**K-2 Mathematics Survey**

1. What math curriculum are you currently using this school year? *(Please check ALL that apply.)*

❒ Everyday Mathematics/Everyday Learning McGraw-Hill

❒ Investigations in Number, Data & Space/SF Pearson

❒ Math Expressions/Houghton Mifflin Harcourt

❒ GO Math!/Houghton Mifflin Harcourt

❒ Harcourt Math or HPS Math/Houghton Mifflin Harcourt

❒ enVisionMATH/Scott Foresman-Pearson

❒ Math in Focus or Singapore Math/Great Source HMH

❒ Other *(please specify)* \_\_\_\_\_\_\_\_\_\_\_­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. In the last 12 months, how much training, professional development, or professional learning about the Common Core State Standards have you participated in in total?

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | ½ day | 1 day (1-4 hours) | 2 days (5-8 hours) | 3 days (9-16 hours) | 4-5 days | >5 days |
| General training on the Common Core State Standards |  |  |  |  |  |  |
|  | ½ day | 1 day (1-4 hours) | 2 days (5-8 hours) | 3 days (9-16 hours) | 4-5 days | >5 days |
| Content-specific training on the Common Core State Standards for Mathematics |  |  |  |  |  |  |

3. How familiar are you with the Common Core State Standards for the grade(s) / subject(s) you teach?

🔿 Very unfamiliar

🔿 Somewhat unfamiliar

🔿 Somewhat familiar

🔿 Very familiar

The next section is designed to provide a collective snapshot of the current Common Core Mathematics knowledge and practice in your local setting. As a reminder, the results of this survey are confidential. In order to gather the most accurate information, please do not guess on the items, and answer as candidly as possible. Remember that many items have no correct or incorrect answers.

Not all content in a given grade is emphasized equally in the Common Core State Standards. Some clusters require greater emphasis than others based on the depth of the ideas, the time that they take to master, and/or their importance to future mathematics or the demands of college and career readiness. This content is referred to as “Major Work.” The Common Core encourages the emphasis of Major Work in each grade, rather than trying to cover all of the standards equally.

4. Which of the following belong to the Major Work of the grade selected for this survey? Determine the major work for the grade level you teach, as well as for the grade below and above. *(Please check ALL that apply.)*

1. K grade

❒ a) Compare numbers

❒ b) Use tally marks

❒ c) Develop understanding of fractions as numbers

❒ d) Understand meaning of addition and subtraction

❒ e) I don’t know.

1. 1st grade

❒ a) Add and subtract within 20

❒ b) Measure lengths indirectly and by iterating length units

❒ c) Extend understanding of fraction equivalence and ordering

❒ d) Create and extend patterns and sequences

❒ e) I don’t know.

1. 2nd grade

❒ a) Identify line of symmetry in two dimensional figures

❒ b) Understand the place value

❒ c) Apply and extend previous understandings of multiplication and division to multiply and divide fractions

❒ d) Represent and solve problems involving addition and subtraction

❒ e) I don’t know.

1. 3rd grade

❒ a) Multiply and divide within 100

❒ b) Identify the measures of central tendency and distribution

❒ c) Develop understanding of fractions as numbers

❒ d) Understand meaning of addition and subtraction

❒ e) I don’t know.

5. Over the past school year, how frequently have you done the following?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Almost never/Never | About once a month | Several times a month | About weekly | Several times a week |
| a) Discussed Common Core State Standards for Mathematics with teachers in other grades |  |  |  |  |  |
| b) Discussed Common Core State Standards for Mathematics with teachers in your own grade |  |  |  |  |  |
| c) Looked at student mathematical work with other teachers for the purposes of professional development |  |  |  |  |  |
| d) Received suggestions from colleagues for curricular materials aligned to the Common Core State Standards for Mathematics |  |  |  |  |  |

The Common Core State Standards balance three aspects of rigor:

* **Conceptual understanding**: students know the meaning behind the math,
* **Procedural skill and fluency**: students can quickly and accurately perform operations, and
* **Application**: students apply their skills and knowledge in real world situations.

