**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 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 |
| 3.NBT.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. | Pages 185-188 | Making ten – single digit fluency |
| 3.NBT.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. | Pages 189-192 | Finding friendly numbers- single and multi-digit fluency |
| 3.NBT.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction. | Pages 193-196 | Using doubles and near doubles- single and multi-digit fluency |
| 3.NBT.2 Fluently **add** and subtract within 1000 using strategies and algorithms based on **place value,** properties of operations, and/or the relationship between addition and subtraction. | Pages 197-200 | Addition number talks that promote place value strategies |
| 3.NBT.2 Fluently add and **subtract** within 1000 using strategies and algorithms based on **place value**, properties of operations, and/or the relationship between addition and subtraction. | Pages 217-220 | Subtraction number talks that promote place value strategies |
| 3.NBT.2 Fluently **add** and subtract within 1000 using strategies and algorithms based on place value, **properties of operations,** and/or the relationship between addition and subtraction. | Pages 201-204 | Addition number talks that promote students to use properties of operations, such as the associative property |
| 3.NBT.2 Fluently add and **subtract** within 1000 using strategies and algorithms based on place value, **properties of operations**, and/or the relationship between addition and subtraction. | Pages 221-229 | Subtraction number talks that promote students to use properties of operations |
| 3.NBT.2 Fluently add and **subtract** within 1000 using strategies and algorithms based on place value, properties of operations, and/or the **relationship between addition and subtraction.** | Pages 207-211 | Subtraction number talks that promote student use of the relationship between addition and subtraction (inverse) |

**Supplemental Number Talks for Fluency Standard**

Standard Addressed by these Number Talks:

**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.

Pose these number sentences to students and ask them to solve them mentally. The student’s role is to demonstrate fluent strategies for solving these problems using place value and/or properties of operations. The teacher’s role is to pose the problem, give students a few minutes to solve the problems and then lead a discussion about how they solved the problems. Teachers will need to write down students’ thinking using number sentences that will show how students used place value and/or the properties of operations. You need not pose all at once, but instead do a few each week during the unit (posing one problem in one setting, or a string of problems that build on each other in one setting or over the course of a week). Conversations may range from 10-20 minutes in length. See the article *Number Talks Build Numerical Reasoning (***October 2011 •** teaching children mathematics) for more information.

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| Standard | Number Talk Problem Sets | Rationale |
| **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. | 2 X 4  4 X 4  6 X 4  8 X 4  3 X 3  6 X 3  9 X 3  2 X 5  3 X 5  5 X 5  7 X 5  8 X 5 | Pose these number talks in related pairs or strings to engage students in a discussion about how these problems are related and how using what we do know can help us figure out what we don’t know. Students can use the relationships in the problems to help them create the facts they don’t know automatically. |
| **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. | 12 ÷ 2  12 ÷ 3  12 ÷ 4  20 ÷ 2  20 ÷ 4  24 ÷ 4  20 ÷ 5 | Pose these number talks in related pairs or strings to engage students in a discussion about how these problems are related and how using what we do know can help us figure out what we don’t know. Students can use the relationships in the problems to help them create the facts they don’t know automatically. |