

Summary Highlights of the K-8 Mathematics Survey Responses

1. **As of July 16, 2015**, the K-8 Math survey had 345 respondents to 18 questions designed by the Academic Standards Review Commission.
2. Out of the 345 respondents,
 - A. 43.5% or 150 taught K-3
 - B. 31.3% or 108 taught grades 6-8
 - C. 20.9% or 72 taught grades 4-5
 - D. 4.3% or 15 were Math Curriculum/Instructional Facilitators
3. Survey respondents rated themselves as to their having appropriate preparation to teach the Math standards for their grade levels:
 - A. 56.4% or 193, "agree"
 - B. 26% or 89, "strongly agree"
 - C. 12.3% or 42, "disagree"
 - D. 3.2% or 11 had, "no opinion"
 - E. 1.2% or 4, "strongly disagree"
 - F. 0.9% or 3, stated "Other"
4. Survey respondents indicated their years of teaching experience as follows:
 - A. 34.2% or 117 had 15 or more years of experience
 - B. 14.9% or 51 had 12 to 15 years of experience
 - C. 14.9% or 51 had 1 to 3 years of experience
 - D. 13.2% or 45 had 7 to 9 years of experience
 - E. 12% or 41 had 4 to 6 years of experience
5. Survey respondents rated the degree of the appropriate support that they had to teach the Math standards for their grade level as follows:
 - A. 57% or 195, "agree"
 - B. 17.5% or 60, "strongly agree"
 - C. 13.2% or 45, "disagree"
 - D. 7% or 24 had "no opinion"
 - E. 2.9% or 10, "strongly disagree"
 - F. 2.3% or 8, stated "Other"
6. 191 survey respondents or 56% agreed that the NC Math standards do not limit their autonomy/flexibility as a teacher. On the other hand, 16.4% or 56 respondents disagreed.

Another 49 respondents or 14.4%, strongly agree. (9.4% had no opinion, and 3.8% had strongly disagreed.)

7. In reference to the question of whether the majority of students who had entered their class this (past) year needed remediation, 34.5% or 118 survey respondents say they “agree.” Another 111 teachers or 32.5% “strongly agree.” (24.9% or 85 teachers “disagree”, and 2.3% or 8 teachers “strongly disagree.”)
8. In reference to the question of whether the Math standards adequately address the teaching of standards algorithms skill, 47.2% or 161 teachers “agree.” However, 29% or 99 teachers “disagree”. Furthermore, 15.5% or 53 teachers had “no opinion,” another 4.7% or 16 teachers “strongly agree”, and 3.5% or 12 “strongly disagree.”
9. When asked whether it is easy to understand and interpret the Math standards, 49.6% or 169 teachers “agree.” On the other hand, 31.1% or 106 “disagree.” Thirty teachers or 8.8% had “no opinion,” and 14 teachers or 4.1% “strongly disagree.”
10. Survey respondents rated their ability to easily translate the Math standards into instruction as follows: 55.1% or 189 teachers “agree.” However, 24.5% or 84 teachers “disagree.”

Another 33 teachers or 9.6% said that, they “strongly agree”, 31 teachers or 9% had “no opinion”, and 6 teachers or 1.7% had to “strongly disagree.”

11. Survey respondents rated the given list of potential concerns that they have with the present Math standards. Their number 1 concern was that “Multiple tasks that may be imbedded in one standard,” (59.6%), their second highest concern was on “Developmental appropriateness for grade level,” (57%), their third highest concern was on “Covering all the standards required by the end of the year.” (50.9%)

Other listed concerns were: “Lack of clarity with the way some standards are written,” (46.8%), and “Sequence/Progression of standards,” (36%)

12. Survey respondents rated the given list of situations that may have impacted their ability to implement the present NC Math standards with fidelity. The “lack of textbooks/instructional materials aligned with standards” was the number 1 situation (65.9%), and closely followed by the situation of “students arriving to class with learning gaps since standards were applied to all grade levels in the same year (i.e. not phased in)” at 64.7%.

