



2020 Syllabus

Objective: to provide a general idea about the concepts that may appear in the competition

Scope: the syllabus covers the major concepts that are critical to holistic understanding of Mathematics.

What it is not: the syllabus is not meant to be exhaustive or detailed.

Interdisciplinary concepts: System, Change, Relationship, Form, Perspective, Development.

Mathematics is a newly added subject to StemCo. We are still experimenting with the syllabus.

Primary (Grades 4-6)

| | Areas | Concepts |
|--|-----------------|--|
| | 1.Data Handling | Information Set Order Pattern Chance Graph Representation Logic |
| | 2.Measurement | Probability Estimation Comparison Unit of measurement Accuracy Precision Instrument Ratio Rate |
| | 3.Shape and | Dimension Perspective |

| | | |
|--|-------------------------|---|
| | Space | Angle Perimeter Area Volume Symmetry Transformation Model Rotation Position Scale Direction |
| | 4. Pattern and Function | Sequence Relationship Function Operation Representation Symbol Exponent Root |
| | 5. Numbers | Part-Whole Ratio Fraction Decimal Percent Strategy Base 10 Model |
| | 6. Others | Anything not covered by the main areas and concepts |

Secondary (Grade 7-9)

| | Areas | Concepts |
|--|-----------------------------|---|
| | 1. Numbers | Sequences Series Patterns Divisibility Digits |
| | 2. Algebra | Linear equations Quadratic equations Inequalities Coordinates Vectors Functions Models |
| | 3. Geometry | 2D figures 3D figures Similarity Mensuration Trigonometry Maps Symmetry Coordinates Vectors |
| | 4. Statistics & Probability | Combinatorics Probability Data Graphs Accuracy Precision |
| | 5. Others | Anything not covered by the main areas and concepts |