



International College Elementary School

Grade Two Math Level Requirements
2018-19

By the end of grade 2, learners will:

Data handling

- A. *Collect, organize data and display the data using tally charts, concrete graphs, pictographs, simple bar graphs and other graphic organizers, with labels ordered properly along the horizontal axis*
- B. *Read and describe data presented in tally charts, concrete graphs, pictograph and other graphic organizers.*

1. Understand that data can be collected, displayed and interpreted using simple bar graphs
2. Collect and represent data in different types of graphs, like tally marks, simple bar graphs and graphic organizer (Venn diagram)
3. Read and interpret data using simple graphs, for example, bar graphs
4. Collect, display and interpret data for the purpose of answering questions

Measurement

By the end of grade 2, learners will:

- *Estimate, measure and record length, mass, time and capacity using non standards and standards units*
- *Compare describe and order events using attributes measured in nonstandard units and standards units*

1. Understand the use of standard units to measure length, mass and time
2. Estimate , and measure lengths heights and distances using standard (to the nearest cm) and nonstandard units
3. Select and justify the choice of standard (meter, centimeter) and nonstandard(pace-foot) unit to measure length
4. Construct a segment of a given length using standard unit of centimeters
5. Understand relationships between meters, and centimeters
6. Estimate, measure and record mass and or the capacity of an object using a variety of non-standard units
7. Compare and order a collection of object by mass or capacity using nonstandard units
8. Tell and write the time to the hour, half hour and quarter hour in digital and analogue form
9. Determine the relationship between days/weeks and between months/years.
10. Choose the appropriate standard unit to help perform measurement tasks

Shape and space

- **By the end of grade 2, learners will :**
 - *Identify common two dimensional shapes and three dimensional figures and sort and classify them by their geometric properties*
 - *Compose and decompose common two dimensional shapes and three dimensional figures*
 - *Describe and represent the relative location of objects using positional language*
1. Distinguish between geometric properties (number of sides or angles) of a two dimensional shape and non-geometric properties (color or size).
 2. Identify, describe and sort polygons according to their geometric properties.

3. Identify, describe and sort three dimensional shapes according to their geometric properties.
4. Locate the line of symmetry of a two dimensional shape manually by folding a paper.
5. Create symmetrical designs and pictures using concrete materials and a variety of tools
6. Use mathematical language to describe geometric ideas.
7. Describe the relative location and movement of an object on a map.
8. Draw simple maps of familiar settings and describe the relative location of objects.
9. Create using concrete materials and describe symmetrical designs.

Pattern and function

By the end of grade 2, learners will :

- A. *Identify ,describe, extend and create repeating patterns, growing patterns, and shrinking patterns*
- B. *Demonstrate an understanding of the concept of equality using between pairs of expressions concrete material, symbols*

1. Understand that patterns can be found in numbers, for example, odd and even numbers, skip counting (by 2's, 3's, 4's, 5's, 10's, and 100's)
2. Describe , extend and create repeating, growing and shrinking patterns in numbers
3. Understand the concept of equality between pairs of expressions using concrete material, and symbols
4. Understand the associative and commutative properties of addition
5. Understand the property of zero and one in addition and subtraction
6. Understand the inverse relationship between addition and subtraction
7. Determine the missing number in simple equations involving addition and subtraction
8. Use the properties and relationships of addition and subtraction to solve problems

Number

By the end of grade 2, learners will:

- *Read, represent, compare and order whole numbers to 100 and use concrete materials to investigate and represent fractions.*
 - *Demonstrate an understanding of numbers by counting forward to 200 and backward from 50, using multiples of various numbers as starting points*
 - *Solve problems involving the addition and subtraction of one and two digit whole numbers using a variety of materials, and investigate multiplication*
1. Read, represent, compare and order whole numbers to 100 using the base 10 system in a variety of ways
 2. Locate a two digit whole number on a partial number line
 3. Compose and decompose two digit number in a variety of ways, using concrete materials
 4. Count forward by 1s,2s,5s, and 10s, up to 200
 5. Count backwards by 1s,2s,5s and 10 from 100
 6. Understand ,model and apply properties of addition in a variety of ways, using concrete materials
 7. Describe use mental strategies for adding and subtracting two digit whole numbers
 8. Determine using concrete material the 10 that is nearest to a given two digit number and justify
 9. Round to the nearest ten and hundred
 10. Estimate quantities up to 100
 11. Estimate sums and differences
 12. Add and subtract 3-digit numbers with and without regrouping
 13. Introduce concept of multiplication
 14. Introduce and compare fractions using concrete material(1, $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$)
 15. Select the appropriate strategy for solving single and multi-steps word problems involving two digit numbers with and without regrouping