Other situations that identified by respondents were as follows: (37.6%) Amount of class time/days in school to cover all standards adequately; (24.2%), and Adequate time for professional development; 5.8% or 20 respondents said “none of these situations apply to me,” and 9% or 31 respondents indicated “Other.”

13. Survey respondents identified, from a given list, which items would help them to implement the NC Math standards with fidelity. Their response was, the need for textbooks (61.2%), professional development (49.1%), and technology (35.8%). Other responses were, Personnel (27.2%) and “Other” (21%).

14. Survey respondents identified specific standards that they are required to teach but would like to see dropped or, substantially revised for their respective grade levels. **Some** of their responses were the following:

6.G.4 Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.

3.G.1

8.ee.6

Statistics

5.MD.2

2.nbt.7 subtracting three digit numbers.

6th grade math is at grade level. The problem is students not learning basic skills like multiplying.

Don't have materials with me to say

8.EE.C.7 Solving pairs of simultaneous linear equations

K.OA.1.

I wouldn't want to see any standards dropped. I would like to have less testing/re-testing to allow for more learning time.

6.G.4

Represent and interpret data. CCSS.MATH.CONTENT.1.MD.C.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

With the 5th grade standards I find them grade level appropriate. In my years of teaching these standards, in my opinion, are aligned properly. It seems that the standards somehow tie in together.

With the NCSCOS, the objectives were so broad and you didn't know how deep to teach the content.

With CCSS you know exactly what to teach. But it is important that you know HOW to teach the standards, I would be disappointed see a change in the 5th standards.

I do not want any of the standards to be changed or sequenced differently.

They are all fine.

Non-standard measurements

4.NBT.6

I would like to see the mean average deviation dropped from the 6th grade statistics curriculum.

4.NBT.1

Subtraction with regrouping for second grade. I do not have the standard and am on vacation so not searching right now! The students have a very difficult time with this task/ standard and we were not to use the standard algorithm making it more difficult for parents to understand.

All of the standards for fractions need to be looked at and revised. There are so many that it is difficult to get to all of them as well as to make sure the students have understood and can perform them well. I feel like they are introduced but the students never have enough time to master them since there are so many other standards we must get to. Fourth grade has 7 different strands for this topic whereas third grade and fifth grade only have 3-4. We also have to teach using many different denominators whereas they come with only the basic denominators from third grade. It is very overwhelming for teachers, students, and parents to master this.

8.SP.4 (Two Way Tables) 8.EE.3 and 8.EE.4 (Operations with Scientific Notation)

5.GA.2

In the 6th grade I would like to see the emphasis on memorizing different geometric formulas reduced or dropped, especially for the surface area of 3D shapes. It would be great if the students could be allowed a formula sheet. Also, I a form an assessment that measures student growth. A student may become proficient in computing with fractions, but that growth will never be recognized because the skill is embedded within a two step algebra problem. Our a student may have learned how to solve a two-step algebra problem, but the learning gain is not seen because of the problem is explained within a 3 sentence word problem.

7.G (ALL)

8.ns

2.HCSobj Solve problems to determine a duration of time. Represent time as a horizontal sequence. Use a timeline to determine duration. Move forward and backward along timeline in multiples of hours, half hours, and quarter hours.

6.EE.3 Apply the properties of operations to generate equivalent expressions.

K.OA.A.3 Decompose numbers less than or equal to 10 into pairs in more than one way, e.g, by using objects or drawings, and record each decomposition by a drawing or equation (e.g., $5=2+3$ and $5=4+1$)

I think they are all important in kindergarten

50A2

6.rp.3

I am new to the grade level I will be entering. My county did provide some training this summer that was helpful.

Anything dealing with slope, example 8.F.B.4.

fractions in 5th grade- multiplying and dividing

3.MD.8 Solve real world and mathematical problems involving perimeters

Cross sections of 3d figures Constant of proportionality

1.G.1??

