-management:</p> <p>Communication:  In order for students to use appropriate mathematical language (notations, symbols and terminology) in oral or written explanations they will use and interpret a range of discipline-specific terms and symbols.</p>
MYP 5 - Maths 2025-2026 - Unit 3 : ICT & Statistics	Relationships	Models, Representation.	Globalization and sustainability	Students will evaluate the appropriateness of using predictions to make real-world decisions by creating models to represent data.	<p>Part One - BIVARIATE STATISTICS</p> <p>Graphical representation of bivariate data: 2D Scatterplots;  linear correlation  Pearson's Correlation Coefficient: strength and direction of a linear correlation;  locus of means;  equation of the line of best fit using GDC;  interpolation and extrapolation.</p> <p>Part Two (Standard)- THEORETICAL PROBABILITY</p> <p>Sample space and definition of theoretical probability of an event;  Venn diagrams and probability tree diagrams;  conditional probability and Law of total probability.</p>	<p><b>Criterion D</b> (Test on Bivariate Analysis).</p> <p>Students will be asked to apply their knowledge about correlation in order to state whether or not there is a relationship between the arm span and the height of a given person.</p> <p>If the last part of the program (Probability) will be taught in standard class - a Criterion C will be assessed based on the production of a poster.</p>	<p>Self-management:  -Plan strategies and take action to achieve personal and academic goals  -Practise dealing with change  Students will approach the background knowledge needed  Thinking:  In order for students to justify whether a solution makes sense in the context of the authentic real-life situation they will use models and simulations to explore complex systems and issues.</p> <p>Communication:  Students will create and present a poster on a factor describing the distribution graph based on acquired data and the reason why the factor can be discriminatory. They will reflect on the word 'normal' in maths and in everyday life.</p>