

Rubric for the Critical Area of Mathematics – Grades K - 2

The intent of this document is to provide support as teachers transition to Common Core Standards. It draws attention to the most critical skills for their grade. If more detailed information is needed, refer to the Common Core State Standards for a deeper understanding and more information. The CCSS can be found on the ISBE website or at commoncore.org.

Attached is a checklist that teachers **could** use to assess their students on the topics that have been deemed critical areas for their grade (K – 2). These are **not** all the topics to be taught, just the ones that should receive the most attention. The document could be used by teachers to record each child's progress in the critical areas, or as a guide as they modify their instruction to better align to CCSS.

The document is in Microsoft Word, so feel free to modify to better meet your needs.

I would appreciate feedback on this document and let me know if I can be of further assistance as you transition to CCSS.

Sue

Sue Mainville
SSoS/ ISBE Data and Assessment Specialist
300 Heart Blvd.
Loves Park, IL 61111
smainvil@kidsroe.org

Rubric for Critical Areas of Math

Kindergarten

Critical Area: 1. Representing, relating, and operating on whole numbers, initially with sets of objects. (K.CC)

Standard		Exceeds Meets Progressing	Comments
Know the number names and count sequence	Count to 100 by ones		
	Count to 100 by 10's		
	Count forward from a given number within a known sequence (not 1)		
	Write numbers 0 -20		
	Represent a number of objects with a written numeral 0 -20 (with zero representing a count of no objects)		
Count to tell the number of objects	When counting objects, say the number names in the standard order, pairing each object with the one and only one number named and each number name with the one and only object.		
	Demonstrate an understanding that the last number name said tells the number of objects counted		
	Demonstrate an understanding that each successive number name refers to a quantity that is one larger		
	Count to answer "how many?" questions with up to 20 items arranged in a line, array or circle or up to 10 items scattered.		
Compare numbers	Identify whether the number of objects in one group is greater than, less than or equal to the number of objects in another group (using matching and counting strategies)		
	Compare two numbers between 1 and 10 presented as written numerals		

Rubric for Critical Areas of Math

Kindergarten

Critical Area: 2. Describe shapes and space (K.G)

Standard		Exceeds Meets Progressing	Comments
Identify and describe shapes (squares, circles, rectangles, triangles, hexagon, cubes, cones, cylinders, and spheres).	Describe objects in the environment using names of shapes		
	Describe the relative position of these objects (above, below, beside, in front of behind, and next to)		
	Correctly name shapes regardless of their orientation or size		
	Identify shapes as 2 dimensional (flat) or 3 dimensional (solid)		

For more information on the Mathematic Common Core State Standards, visit the following website:

http://www.corestandards.org/assets/CCSSI_Math%20Standards.pdf

Rubric for the Critical Area of Mathematics – Grades K - 2

The intent of this document is to provide support as teachers transition to Common Core Standards. It draws attention to the most critical skills for their grade. If more detailed information is needed, refer to the Common Core State Standards for a deeper understanding and more information. The CCSS can be found on the ISBE website or at commoncore.org.

Attached is a checklist that teachers **could** use to assess their students on the topics that have been deemed critical areas for their grade (K – 2). These are **not** all the topics to be taught, just the ones that should receive the most attention. The document could be used by teachers to record each child’s progress in the critical areas, or as a guide as they modify their instruction to better align to CCSS.

The document is in Microsoft Word, so feel free to modify to better meet your needs.

I would appreciate feedback on this document and let me know if I can be of further assistance as you transition to CCSS.

Sue

Sue Mainville
SSoS/ ISBE Data and Assessment Specialist
300 Heart Blvd.
Loves Park, IL 61111
smainvil@kidsroe.org

Rubric for Critical Areas of Math

Grade 1

Critical Area 1: Developing understanding of addition, subtraction, and strategies for addition and subtraction within 20. (1.OA)

Standard		Exceeds Meets Progressing	Comments
Represent and solve problems involving addition and subtraction	Use addition within 20 to solve word problems involving situations of adding to, putting together, and comparing with the unknowns in the answer position.*		
	Use addition within 20 to solve word problems involving situations of adding to, putting together, and comparing with the unknowns in either addend position.*		
	Use subtraction within 20 to solve word problems involving taking apart, taking from and comparing with the unknown in the answer position*		
	Use subtraction within 20 to solve word problems involving taking apart, taking from and comparing with the unknown in the minuend and subtrahend position.*		
	Solve problems that call for addition of 3 whole numbers whose sum is no more than 20*		
<i>*by using objects, drawings, and equations with a symbol for the unknown number to represent the problem</i>			

Critical Area 1: Developing understanding of addition, subtraction, and strategies for addition and subtraction within 20. (1.OA) (con't)

Standard		Exceeds Meets Progressing	Comments
Understand and apply properties of operations and the relationship between addition and subtraction.	Apply properties of operations as strategies to add and subtract. (Students do not need to use formal terms) $8+3 = 11$ so $3 + 8 =11$ (Commutative property) $2+ 6+4 = 2 + 10$ (Associative property)		
	Understand subtraction as an unknown addend problem. Subtract $10 - 8$ by finding the number that makes 10 when added to 8.		
Add and subtract within 20	Relate counting to addition and subtraction. For example they see that counting on 2 is the same adding 2		
	Add and subtract within 20 while demonstrating fluency for addition and subtraction within 10. Use strategies such as counting on.		
	Making 10 (e.g., $8 + 6 = 8 + 2 + 4 = 10 + 4=14$		
	Decomposing a number leading to a 10 (e.g., $13 - 4 = 13 - 3 - 1 = 10 - 1 =9$)		
	Using relationships between addition and subtraction(e.g., knowing that $8 + 4 = 12$, one knows that $12 - 8 = 4$)		
	Creating equivalent but easier know sums (e.g., adding $6 + 7$ by creating the known equivalent $6 + 6 + 1 =12 + 1 = 13$)		