8.G.7 Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real world and mathematical problems in two and three dimensions.

3.MD.7 Relate area to the operations of multiplication and addition. d. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems. 3.MD.1 Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram

6.RP.1

5.NBT.7 Specifically multiplication and division of decimal numbers using models or drawings. This standard is developmentally inappropriate for fifth grade.

6.SP.4 Display numerical data in plots on a number line, including dot plots, histograms, and box plots. Parts of Geometry, for instance the transformation part. This need to be introduced to Geometry students in Math 2. Historical graphs: It which need to be covered after students understands the relationship between slope and rate of change

8.EE.8B Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. For example, $3x + 2y = 5$ and $3x + 2y = 6$ have no solution because $3x + 2y$ cannot simultaneously be 5 and 6.

3.OA.5

4.NF.2

The most difficult standard for my fifth graders to grasp is identifying the correct operation for word problems involving fractions

K. NBT.A1 This is a difficult for kindergarten students to grasp. The past few years I have noticed students getting extremely frustrated and unable to understand tens and ones.

6.G.5c

7.G.3 Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids. 7.SP.7 Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy. Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected. Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?

3.OA.9

5.G.B.3 Hierarchy of polygons

Please stop reinventing the wheel. Leave them alone and let us teach. Use your efforts and make a state wide curriculum that is available for all teachers to use. Look at New York or Georgia for examples.

None, although 5.G.4 is very confusing for fifth graders.

1.G.3

3.MD.A. 2. Measuring liquid volumes and masses.

15. Survey respondents were asked to elaborate on why they found particular standards to be problematic. **Some** of their responses were the following:

the metric part is not appropriate

The students do not understand the word problems because they are too difficult.

Two way tables are not used often and do not flow well in to Math I skills. Operations with scientific notation are very different to teach when students don't yet understand the exponential rules. This may be better used with in the Math I curriculum.

Both of these focus on the distributive property of multiplication. I do not feel thirds graders are developmentally ready to do this when it is not broken down into the power of 10. Finding the area of irregular shapes is very difficult for this age group and they often times do not make the connection between this and the distributive property.

With this standard, problems can be written in a tricky manner, confusing the students.

Unsure

This standard is misleading. It makes it seem that it is the only standard that deals with multistep word problems because it is the only one that explicitly says this. However, when the statewide assessments are presented to our learners ALL standards are framed as multistep word problems.

Why needed? Why 3 names for slope (unit rate, constant proportionality, slope)

In my experience, students are not developmentally ready to solve systems of linear equations algebraically in the eighth grade.

It is not developmentally appropriate for first grade.

Not developmentally appropriate.

This standard is easy to teach, however, I see students come to sixth grade ill-prepared for mastering this skill. They need far more work in understanding the other operations with fractions before working with division of fractions.

Above students' understanding - need more of an integer and Algebra background!

Unclear and not developmentally appropriate

This standard is embedded with graphing slopes.

It only addresses part of the metric system.

It is unfathomable to me why a 6th grade student needs to be able to perform this task, and even those who can perform are only doing the algorithms and do not truly understand its application in real world scenarios. This is more appropriate for a high school or college statistics class.

Obvious.

Children really struggle with conversions in measurement. I think they need to have a strong background knowledge of standard and metric measurement before they can master multi-step problems. It is very difficult for them to express measurement from larger units to smaller units when they have not mastered the basics of measurement.

The only problem I have with the standard is the box plots. I like to connect our math content with real world applications and the box plot is the only part of the standard I feel has no relevance.

I would like more clarity on things like solve "real world" problems ; "explain why" ; "compare" ; "interpret".

The verbs are not as concrete as I would like them. They leave room for a lot of interpretation.

There is a huge gap of knowledge here. Money, for example is addressed in grade 2, but only in terms of how it is counted, not how it is written in decimal form. Grade 3 does not address money at all. Grade 4 addresses decimals, but not money. There is an "assumption" that teachers will use money to teach decimals. There is also a tremendous amount of vocabulary & memorization required for this standard. It involves standard and metric measurement of distance/length, mass/weight, capacity and volume. Then, there is time. There are conversions. It is just too much embedded in one standard.

