**MATHEMATICS - GRADE 8 2022**

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| **TOPIC** | **ASSESSMENT STANDARDS** | **PORTFOLIO ASSESSMENT TASKS** |
| **PHASE 1 (19 January 2022 – 25 March 2022)** | | |
| **Numbers, Operations and relationships** | Multiples and factors | **Task 1:** Assignment: Fractions, HCF, LCM, integers, number system  7 – 11 Feb &  28 Feb – 4 Mar  **Task 2:** March control test:  14 – 18 Feb &  7 – 11 March |
| Integers |
| Fractions |
| Additive and multiplicative inverses |
| **Financial calculations** | Profit and loss |
| Simple interest, loans, hire-purchase |
| **Algebra** | Introduction |
| **Techniques, Strategies in calculations** | Exponents: laws, simple calculations, scientific notation |
| Rounding, estimation |
| Multiple operations |
| **PHASE 2 (5 April 2022 – 24 June 2022)** | | |
| **Patterns, Functions, Algebra** | Classification of like and unlike terms | **Task 3:** Investigation: Functions & relations  16 – 20 May  **Task 4:** June Exams:  13 – 24 Jun |
| Addition and subtraction |
| Multiplying and dividing monomials |
| Simplification with brackets |
| Expressions: simplification and combined operations |
| **Equations** | Solving by: inspection, trial and improvement, algebra |
| Checking roots by substitution, calculator usage |
| **Relationships and modelling** | Investigate patterns and functions in Algebra |
| Recording and representation: flow charts and tables |
| Solution as a rule or formula |
| **PHASE 3 (19 July 2022 – 25 November 2022)** | | |
| **Space and shape** | Intersecting, parallel and perpendicular lines | **Task 5:** Project:  Area, Perimeter & Pythag  29 Aug – 2 Sept  **Task 6:** Controlled Test  15 – 19 Aug &  12 – 16 Sept  **Task 7:** Year-end Exam  14 – 25 Nov |
| Triangles: types and side and angle relationships |
| Theorem of Pythagoras |
| Quadrilaterals and other polygons |
| Circles |
| Estimation and calculators |
| Relevant unit conversions |
| **Data Handling** | Collection, Central tendencies, graphical representations and analysis |
| **Graphs** | Drawing graphs |
| **Graphs**  **Transformations** | Recognising linear vs non-linear and discrete vs continuous |
| Use of terms: maximum, minimum, increasing, decreasing |
| Defining: translation, rotation, reflection |
| **Transformations** | Using symmetry to investigate geometric figures |
| **Consolidation** | Revision of all assessment standards |