

# SUMMARY OF CHANGES IN CONTENT AND EMPHASIS IN K-4 MATHEMATICS

## ***INCREASED ATTENTION***

### **NUMBER**

- Number sense
- Place value concepts
- Meaning of fractions and decimals
- Estimation of quantities

### **OPERATIONS AND COMPUTATION**

- Meaning of operations
- Operation sense
- Mental computation
- Estimation and the reasonableness of answers
- Selection of an appropriate computational method
- Use of calculators for complex computation
- Thinking strategies for basic facts

### **GEOMETRY AND MEASUREMENT**

- Properties of geometric figures
- Geometric relationships
- Spatial sense
- Process of measuring
- Concepts related to units of measurement
- Actual measuring
- Estimation of measurements
- Use of measurement and geometry ideas throughout the curriculum

## ***DECREASED ATTENTION***

### **NUMBER**

- Early attention to reading, writing, and ordering numbers symbolically

### **OPERATIONS AND COMPUTATION**

- Complex paper-and-pencil computations
- Isolated treatment of paper-and-pencil computations
- Addition and subtraction without renaming
- Isolated treatment of division facts
- Long division
- Long division without remainders
- Paper-and-pencil fraction computation
- Use of rounding to estimate

### **GEOMETRY AND MEASUREMENT**

- Primary focus on naming geometric figures
- Memorization of equivalencies between units of measurement

## INCREASED ATTENTION

### PROBABILITY AND STATISTICS

Collection and organization of data  
Exploration of chance

### PATTERNS AND RELATIONSHIPS

Pattern recognition and description  
Use of variables to express relationships

### PROBLEM SOLVING

Word problems with a variety of structures  
Use of everyday problems  
Applications  
Study of patterns and relationships  
Problem-solving strategies

### INSTRUCTIONAL PRACTICES

Use of manipulative materials  
Cooperative work  
Discussion of mathematics  
Questioning  
Justification of thinking  
Writing about mathematics  
Problem-solving approach to instruction  
Content integration  
Use of calculators and computers

## DECREASED ATTENTION

### PROBABILITY AND STATISTICS

### PATTERNS AND RELATIONSHIPS

### PROBLEM SOLVING

Use of clue words to determine which operation to use

### INSTRUCTIONAL PRACTICES

Rote practice  
Rote memorization of rules  
One answer and one method  
Use of worksheets  
Written practice  
Teaching by telling