Students already have the hard task of composing and decomposing numbers adding and subtracting numbers within ten. Kindergarten students all come in different developmental stages. Seeing the + - = signs are new to kindergarten students have so much that is expected of them numbers 11-19 is even a struggle for them to remember.

Age-appropriateness of the level of understanding is too difficult for 1st grade

In order to teach the standard as written, students must estimate where the placement of the decimal should be placed after much exploration with models. The models become incredibly messy, are very small, and are difficult to make sense of without a tremendous amount of practice. There are too many standards and adequate time cannot be given to develop the necessary understandings.

The metric system is not real life to a 4th grader. I don't mind the common core. I am extremely concerned with the age appropriateness of the questions. Students in my area struggle on the EOG

because there are too many hidden steps. We need to assess the basic knowledge and not try and trick these small children. More time and practice solidifying basic algorithms is needed at the K-5 level.

Students at this age have difficulty comparing the different values of place values.

There aren't enough resources available to help students visualize cross sections. There are entirely too many SP standards and 7.SP.7 is very confusing.

Third grade is not ready for division

I have no problem with the way this standard is written. In the past, we have taught the standard exactly as it is written. For testing with DPI tasks, students are now required to also know that 706 could be 70 tens and 6 ones or 706 ones. This is very tricky for second graders and many students are not developmentally ready for that yet.

Area- It is too abstract, even higher students struggle with it. It does not seem developmentally appropriate Time- the standard is not clear as to elapsed time within/over an hours. It has been a topic of great discussion with several district teachers as to what it really expected.

the use of informal language to describe and compare shapes is subjective. It should be clear about the informal words that a kindergartner will use. The words corners, vertices, sides, etc are actually formal words to describe and compare shapes.

My students really struggled to conceptualize what a number line is and how to move along it. They got really confused with how to make jumps and how to skip along the line and what kind of math was occurring as they moved one way or the other. I would like for this standard to be reviewed and possibly revised, but not dropped altogether.

The students cannot connect the 3 dimension to a 2 dimensional net and find missing lengths.

Difficult for 2nd graders to verbalize or write in the form of an explanation. Explain through drawings would work.

Students struggle to visualize parts of numbers being multiplied and divided and why the products become smaller and the quotients become larger - it is a reverse thinking for them after multiplying and dividing large whole numbers. This standard is not developmentally appropriate in my opinion.

Students have a hard time deciphering between the wording of various word problems to decide if addition or subtraction would be the best strategy for solving it. Some of those word problems call for subtraction through unknown addend problems. These can be tricky or confusing for students.

Kindergarten children have a hard time understanding this math concept, I don't feel it is developmentally appropriate

Many of our second grade students are not developmentally ready to understand/comprehend all that is being asked of them in the completion of many of the word problems they are required to answer. They can be very abstract.

There are too many skills in this standard. I feel like multiplicity should be 1 grade level and dividing should be another. Students find it hard to grasp the many different steps how to differentiated between multiplying and diving when solving problems.and understanding of this concept.

More instructional time should be spent on other Geometry standards.

Too high level for middle school students. Too many embedded skills within that they do not have mastered.

This standard takes a long time to teach first graders when we are already cramped for time so that we can fit it all in. I think it is more developmentally appropriate for second grade.

Line plots are very abstract to students and not a skill that is used in daily life. It is difficult for them to interpret what the question is asking despite studying question stems. Questions that involve finding the total length by adding up ALL the values represented by the Xs are not developmentally appropriate for 4th graders.

The standard includes metric measurements which students do not use regularly. In addition, the students have little to no experience with the idea of mass or volume, which involves significant teaching in order to master. It does not seem age appropriate.

