**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 4. 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 addition and subtraction strategies, read pages 157- 170 and watch clips 3.2 and 3.3. For specific information about addition strategies, see pages 170-174 and watch clip 3.1. For specific information about subtraction strategies, see pages 175-181 and watch clip 5.6.

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| Standard | Page Numbers | Strategy/Purpose |
| 4.NBT.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.\* | Pages 185-188 | Making ten – single digit fluency |
| 4.NBT.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.\* | Pages 189-192 | Finding friendly numbers- single and multi-digit fluency |
| 4.NBT.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.\* | Pages 193-196 | Using doubles and near doubles- single and multi-digit fluency |
| 4.NBT.4 **Fluently add** and subtract multi-digit whole numbers using the standard algorithm.\* | Pages 197-200 | Addition number talks that promote place value strategies |
| 4.NBT.4 **Fluently** add and **subtract** multi-digit whole numbers using the standard algorithm.\* | Pages 217-220 | Subtraction number talks that promote place value strategies |
| 4.NBT.4 **Fluently add** and subtract multi-digit whole numbers using the standard algorithm.\* | Pages 201-204 | Addition number talks that promote students to use properties of operations, such as the associative property |
| 4.NBT.4 **Fluently** add and **subtract** multi-digit whole numbers using the standard algorithm.\* | Pages 221-229 | Subtraction number talks that promote students to use properties of operations |
| 4.NBT.4 **Fluently** add and **subtract** multi-digit whole numbers using the standard algorithm.\* | Pages 207-211 | Subtraction number talks that promote student use of the relationship between addition and subtraction (inverse) |

*\*Though the standard says that students should use the standard algorithm to solve, some students may still need to experience using place value, the properties of operations, and the relationship between addition and subtraction, to be successful in using the standard algorithm. The goal of Number Talks is* ***NOT*** *to get students to use the standard algorithm, but to dig in and understand whether or not students understand the big math behind it. Using Number Talks to explore the different strategies that can be used to solve addition and subtraction problems will help your students better understand what happens during the use of the standard algorithm. Number Talks also engage students in the use of the Mathematical Practices outlined in the Common Core.*

**Multiplication Number Talks**

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.

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| Standard | Page Numbers | Strategy/Purpose |
| **4.OA.4 Find all factor pairs for a whole number in the range 1–100. Recognize that a whole number is a multiple of each of its factors**. Determine whether a given whole number in the range 1–100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1–100 is prime or composite. | Pages 282-284 | Breaking Factors into Smaller Factors: These Number Talks focus on breaking numbers down into smaller factors. This is critical for later work with multi-digit multiplication. It sets the foundation for students to use the associative and distributive properties. |