**Resource Guide for using, *Number Talks: Helping Children Build Mental Math and Computation Strategies.***

The *Number Talks* book is a great resource, and there are many very useful parts of the text. This is a resource guide that will aid you in planning to use the book for each of your units in grade 3. Each unit (when applicable) will have its own resource guide.

If you are unfamiliar with using Number Talks in your classroom, your best bet is to read the first two chapters (pages 3-31) to get a good base of understanding for using Number Talks as a tool for learning in your classroom. Chapter one outlines the rationale for using Number Talks, the key Components of a Number Talk, and ideas for building the classroom community that is necessary for effective Number Talks. Chapter two helps you prepare for using Number Talks in your classroom. There are some great ideas for establishing procedures and setting expectations. We recommend that if Number Talks are new to you, you invest the time to read these few pages to orient yourself to using Number Talks in your classroom. There are also some great classroom examples on the DVD (included with the book) for you to see Number Talks in action.

Once you feel good about how you will go about using a Number Talk in your classroom, you will want to pick Number Talks that will be purposeful for the Unit you are working in. This resource guide will steer you directly towards Number Talks that will match the standards in this Unit.

For Background information on multiplication and division strategies, read pages 230-244 and watch clip 5.2. For specific information about multiplication strategies, see pages 244-253 and watch clip 3.5. For specific information about division strategies, see pages 254-261 and watch clip 5.5.

|  |  |  |
| --- | --- | --- |
| Standard | Page Numbers | Strategy/Purpose |
| 3.OA.5 Apply properties of operations as strategies to multiply and divide. [Students need not use formal terms for these properties.] Examples: If 6 x 4 = 24 is known, then 4 x 6 = 24 is also known. (Commutative property of multiplication.) 3 x 5 x 2 can be found by 3 x 5 = 15, then 15 x 2 = 30, or by 5 x 2 = 10, then 3 x 10 = 30. (Associative property of multiplication.) **Knowing that 8 x 5 = 40 and 8 x 2 = 16, one can find 8 x 7 as 8 x (5 + 2) = (8 x 5) + (8 x 2) = 40 + 16 = 56. (Distributive property.)** | Page 273 | Partial Products- using partial products engages students in using the distributive property of multiplication. Since this Unit focuses on factors 2, 3, 4, 5, and 10, you may choose number talks that fit those factors, but feel free to expand past those factors if your students are ready. |
| 3.OA.5 Apply properties of operations as strategies to multiply and divide. [Students need not use formal terms for these properties.] Examples: If 6 x 4 = 24 is known, then 4 x 6 = 24 is also known. (Commutative property of multiplication.) **3 x 5 x 2 can be found by 3 x 5 = 15, then 15 x 2 = 30, or by 5 x 2 = 10, then 3 x 10 = 30. (Associative property of multiplication.)** Knowing that 8 x 5 = 40 and 8 x 2 = 16, one can find 8 x 7 as 8 x (5 + 2) = (8 x 5) + (8 x 2) = 40 + 16 = 56. (Distributive property.) | Page 278 | Doubling and Halving - when doubling and halving, students are engaged in using the ideas of the associative property of multiplication. Since this Unit focuses on factors 2, 3, 4, 5, and 10, you may choose number talks that fit those factors, but feel free to expand past those factors if your students are ready. |
| 3.OA.5 Apply properties of operations as strategies to multiply and divide. [Students need not use formal terms for these properties.] Examples: If 6 x 4 = 24 is known, then 4 x 6 = 24 is also known. (Commutative property of multiplication.) **3 x 5 x 2 can be found by 3 x 5 = 15, then 15 x 2 = 30, or by 5 x 2 = 10, then 3 x 10 = 30. (Associative property of multiplication.) Knowing that 8 x 5 = 40 and 8 x 2 = 16, one can find 8 x 7 as 8 x (5 + 2) = (8 x 5) + (8 x 2) = 40 + 16 = 56. (Distributive property.)** | Pages 282-283 | Breaking factors into smaller factors – when breaking factors into smaller factors, students are engaged in using the ideas of the associative property of multiplication. This also builds the foundation for students using the distributive property when multiplying.Since this Unit focuses on factors 2, 3, 4, 5, and 10, you may choose number talks that fit those factors, but feel free to expand past those factors if your students are ready. |
| 3.OA.2 Interpret whole-number quotients of whole numbers, e.g., interpret 56 ÷ 8 as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. *For example, describe a context in which a number of shares or a number of groups can be expressed as 56 ÷ 8.* | Page 290 | Partial Quotients- finding partial quotients engages students in using the place value system to divide. It also engages them in using the distributive property if they understand the relationship between multiplication and division. Since this Unit focuses on factors 2, 3, 4, 5, and 10, you may choose number talks that fit those factors, but feel free to expand past those factors if your students are ready. |
| 3.OA.7 Fluently multiply and divide within 100, using strategies such as **the relationship between multiplication and division** (e.g., knowing that 8 x 5 = 40, one knows 40 ÷ 5 = 8) or properties of operation. By the end of Grade 3, know from memory all products of two one-digit numbers. | Page 295 | Multiplying Up- these strings of numbers will engage students in using the relationship between multiplication and division.  |