3.MD.2 - students are practicing reading recipes and reading instructions on how to make items. All of these use standard measurements. So in literacy I am having to explain math concepts not in the standard so students can have a sense of what reading a recipe is. 3.MD.4 covers 2 major concepts in one standard. Ask students to master 1 of the skills first. Reading a broken ruler or reading a line plot. It's too complex for them all at once. Lastly rectilinears are taught before distributive property (why???) how about students master regular shapes first.

My students have the capability of learning this standard and completing associated tasks, but the standard itself is insufficient in terms of teaching. It should be broadened to include the specific systems of measurement to be taught -- i.e., the customary system of measurement for length, capacity, and weight; the metric system of measurement for length, capacity, and mass.

Foundational skills need to be mastered first.

I find this problematic because there is too much too teach and still have time for students to develop the level of thinking required to grasp each topic at a deeper level.

They don't have the wherewithal to understand part of

It's not real-world useful, so it takes time from other important standards. It is very difficult for students to apply their knowledge of adding/subtracting fractions as well.

There is no real world application for 6th graders to use this type of data analysis at this level.

Understanding box plots, mean, median, mode and range is enough.

Many students not ready developmentally to take on this task Parents try to show students the way they learned/ standard algorithm We are not teaching the standard algorithm yet!

Students have trouble with the visual spatialization of this goal

This standard asks students to learn the distributive property of multiplication in the same year that they are learning the basic properties of multiplication. For advanced students, this is a challenging task, but for students who are still struggling to master the basics of multiplication

students are not developmentally ready to understand these nor exponents by my grade level

Students struggle to understand how to set up and solve proportions. The basic ratio in a word problem is the first time they are introduced to the concept and going deeper in that area would be great.

There is too much to cover in this objective and too many gaps to address prior to teaching this objective.

In fourth grade it is difficult to teach multiple ways to multiply and divide to students who do not have a strong foundation. By the time we cover three methods for each it tends to get a bit confusing for some of the kids working at a lower level and even some of the average kids.

Students typically have very few real world experiences to prepare them for these standards. There is a huge jump from multiplying and dividing whole numbers, and even decimals, to fractions.

Students do not seem to understand basic math facts and place value to go from basic math facts to two digit to three digit.

Students in first grade still need to use number lines, base ten blocks, or 100 boards to find ten more & 10 less.

Most students just don't understand slope, even with the 90 degree triangle, even with real world examples. I'm very visual, so it makes sense to me. They could, for the most part, tell me if it was positive, negative, undefined, or zero. But, finding what it was seemed to be the most difficult thing ever. Even after we came back to review it toward the end of the year.

Many of the written problems are confusing for the developmental ability of the students.

Students have no prior knowledge of the distributive property or expressions when they enter sixth grade.

As math teachers, we are burdened with the task of introducing both concepts and master the applications of both concepts at a level that is not developmentally appropriate for the average sixth grader.

This is unrealistic in the real-world. Students would not need to perform calculations involving scientific notation without the use of technology. Students should understand how to read, write and convert scientific notation. But the knowledge to perform operations by hand is irrelevant in today's society.

16. Survey respondents were asked to identify the standards that they were required to teach, and felt was critically important to their students. **Some** of their responses were the following:

8.NS.1 and 8.NS.2

3.OA.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.1

The number system 6.NS.1 6.NS.2 6.NS.3 6.NS.4 6.NS.5 6.NS.6

All standards

Work with time and money. CCSS.MATH.CONTENT.2.MD.C.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m. CCSS.MATH.CONTENT.2.MD.C.8 Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?

8.F.5. Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.

K.CC.4 Understanding the relationship between numbers and quantities: connecting counting to cardinality.

4.NBT.4 Fluently add and subtract multi-digit whole numbers

I liked them all... just too many of them.

