**Math Unit Organizer**

**Book 2A Unit 5: Multiplication Tables of 2 and 3 (includes division of same facts)**

**2nd Grade**

**Summary:**

Students will begin to study and commit multiplication facts to memory. Students will build on prior knowledge of what multiplication and division mean and relate that to the standard algorithm for both. Students will be able to solve word problems for multiplication and division of 2’s and 3’s.

**Previous Unit:**

Multiplication and Division

**Next Unit**

Multiplication (and Division) Tables of 4, 5, and 10

**The Big Idea:**

Multiplication (and division) of 2’s and 3’s can be solved using skip counting strategies (repeated addition) until these facts become memorized.

**Singapore Content:**

I. Multiplication by 2 and 3

A. commit multiplication facts to memory

B. review counting by 2’s and 3’s

C. relate counting by 2’s and 3’s to multiplication algorithm

D. use rectangular arrays to illustrate multiplication for these math facts

E. write two related equations for multiplication facts of 2’s and 3’s

F. solve word problems for these facts using pictures and part/whole model

II. Division

A. review the meaning of division

B. understand division as sharing equally into a given number of groups and finding the number in each group

C. relate division facts for 2’s and 3’s to multiplication facts

D. write two related equations for division of 2’s and 3’s

E. solve word problems involving division of 2’s and 3’s using pictures and part/whole model

F. form a family of two multiplication and two division equations

**Core Knowledge Connections:**

* Practice doubling (adding a number to itself)
* Recognize the “times” sign (x) and know what “factor” and “product” mean
* Understand that you can multiply numbers in any order
* Multiplication facts: know the product of any single-digit number x 1, 2, 3, 4, 5 and know what happens when you multiply by 1, by 0, and by 10
* Solve simple word problems with multiplication

**Colorado State Standards for Math- Grade 2 and The Common Core State Standards for Mathematics:**

**[CCSS.MATH.CONTENT.2.OA.C.3](http://www.corestandards.org/Math/Content/2/OA/C/3/)** Work with equal groups of objects to gain foundations for multiplication.

**[CCSS.MATH.CONTENT.2.OA.C.4](http://www.corestandards.org/Math/Content/2/OA/C/4/)**  
Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.

Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.

**Prior Knowledge:**

**Kindergarten**

* Add and subtract to 10

**Grade 1**

* Addition facts to 10+10
* Add in any order
* Solve word problems for addition and subtraction
* Know that when you add three numbers, you get the same sum regardless of grouping addends

**What Students Will Learn in Future Grades:**

**3rd Grade**

* Use mental computation strategies
* Master basic multiplication fasts to 10X10 and mentally multiply by 10,100, and 1,000
* Multiply two whole numbers, with and without regrouping, in which one factor is 9 or less and the other is a multi-digit number up to three digits
* Solve two-step word problems and solve word problems involving multiplication
* Know basic division facts to 100 divided by 10 and the meaning of dividend, divisor, and quotient
* Divide two-and three-digit dividends by one-digit divisors; solve division problems with remainders