## Mathematics

Admission Tests

Content
Core Skills and test specs

## Nile International Education System

KG2 topics:

| grade | Test type | timing | Core topics |
| :--- | :--- | :--- | :--- |
| KG2 | Oral test | 5 minutes | 1. Identify numbers |
|  |  |  | 2. Order and compare numbers |
|  |  |  | 3. Count objects |
|  |  |  | 4. what comes after and before any number |

Grade 1 topics:

| grade | Test type | timing | Core topics |
| :---: | :--- | :--- | :--- |
| Grade 1 | Oral test | 5 minutes | 1. identify two digit numbers |
|  |  |  | 2. compare numbers |
|  |  |  | 3. arrange numbers ascending or descending |
|  |  |  | 4. identify 2-D shapes |
|  |  |  | 5. add two numbers |
|  |  |  | 6. count on and back |
|  |  |  |  |

Grade 2 topics:

| grade | Test type | timing | Core topics |
| :---: | :---: | :---: | :---: |
| Grade 2 | Oral test | 5 minutes | 1. Read, write and order numbers to 20 and understand zero as an empty set <br> 2. Compare pairs of numbers less than 20 <br> 3. Partition 2 digit numbers <br> 4. Pairs with totals of 5 and 10 <br> 5. Compare pairs of two-digit numbers <br> 6. Order numbers to 100 <br> 7. Find halves, thirds and quarters of shapes and small numbers of objects <br> 8. Add single-digit numbers to two-digit numbers <br> 9. subtract single-digit numbers to two-digit numbers <br> 10. Compare two-digit numbers using < and > signs <br> 11. Directly compare and order lengths <br> 12. Order days of the week and months of the year <br> 13. Measure and compare length using centimetres and metres <br> 14. Describe 3D shapes <br> 15. Recognise coins and notes, know the relationship between them <br> 16. Represent and read given data using Pictograms, block graphs, lists and tables |

Grade 3 topics:

| Grade | Test duration | Total mark | Strand |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Numbers | Geometry and measures | Data handling |
| Grade 3 | written test One paper 30 minutes | 20 marks Calculator not allowed | 1. Read and write numbers in letters and digits. <br> 2. Understand the numbers system. <br> 3. Know what each digit represent in a 2 digit number. <br> 4. Compare and order 2 digit numbers. <br> 5. Add and subtract 2 digit numbers. <br> 6. Multiplication and division for times table from 1 to 5 only. <br> 7. Fractions of simple shapes and numbers. | 1. Identify different types of lines. <br> 2. Ordering, estimating and measuring line segments ( $\mathrm{cm}, \mathrm{m}$ ) <br> 3. Perimeter of polygons. <br> 4. Telling time on a digital and analogue clock. | Collect and represent data using tables and tallies. |

Grade 4 topics:

| Grade | Test duration | Total mark | Strand |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Numbers | Geometry and measures | Data handling |
| Grade 4 | written test One paper 40 minutes | 30 marks No calculator allowed | Place value to 10000 Number facts to 20 <br> Adding/subtracting 4digit numbers <br> Identify Odd and even numbers <br> multiplying pairs of single-digit numbers and know corresponding divisions <br> Multiplying and dividing 2-digit by 1-digit number <br> Multiplying and dividing by 10 and 100 Fractions Halves, quarters, thirds, fifths, eighths and tenths of shapes <br> Equivalent fractions and decimals for halves, quarters and tenths | Identifying and describing 3D shapes Units of capacity and weight <br> Units of length Perimeter of squares and rectangles Area by counting squares Estimating measuring and recording lengths Units of time Telling time | Using the language of probability to describe the likelihood of events Collecting and using data Bar charts <br> Tally charts, frequency tables |

Grade 5 topics:

| Grade | Test duration | Total mark | Strand |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Numbers | Geometry and measures | Data handling |
| Grade 5 | written test One paper 40 minutes | 30 marks No calculator allowed | 1. Add and subtract whole numbers, Fractions and decimals. <br> 2. Multiply and divide numbers till $10 \times$ 10 <br> 3. Compare and order whole numbers, decimals and fractions. <br> 4. Round (approximate) numbers. <br> 5. Define even and odd numbers. <br> 6. Identify multiples, factors and find common multiples. | 1. Identify units of time. <br> 2. Calculate time intervals. <br> 3. Describe symmetry of polygons. <br> 4. Identify and use units of mass and capacity. | 1. Represent data on tally charts and bar charts. <br> 2. Answer questions form given graphs. |

Grade 7 topics:

| Grade | Timing | Total mark | STRAND |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Numbers | algebra | Geometry and measure | Data handling |
| Grade 7 | written test two papers: <br> Paper 1 ( 20 minutes ) <br> Paper 2 ( 20 minutes) | 40 marks <br> - Paper 1 calculato r NOT allowed <br> - Paper 2 calculato r allowed | 1. Adding/subtracting integers Order of operations <br> 2. Order and compare integers <br> 3. Place value, ordering, rounding <br> 4. adding and subtracting decimals <br> 5. multiplying 3-digit by 2-digit whole numbers; <br> 6. Fractions/percentag es of shapes Equivalent fractions, cancelling, ordering <br> 7. adding/subtracting;m ultiplying fraction by integer <br> 8. equivalence of fractions, decimals and percentages <br> 9. fractions and percentages of quantities <br> 10. ratio of two parts <br> 11. simple direct proportion | Coordinates in all four quadrants | 1. Measuring and drawing angles <br> 2. Perimeter and area of a rectangle <br> 3. Measures/estimates of length, area, mass, capacity and time; conversions of units <br> 4. surface area and volume of cuboids | 1. Language of probability <br> 2. Probability scale <br> 3. Collecting, representing and interpreting data in bar line graphs, frequency diagrams for grouped discrete data, and pie charts |

Grade 8 topics:

| Grade | Timing | Total mark | STRAND |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Numbers | algebra | Geometry and measure | Data handling |
| Grade 8 | written test two papers: <br> Paper 1 ( 20 minutes ) Paper 2 ( 20 minutes) | 40 marks Paper 1 calculator NOT allowed Paper 2 calculator allowed | 1. Four rules with integers <br> 2. order of operations, including brackets <br> 3. Squares, cubes and roots; factors, primes, prime factor HCF, LCM <br> 4. Decimal place value, ordering, rounding <br> 5. Fractions and percentages Equivalent fractions; ordering fractions <br> 6. adding/subtracting factions <br> 7. multiplying/dividing by proper fraction <br> 8. multiplying/dividing decimals by decimals <br> 9. Calculating ratios 10. Direct proportion | 1. Simplifying linear expressions and simple expressions with powers <br> 2. Multiplying a single term over an expression in brackets <br> 3. Factorize by taking common factors | 1. Alternate/co rresponding angles <br> 2. Finding unknown angles on a straight line or around a point <br> 3. Perimeter and area of rectangle <br> 4. Volume and surface area of cuboids | 1. Collecting, representin g, interpreting data: bar charts, pie charts <br> 2. mean, median, mode/modal class <br> 3. probability |