2.Nbt.7 and 2.nbt.8

A.....1.NBT.A.1, 1.NBT.B.2; B.....1.OA.B.3 & 4; 1.OA.C. 5 & 6 A....Dealing with place value B...Dealing with adding and subtracting within 20; counting on to make 10 to get to a number higher than 10;

Understand that subtraction as an unknown addition problem

7.NS.3

4.NBT

I do like 7th grade doing rate of change to lead into the slope for 8th grade. I teach all three grade levels in accelerated classes as well as Math 1. I do integrate all three standards in my classes.

All of Numbers and base ten operations

2.NBT.1 Understand that the three digits of a threedigit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases: a. 100 can be thought of as a bundle of ten tens – called a “hundred.” b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).

5.NBT.B.5,6,7

number sense

I believe they all are important

Don't have standards with me but most surely fractions and geometry

6. NS. 5

1.OA.A - Represent and solve problems involving addition and subtraction.

8.EE.8 Analyze and solve pairs of simultaneous linear equations.

7.NS (ALL) and 7.EE (ALL)

2.NBT.1

3.OA.8

8.EE.7

all i think they are well written and developmentally appropriate

Addition, Subtraction, Multiplication, Division and Multi-step word problems!!!

1.OA.3 Apply properties of operations to add and subtract within 20

1.NBT.2 and 1.NBT.3

8.EE.7

5NBTA.1 Understanding the Place Value system.

6.ns.1

4.OA.A3

3.OA.7

5.NBT.B.5

2.MD.8 and 2.NBT.7

4.NBT.5 Multiply a whole number of up to four digits by one- digit whole number; multiply two, two-digit numbers. Use strategies based on place value and the properties of operations. Illustrate and explain the calculation.

8.EE.7 Solve linear equations in one variable

I think all the 6th grade standards are important; what I need is a resource for my students to practice what they have learned. I cobble together practice work and it is not helpful to the students or to me.

K.cc.4 counting and cardinality

3.OA.7 Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

K.CC.B.4 Understand the relationship between numbers and quantities; connect counting to cardinality.

17. Survey respondents were asked to elaborate on why they thought it was important for their students to master a particular standard. **Some** of their responses were the following:

multiplication is the most important piece in fourth grade as it is the base for area, conversions, and fractions.

It involves problem solving with addition, subtraction, multiplication, and division which are lifelong skills.

Unsure

Students will deal with fractions in the real world FOREVER! They seem to have a hard time grasping fractions (add, subtract, multiply and divide). I seem to have to spend a LOT of time reviewing fractions.

A...Students must have a strong number sense of numbers to 120 before moving on; they must be able to determine the number of ones and tens and be able to Make a Ten when adding 2 digit numbers

B...Students understand addition and subtraction better when presented with the commutative property; learning number families...this helps with finding unknowns; they see *Patterns emerge

These standards cover fractions and decimals, which are the critical learning areas in fifth grade.

Ratios, rates and proportional reasoning are real-life math skills that most individuals can benefit from knowing.

Most everything depends on an understanding of positive and negative numbers. I tried several tricks, but the majority of my students struggled with grasping the operations using positive and negative numbers.

They need the understanding and the strategies for each operation.

Because place value is the foundation for students being able to move on to other mathematics skills:

comparing numbers, adding and subtracting multiple digits, skip counting, and more. If students haven't mastered what the value of each digit in a number is, it makes their learning exponentially more difficult.

most everything required for the 7th grade curriculum centers around these two standards

Students need to be able to do all computation of fractions and decimals and understand where these are used in real-life.

I believe this is the basis of all math.

Understanding equivalent fractions is crucial to understanding fractions as a whole. This skill is needed to add and subtract fraction, compare fractions, and reason through word problems.

Though all standards are critical, I feel this standard is the most important to master because if a student does not master this one standard they are set up for failure with every other standard on statewide testing. Though none of the other standards mention multistep word problems, students will see the content of those standards as multistep word problems.

I feel that this skill is so important because it builds the foundation that most mathematical learning is built on. These two skills will be most used in students' lives, especially in the real world.

This are life skills they need to make it in the real world!