The next questions examine those aspects of rigor.

6. Examine each Common Core State Standard below carefully and check which aspect(s) of rigor are being targeted.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Conceptual Understanding | Procedural Skill and Fluency | Application | I don’t know |
| a) Fluently add and subtract within 5. |  |  |  |  |
| b) Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem. |  |  |  |  |
| c) Explain why addition and subtraction strategies work, using place value and the properties of operations. |  |  |  |  |
|  | Conceptual Understanding | Procedural Skill and Fluency | Application | I don’t know |
| d) Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:  i. 10 can be thought of as a bundle of ten ones – called a “ten.”  ii. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.  iii. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three,four, five, six, seven, eight, or nine tens (and 0 ones). |  |  |  |  |
| e) Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. |  |  |  |  |

7. Please indicate the extent to which you agree or disagree with the following statements as they relate to your mathematics teaching this school year.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Strongly Disagree | Somewhat Disagree | Somewhat Agree | Strongly Agree | Not Applicable |
| a) I choose which standards to teach based on the major work of the grade. |  |  |  |  |  |
| b) I try to incorporate conceptual understanding into every lesson that I teach. |  |  |  |  |  |
| c) I try to incorporate real-world applications into every lesson that I teach. |  |  |  |  |  |
| d) I use the textbook to determine the order of the standards that I teach. |  |  |  |  |  |
| e) I use the wording of the standards to determine if procedural skills, conceptual understanding, and/or real-world applications are emphasized in my lessons. |  |  |  |  |  |
| f) I order lessons based on the order of the standards at my grade. |  |  |  |  |  |
| g) I spend less time in the classroom on additional/supporting standards. |  |  |  |  |  |
| h) I organize which standards to teach based on how they connect to one another within and across units. |  |  |  |  |  |
| i) I seek to balance my unit across procedural skills, conceptual knowledge and real-world applications. |  |  |  |  |  |
| j) I consider students’ prior knowledge when writing my lesson and learning objective. |  |  |  |  |  |
| k) I try to give equal importance to all topics throughout the year. |  |  |  |  |  |

The CCSS emphasizes coherence *across* grades through progressions of topics over multiple grade-levels.

8. Consider this standard.

Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:

1. 10 can be thought of as a bundle of ten ones – called a “ten.”
2. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
3. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).

This standard is a preceded by which of the following standards? *(Select one.)*

🔿 a) Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

🔿 b) Understand that the three digits of a three-digit 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:

1. 100 can be thought of as a bundle of ten tens – called a “hundred.”
2. 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).

🔿 c) Use place value understanding to round multi-digit whole numbers to any place.

🔿 d) Use place value understanding to round whole numbers to the nearest 10 or 100.

🔿 e) I don’t know

9. Consider this standard.

Understand that the three digits of a three-digit 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:

1. 100 can be thought of as a bundle of ten tens – called a “hundred.”
2. 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)

This standard prepares students for which of the following standards? *(Select one.)*

🔿 a) Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

🔿 b) Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:

1. 10 can be thought of as a bundle of ten ones – called a “ten.”
2. The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.
3. The numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 refer to one, two, three, four, five, six, seven, eight, or nine tens (and 0 ones).

🔿 c) Use place value understanding to round whole numbers to the nearest 10 or 100.

🔿 d) 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).

🔿 e) I don’t know

The CCSS also emphasizes coherence *within* grades through explicit connections among topics within the grade.

10. From the list of five standards below, select *three* (in any order) that could be taught together in a coherent unit. Please ensure that you select three standards.

❒a) Apply properties of operations as strategies to add and subtract. *Examples: If 8 + 3 = 11 is known, then 3 + 8 = 11 is also known (commutative property of addition). To add 2 + 6 + 4, the second two numbers can be added to make a ten, so 2 + 6 + 4 = 2 + 10 = 12 (associative property of addition).*

❒b)Order three objects by length; compare the lengths of two objects indirectly by using the third object.

