

## **Clark-Wilkins Key Concepts by Grade Level**

### **KINDERGARTEN:**

The key objective at the Kindergarten level is to understand number. Number conceptualization is dependent on three key sub-skills: 1-1 correspondence, sequencing, and visual clustering. Children who have not integrated and mastered these key sub-skills will continue to count on fingers and have difficulty in learning arithmetic facts.

1. Number recognition to 100.
2. Place value (two digit numbers) – tens and ones
3. Counting forward and backward from a given number
4. Identifying simple shapes
5. Measurement using body parts
6. Concept of addition and subtraction
7. Master basics addition facts: add 1, add 10 and making 10
8. Developing prerequisite skills for mathematics learning
9. Learning and using mathematics language

### **GRADE ONE:**

1. Mastering addition facts to 20
2. Reading, writing, and expressing numbers in the hundreds
3. Understanding place value (three digit numbers)
4. Counting forward and backward by 1's, 2's, 10's from a given number
5. Recognizing, describing, and drawing all the basic figures
6. Skip counting by 2, 5, and 10
7. Measurement using body parts and go-between units
8. Recognition of fractions (whole, halves, fourths)

### **GRADE TWO:**

1. Mastering subtraction facts from 20
2. Operations on numbers (addition and subtraction) with and without regrouping

3. Reading, writing, and expressing numbers in the thousands
4. Place value in standard, semi-expanded, and expanded forms, and its application to money and measurement
5. Counting forward and backward by 1's, 2's, 5's, and 10's from any given number
6. Recognizing, describing, and drawing all the basic figures and their relationships
7. Collection and representation of data using shapes and numbers relevant to them
8. Recognition of fractions ( $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{1}{10}$ )

### **GRADE THREE:**

1. Mastery of multiplication facts to 100
2. Reading, writing, and expressing numbers in any number of cycles (thousands, millions, etc.)
3. Place value of any digit (standard, semi-expanded, and expanded forms)
4. Counting forward and backward by 1's, 2's, 5's, 10's, 100's and  $\frac{1}{2}$  from any given number
5. Recognizing, describing, and drawing all the basic figures and their relationships
6. Measurement using standard units (whole and halves); calculating perimeters of any shape and area of rectangles, squares, and shapes made up of rectangles and squares
7. Simple fractions, their relationships, and adding fractions with the same denominators

### **GRADE FOUR:**

1. Mastery of division facts from 144 (up to table of 12)
2. Reading, writing, and expressing numbers in any number of cycles and simple decimal numbers
3. Place value any digit (standard, semi-expanded, and expanded forms)
4. Counting forward and backward by 2's, 5's, 10's,  $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{1}{10}$  from any given number

5. Operations on multi-digit numbers: addition, subtraction, multiplication (two digit by two digit), and long division (with and without remainder)
6. Recognizing, describing, and drawing all the basic figures and their relationships
7. Measurement using standard units (whole and halves)
8. Simple fractions and operations of addition and subtraction on simple fractions
9. Collection, organization, representation, and interpretation of data