It's important that students understand the concept of multiplication (i.e. it is repeated addition). Using drawings is key to helping students solve problems associated with this standard.

The ability to understand that two equations can have the same solution and how to manipulate the equations is the foundation of higher math.

Problem solving skills

Place value is very hard to understand and students need to understand it, in order to learn a lot of other standards.

This standard is written fairly well and is critical to solidifying their linear thinking. It also addresses proportional reasoning in a very clear manner.

This standard is important for my students to master because I teach EC students who are on multiple grade levels and who are on multiple learning levels. for them this is really the foundation for all the other standards. If they do not successfully obtain this standard, it will be hard to grasp the other concepts that need to be learned. We have to really consider the EC student and their needs in each of these standards.

If the students can master this standard, then they will understand how fractions are formed and that is the basis for a lot of other fraction curriculum.

many questions on the EOG

The deeper the foundation students have for base ten, the deeper their understanding of how all of our math works.

It is helpful for students to see numbers represented several ways.

It is a life skill.

This is a good foundational standard.

I feel if students have a clear understanding of ratios and proportions then they can solve almost any math problem needed.

Place value is a skill that must be mastered in order to be successful in future mathematics. It is a skill that needs to be mastered each year.

18. Survey respondents were asked if there was a standard or skill that was dropped in the transition to CCSS that they feel should be reinstated, and how the standard or skill would be beneficial to students. **Some** of their responses were the following:

*Calendar Math; can't believe this was dropped; so much of what we do such as place value; addition and subtraction can be integrated in calendar math; first graders still need this important skill. *Odd/Even numbers...this can certainly be integrated within calendar skills *Patterns; while this may or may not use algorithms, (depending on the kind of pattern) it builds reasoning and may spark some creativity
Drop volume and keep area, even with circles.

I am not sure where elapsed time fits into the curriculum, however I have noticed that most of my students can't read an analog clock.

In my 6thde classes, I continue to do area and circumference of a circle as I teach multiplying decimals. This works well. I also think 7th grade can move into slope a little more than just rate of change. I also think that 8th grade should go back to all calculator active since in today's world everyone has calculators on their phones.

Not aware of any that need reinstating.

Slides, transisions, and translations as well as rotational symmetry. However small this may seem students still need to be exposed to this vocabulary.

I have only taught CCSS.

In first grade the 4 standards cover all the necessary skills to be successful in second grade. My students are stronger mathematical thinkers now.

Money should be taught in 3rd grade.

patterns

3.MD.1- I do not think the skill was missed or dropped, however, about 50% of my students came into third grade not knowing how to tell time at all. It is once again hard to catch them up and complete

elapsed time to the nearest minute with the time constraint of the pacing guide. Just a standard I feel should be mentioned to 1st and 2nd grade teachers to focus a little more on.

prime factorization is no longer specifically mentioned in our current standards. This is something that really helps students in higher grades with factoring. Introducing it with 6ns.4 would be easy to incorporate.

No, I think the standards are great the way that they are written.
none.

I was not teaching in North Carolina before the transition.

I moved to this grade level after the transition, so I am unsure.

general geometry vocabulary. I know that students are suppose to cover this material in elementary school, so it is a skill to be maintained, but they don't always come to me with the required knowledge.

I think that two digit by one digit division and multiplication should be brought back to 3rd grade as far as developing an understanding and several algorithms that students could use. I think this would help 4th tremendously since everything is problem solving and multi-step.

No - make sure to keep probability out of 6th grade!!! Way above students' understanding!!

Changing a fraction to a decimal and a percentage. We must teach this to help with other standards but the students are not tested on it. This is frustrating to students. I feel that they should be tested to the skills leading up to others as well. It is not fair to kids who can not work a multi step problem because of learning disorder. They can do the basic.

Unsure as I began teaching 5th grade math when CCSS began.

No.

Reading and understanding data in a variety of charts and graphs.

Simplifying and operating with radicals is not its own standard so it sometimes is lost between 8th grade, Math 1 and Math 2.