❒ c) Tell and write time in hours and half-hours using analog and digital clocks.

❒ d) Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.

❒ e) Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. *For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.*

❒ f) 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.

11. Please briefly explain below your reasoning for your selections.

Yesterday, Mr. Jones taught a math lesson to his 1st grade class and he would like comments on a few elements of his lesson.

12. Mr. Jones wants to be sure his lesson plan was Common Core-aligned. This was his objective for the class: “*Students will solve word problems that call for addition of three whole numbers, relate counting on to addition, and understand that the two digits of a two-digit number represent amounts of tens and ones.*” This objective is: *(Select one.)*

🔿 a) Supporting work of 1st grade

🔿 b) Major Work of 1st grade

🔿 c) Not a 1st grade objective

🔿 d) I don’t know.

13. Which activity would be appropriate for this lesson objective? *(Select one.)*

🔿 a) Students play a game in which the value on two cards are added and the player with the higher sum wins the round.

🔿 b) Students model a story problem using cubes and 10-frames to show the final sum as a two-digit number.

🔿 c) Students use base-10 blocks to model 2-digit numbers.

🔿 d) Students measure the lengths of various objects around the classroom and sort the lengths in order from lowest to highest.

🔿 e) I don’t know.

Mr. Jones used the following lesson plan to meet his objective:

Lesson: *The Very Hungry Caterpillar* by Eric Carle

*Objective:*

**Students will solve word problems that call for addition of three whole numbers, relate counting on to addition, and understand that the two digits of a two-digit number represent amounts of tens and ones.**

Lesson plan:

* Read the book, The Very Hungry Caterpillar, to the class. After the story has ended, ask, "How many things do you think the caterpillar ate in this story?" Take a minute to have students share an estimate with a partner.
* Next, provide each student with a dry erase board, ten-frames, and a set of counters or unifix cubes. Read the book again. After each page, pause so that the students can add counters or unifix cubes to the ten-frame to represent the number of things the caterpillar ate, and then write an equation on the dry-erase board connecting addition to the number of counters used.

1. If the students are working in pairs, one student can add the counters/unifix cubes to the ten-frame while the other student writes the equation. By the end of the story, there should be a total of 25 food items eaten and one leaf eaten (the students can decide as a class whether to count the leaf as a food). There will be two ten-frames completed with five or six counters/unifix cubes on the third ten-frame.

* At various points during the activity, stop and ask students to share their answers. If students come up with different equations, use them as a point of discussion. Ask students, "Can all of these be correct?"

14. In the lesson plan above, which type(s) of student learning is/are addressed? *(Please check ALL that apply.)*

❒ a) Conceptual understanding is addressed.

❒ b) Procedural skill is addressed.

❒ c) Application is addressed.

❒ d) None of the above is addressed.

❒ e) I don’t know.

15. Which standard(s) is/are addressed in the lesson plan? *(Please check ALL that apply.)*

❒ a) Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.

❒ b) Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

❒ c) Understand that the two digits of a two-digit number represent amounts of tens and ones.

❒ d) 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.

❒ e) None of the above.

❒ f) I don’t know.

16. Briefly, how would you improve upon the lesson plan to more thoroughly address this/these standard(s)?

17. Given the same lesson plan, which statement(s) below reflect the lesson? *(Please check ALL that apply.)*

❒ a) The lesson asks students to attend to precision.

❒ b) The lesson asks students to reason abstractly and quantitatively.

❒ c) The lesson asks students to construct arguments and critique reasoning in others.

❒ d) The lesson requires students to model with mathematics.

❒ e) The lesson has students look for and express repeated reasoning.

❒ f) The lesson builds on previous knowledge.

❒ g) The lesson encourages students to use appropriate tools strategically.