Critical Area 2: Developing Understanding of Whole Number Relationships and place value, including grouping in tens and ones. (1NBT)

Standard		Exceeds Meets Progressing	Comments
Extend the counting sequence.	Count to 120, starting at any number less than 120		
	Read and write numerals up to 120 and represent a number of objects with a written numeral.		
Understand place value.	Understand that the two digits of a two-digit number represent amounts of tens and ones.		
	10 can be thought of as a bundle of ten ones — called a “ten.”		
	The numbers from 11 to 19 are composed of a ten and one, two, three, four, five, six, seven, eight, or nine ones.		
	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).		
	Compare two two-digit numbers based on meanings of the tens and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.		
Use place value understanding and properties of operations to add and subtract.	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 strategies to a written method and explain the reasoning used.		

Standard		Exceeds Meets Progressing	Comments
Use place value understanding and properties of operations to add and subtract. (con't)	Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.		
	Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used.		
	Subtract multiples of 10 in the range 10-90 from multiples of 10 in the range 10-90 (positive or zero differences), using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.		
	Relate the strategies used above to a written method and explain the reasoning used.		

Critical Area 3: Developing understanding of linear measurement and measuring lengths as iterating units. (1MD)

Standard		Exceeds Meets Progressing	Comments
Measure lengths indirectly and by iterating length units.	Order three objects by length; compare the lengths of two objects indirectly by using a third object.		
	Compare the lengths of two objects indirectly by using a third object.		
	Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end.		
	Understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. <i>Limit to contexts where the object being measured is spanned by a whole number of length units with no gaps or overlaps.</i>		

Critical Area 4: Reasoning about attributes of and composing and decomposing geometric shapes (1G)

Standard		Exceeds Meets Progressing	Comments
Reason with shapes and their attributes	Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color orientation, overall size).		
	Build and draw shapes to possess defining attributes from goal above.		
	Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.		
	Partition circles and rectangles into two and four equal shares, describe the shares using the words <i>halves</i> , <i>fourths</i> , and <i>quarters</i> , and use the phrases <i>half of</i> , <i>fourth of</i> , and <i>quarter of</i> .		
	Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.		

For more information on the Mathematic Common Core State Standards, visit the following website:

http://www.corestandards.org/assets/CCSI_Math%20Standards.pdf

Rubric for the Critical Area of Mathematics – Grades K - 2

The intent of this document is to provide support as teachers transition to Common Core Standards. It draws attention to the most critical skills for their grade. If more detailed information is needed, refer to the Common Core State Standards for a deeper understanding and more information. The CCSS can be found on the ISBE website or at commoncore.org.

Attached is a checklist that teachers **could** use to assess their students on the topics that have been deemed critical areas for their grade (K – 2). These are **not** all the topics to be taught, just the ones that should receive the most attention. The document could be used by teachers to record each child’s progress in the critical areas, or as a guide as they modify their instruction to better align to CCSS.

The document is in Microsoft Word, so feel free to modify to better meet your needs.

I would appreciate feedback on this document and let me know if I can be of further assistance as you transition to CCSS.

Sue

Sue Mainville
SSoS/ ISBE Data and Assessment Specialist
300 Heart Blvd.
Loves Park, IL 61111
smainvil@kidsroe.org

Rubric for Critical Areas of Math

Grade 2

Critical Area 1: extending understanding of base-ten notation (2NB)

Standard		Exceeds Meets Progressing	Comments
Understand Place Value	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.		
	100 can be thought of as a bundle of ten tens — called a “hundred.”		
	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).		
	Count within 1000; skip-count by 5s, 10s, and 100s.		
	Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.		
	Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using $>$, $=$, and $<$ symbols to record the results of comparisons.		

Critical Area 2: building fluency with addition and subtraction (2.OA, 2.NBT)

Standard		Exceeds Meets Progressing	Comments
Represent and solve problems involving addition and subtraction.	Use addition within 100 to solve one- and two-step word problems involving situations of adding to and putting together with unknowns in the answer positions		
	Use addition within 100 to solve one- and two-step word problems involving situations of adding to and putting together with unknowns in either addend position.		
	Use subtraction within 100 to solve one- and two-step word problems involving situations of taking from and taking apart, with unknowns in the answer position.		
	Use subtraction within 100 to solve one- and two-step word problems involving situations of taking from and taking apart, with unknowns in the minuend and subtrahend position.		
	Solve one- and two-step word problems involving situations of comparing, with unknowns in all positions		
Add and subtract within 20.	Fluently add and subtract within 20 using mental strategies		
	By end of Grade 2, know from memory all sums of two one-digit numbers.		
Use place value understanding and properties of operations to add and subtract.	Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.		
	Add up to four two-digit numbers using strategies based on place value and properties of operations.		
	Add and subtract within 1000, 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.		
	Relate the strategy used in the goal above to a written method.		
Use place value understanding and properties of operations to add and subtract.	Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.		

Critical Area 3: Using standard units of measure (2MD)

Standard		Exceeds Meets Progressing	Comments
Measure and estimate lengths in standard units.	Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.		
	Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.		
	Describe how the two measurements from the goal above relate to the size of the unit chosen.		

Critical Area 4: Describing and analyzing shapes (2G)

Standard		Exceeds Meets Progressing	Comments
Reason with shapes and their attributes.	Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.		
	Draw shapes having specified attributes, such as a given number of angles or a given number of equal faces.		
	Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.		

For more information on the Mathematic Common Core State Standards, visit the following website:

http://www.corestandards.org/assets/CCSSI_Math%20Standards.pdf