Finding area and circumference of circles. This age group loves pizza. What shape is it? We could then present relative real world situations.

Teachers need tremendous support in understanding how to teach the standards. Far too many students are reaching upper elementary grades unable to transition from drawings to use of numbers to make sense of their thinking.

Identify coins

The use of fractions/decimals/percents. The understanding of percents is a basic real-world skill (growth, rates, money, etc) that permeates industry as well as personal. The understanding of percents is more essential than the understanding of negative exponents.

N/A As a first year teacher, I am accustomed only to Common Core.

Please stop reinventing the wheel. Leave them alone and let us teach. Use your efforts and make a state wide curriculum that is available for all teachers to use. Look at New York or Georgia for examples.

Money needs to be reinforced in more grades than just 2nd. Why is metric measurement taught before standard? Especially since we are not asking students to do anything more than estimate mass and volume in 3rd grade.

I am not aware, as I transitioned to middle school the same year we transitioned to CCSS.

Not sure about 2nd - 5th grade. I haven't had exposure to all K-5 grades long enough to really know what was dropped. In lower grades I feel calendar time is important and beneficial to students. It helps develop number sense in a repetitive manner. It sets the foundation for skills addressed or strengthened in later grades such as odd/even, counting, number patterns and general understanding of a time (year, month, day, hours...)

Patterns and money

I feel there needs to be a standard for money. Recognizing money, counting money, and the value of money.

I felt it unnecessary to remove all probability standards from sixth grade. Some of my most favorite topics to teach were things like permutations and combinations. While challenging for students, they allowed for a great deal of inquiry-based learning, problem-solving, and higher level thinking skills. I feel the students thrived having this challenge.

Money

Geometry involving circles and cones because they fit in with the current 7th geometry standards and would provide a transition to 8th grade standards

Measurement conversion across systems

This really applies to high school math -- While I am glad that kids are getting more statistics in high school math, I am disappointed that this is happening at the expense of traditional Geometry. There is VERY LITTLE traditional Geometry in the high school curriculum anymore! All that's there is analytic Geometry, such as calculating slope and distance on the coordinate grid to see if a quadrilateral on the coordinate grid is a rectangle. That's not enough.

NO!!! 7th grade seemed to lose very little and gain a whole lot. I would like to see Circumference and some of the Probability material moved back to 6th grade.

Nope.

I would add back to the curriculum the use of matrices. This was a better use of data in comparison to the two way tables.

Not applicable - the transition was before I began teaching.

They dropped concepts of calendar time from kindergarten...we still teach it to some degree since our students need those concepts to function in the real world.

Groupings of 2's, 5's, and 10's to count collections (1.02) • Fair Shares (1.04) I saw a huge gap in my students who needed remediation in these areas. They struggled in counting by 2's and fair shares until I remediated them. They need to have quick strategies for counting groups of numbers quickly. They could not keep the sequence going on 2's.

I am unaware of standards dropped during the transition.

Do not know....first year teaching this grade level

I'm not sure on this one. I started teaching with CCS in middle school this year. I have an elementary education background. I just noticed that my students were lacking some very important foundational skills.

Volume of pyramids was dropped, but cones remain at the 8th grade Math level. I feel these two concepts should (still) be taught together. It is a natural progression to go from area to volume of prisms/cylinders into volume pyramids/cones.

I firmly believe that money should be retained once after they are introduced. Students learn in it in the earlier grades and then it rarely appears in third grade at all. I worry about students not being able to grasp money skills.

19. Survey respondents were asked if they would like to see the Academic Standards Review Commission recommend teacher-suggested changes to the Math standards to the NC legislature.

83.4% strongly agreed and agreed (or, 42.3% and 41.1% respectively). Another 10% (35 respondents) had "no opinion"; 2.4% (8 respondents) indicated "Other", 2.1% (7 respondents) chose to "disagree", and 1.5% (5 respondents) said they "strongly disagree."