❒ h) I don’t know

18. Which prerequisite content will prepare students for this lesson? *(Select one.)*

🔿 a) Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.

🔿 b) For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation

🔿 c) Count forward beginning from a given number within the known sequence (instead of having to begin at 1).

🔿 d) Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (such as 18 = 10 + 8)

🔿 e) None of the above.

🔿 f) I don’t know.

19. This lesson most directly prepares students to learn which of the following standards? *(Select one.)*

🔿 a) Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.

🔿 b) Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

🔿 c) Count within 1000; skip-count by 5s, 10s, and 100s.

🔿 d) Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.

🔿 e) None of the above.

🔿 f) I don’t know.

20. Thinking about the last complete unit that you taught, how often did you do the following?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Never | Rarely | Sometimes | Often | In all or most lessons |
| a) Build on prior skills and knowledge when teaching new content |  |  |  |  |  |
| b) Ground procedures and formulas in conceptual understanding |  |  |  |  |  |
| c) Make the mathematics of the lesson explicit by using explanations, representations, and/or examples |  |  |  |  |  |
| d) Use repeated practice to improve students' computational skills |  |  |  |  |  |
|  | Never | Rarely | Sometimes | Often | In all or most lessons |
| e) Have students do work with and practice grade-level problems and exercises. |  |  |  |  |  |
| f) Emphasize one solution method to strengthen all students’ understanding of the content |  |  |  |  |  |
| g) Have students choose and use appropriate tools when solving a problem |  |  |  |  |  |
| h) Check for understanding throughout the lesson using informal, but deliberate methods (such as questioning or assigning short problems) |  |  |  |  |  |
| i) Summarize the mathematics with references to student work to reinforce the focus of the lesson |  |  |  |  |  |
| j) Predominantly use questions and problems that are from the textbook |  |  |  |  |  |
| k) Review standards from previous grades |  |  |  |  |  |
| l) Ask students to explain and justify their work |  |  |  |  |  |
| m) Provide feedback to help students revise initial work |  |  |  |  |  |

21. A teacher walking around the classroom overhears the comments below during student group work. Which comment shows students demonstrating the practice standard ‘**construct viable arguments and critique the reasoning of others’**? *(Select one.)*

🔿 a) “That could be the answer, or the answer could be 18.”

🔿 b) “No, the answer can’t be 27, because both numbers you’re adding are less than 10.”

🔿 c) “Yep, I agree that the answer is 16.”

🔿 d) “I don’t think the answer is 16. I’m going to ask the teacher.”

🔿 e) I don’t know

22. Which scenario shows students demonstrating the practice standard ‘**model with mathematics’**? *(Select one.)*

🔿 a) Students completing a worksheet on adding and subtracting within 20.

🔿b) Students explaining why addition strategies work.

🔿c) Students arranging counters to represent a subtraction situation.

🔿d) Students working in a group to answer problems comparing two numbers.

🔿e) I don’t know

23. In the last year, how frequently have you used the following websites for free resources and information about the Common Core State Standards?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Almost never/Never | About once a month | Several times a month | About weekly | Several times a week |
| Teaching Channel |  |  |  |  |  |
| Teachers Pay Teachers |  |  |  |  |  |
| LearnZillion |  |  |  |  |  |
| Share My Lesson |  |  |  |  |  |
| BetterLesson |  |  |  |  |  |
| Achieve the Core |  |  |  |  |  |
| Khan Academy |  |  |  |  |  |
| Pinterest |  |  |  |  |  |
| My state education agency website |  |  |  |  |  |
| My district education agency website |  |  |  |  |  |
| Other state or district education agency website |  |  |  |  |  |
| Other *(please specify)* |  |  |  |  |  |

Thank you very much for the time and thought you have put into completing this survey.

For more information about the organization conducting this research,

Student Achievement Partners,

visit [www.achievethecore.org](http://www.achievethecore.org).