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 5. 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
5.NBT.5 Fluently **multiply** multi-digit whole numbers using the standard algorithm.*	Page 272-275	Partial Products- using partial products engages students in using place value and the distributive property of multiplication.
5.NBT.5 Fluently **multiply** multi-digit whole numbers using the standard algorithm.*	Page 276-281	Doubling and Halving - when doubling and halving, students are engaged in using the ideas of the associative property of multiplication.
5.NBT.5 Fluently **multiply** multi-digit whole numbers using the standard algorithm.*	Pages 282-285	Breaking Factors into Smaller Factors – when breaking factors into smaller factors, students are engaged in using place value and the ideas of the associative property of multiplication. This also builds the foundation for students using the distributive property when multiplying.

5.NBT.6 Find whole-number **quotients** of whole numbers with up to four-digit dividends and two-digit divisors**, using strategies based on place value, the properties of operations**, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	Pages 287-292	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.
5.NBT.6 Find whole-number **quotients** of whole numbers with up to four-digit dividends and two-digit divisors**, using strategies based on** place value, the properties of operations, and/or **the relationship between multiplication and division.** Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	Pages 293-297	Multiplying Up- these strings of numbers will engage students in using the relationship between multiplication and division.
5.NBT.6 Find whole-number **quotients** of whole numbers with up to four-digit dividends and two-digit divisors**, using strategies based on** place value, **the properties of operations**, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.	Pages 298-299	Proportional Reasoning- these number sets will engage students in using relational thinking to solve problems. They will use many of the properties of operations to solve these problems.

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 multiplication and division, 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 multiplication and division 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.*