

Essential Math Skills Inventory: Rubric

Preschool	Emergent	Developing	Proficient
Demonstrates one-to-one correspondence for numbers 1-10, with steps	Not yet able to count steps in sequence	Able to count 2 to 9 steps in sequence, but is sometimes inconsistent	Counts 10 or more steps in sequence
Demonstrates one-to-one correspondence for numbers 1-10, with manipulatives.	Not yet counting objects with one-to-one correspondence	Counts objects with accuracy to 3	Shows one-to-one correspondence when counting 10 or more objects
Adds on using numbers 1-10, with steps	Unable to add on numbers using steps on a number line without recounting (1-10)	Inconsistently adds on numbers using steps on a number line without recounting (1-10)	Adds on numbers using steps on a number line without recounting (1-10)
Adds on using numbers 1-10, with manipulatives	Unable to add on numbers without recounting (1-10)	Inconsistently adds on from a set of objects without recounting (1-10)	Adds on from a set of objects without recounting (1-10)
Kindergarten	Intervention	Developing	Proficient
Demonstrates counting to 100	Counts to less than 20 with accuracy	Able to count to 50 to 99 with accuracy	Counts to 100 with accuracy
Has one-to-one correspondence for numbers 1 to 30	Can count fewer than 10 objects with one-to-one correspondence	Shows one-to-one correspondence when counting 10 to 29 objects	Shows one-to-one correspondence when counting 30 or more objects

Understands combination (to 10)	Does not consistently understand how to add on or take away 1-3 objects without recounting	Consistently adds on or takes away 1-3 objects without recounting	Adds on or takes-away from a set of objects without recounting (1-10)
Recognizes number groups without counting (2 to 10)	Recognizes number groups of 1 or 2 without counting	Recognizes number groups of 3 to 5 without counting	Recognizes number groups up to 10 without counting individual objects
First Grade	Intervention	Developing	Proficient
Counts objects with accuracy to 100	Counts fewer than 20 objects with accuracy	Sometimes counts objects with accuracy (to 100)	Consistently counts objects with accuracy (to 100)
Replicates visual patterns or movement patterns	Has difficulty replicating a 2-step visual pattern (i.e. square-circle, red-blue) or a 2-step movement pattern (i.e. clap hands, step forward)	Can sometimes replicate a 2- or 3-step visual or movement pattern	Can consistently replicate a 3- or 4-step visual pattern or movement pattern
Understands concepts of add on or take away (to 30) with manipulates	Unable to add on or take away numbers from a group (to 10)	Using an abacus (or other standard counting manipulative), can add on or take away numbers from group, but must recount to find resulting number (to 30)	Using an abacus (or other standard counting manipulative), can add on or take away numbers and name resulting number (to 30)

Can add or subtract single digit problems on paper	Needs assistance to add single digit problems on paper	Adds single digit problems on paper independently but with partial accuracy	Adds single digit problems on paper independently and accurately
Show a group of objects by number (to 100)	Shows a group of objects of fewer than 25 using an abacus or other manipulative	Shows a group of objects to 50 using an abacus or other manipulative	Shows a group of objects to 100 using an abacus or other manipulative
Second Grade	Intervention	Developing	Proficient
Quickly recognizes number groups (to 100)	Using manipulatives, recognizes numbers groups of fewer than 25	Using manipulatives, recognizes number groups of 25 to 75	Using manipulatives, quickly recognizes number groups to 100
Adds or subtracts from a group of objects (to 100)	Needs assistance to add to a group of objects and recognize the sum	Can accurately add to a group of objects but needs assistance with subtraction	Can accurately add to or subtract from a group of objects to 100
Adds or subtracts double-digit problems on paper	Needs assistance to add double-digit problems on paper	Accurately adds double-digit problems on paper but needs assistance with subtraction	Accurately adds or subtracts double-digit problems on paper
Counts by 2, 3, 4, 5, and 10 using manipulatives	Unable to skip count using manipulatives	Counts by 2s and 5s and is beginning to count by 3s and fours using manipulatives	Consistently counts by 2s, 3s, 4s, 5, and 10s using manipulatives

Solves written and oral story problems using the correct operations	Unable to solve written and oral story problems with guidance	Able to solve written and oral story problems with guidance	Consistently able to solve written and oral story problems by developing a plan, solving problems using correct operations, and evaluating the solution
Understand/identifies place value to 1,000	Does not yet understand place value for 1s, 10s, 100s and 1000s	Consistently identifies place value for 1s and 10s. Sometimes identifies place value for 100s and/ or 1000s	Consistently understands and identifies place value for 1s, 10s, 100s, and 1000s
Third Grade	Intervention	Developing	Proficient
Reads and writes numbers to 10,000 in words and numerals	Counts, reads, and/or writes numbers to 100	Counts, reads, and/or writes numbers to 1,000	Counts, reads, and writes numbers to 10,000
Uses common units of measurement: length, weight, time, money, temperature	Does not yet use units of measurement accurately	Able to use some units of measurement with accuracy	Consistently able to use all common units of measurement accurately
Adds or subtracts 3-digit problems on paper with regrouping	Unable to add or subtract 3 digit numbers with regrouping	Able to accurately add or subtract 3-digit numbers with guidance or use of manipulatives	Able to accurately add or subtract 3-digit numbers on paper
Rounds numbers to the 10s	Unable to round numbers to 10s	Rounds numbers to 10s in somewhat consistent manner	Automatically rounds numbers to 10s

Rounds numbers to the 100s	Unable to round numbers to 100s	Rounds numbers to 100s in somewhat consistent manner	Automatically rounds numbers to 100s
Adds and subtracts 2-digit numbers mentally	Unable to mentally add or subtract 2-digit numbers	Sometimes able to demonstrate ability to mentally add or subtract 2-digit numbers	Consistently demonstrates ability to mentally add or subtract 2-digit numbers
Counts by 5, 6, 7, 8, 9, and 10 using manipulatives	Unable to skip count using manipulatives	Beginning to count by 5, 6, 7, 8, 9, and 10 using manipulatives	Consistently counts by 5, 6, 7, 8, 9, and 10 using manipulatives
Uses arrays to visually depict multiplication	Uses arrays to visually depict multiplication for facts through 2	Uses arrays to visually depict multiplication for facts through 6	Uses arrays to visually depict multiplication for facts through 12
Recognizes basic fractions	Unable to identify $\frac{1}{2}$, $\frac{1}{3}$ and $\frac{1}{4}$ in a picture form with automaticity.	Can identify basic fractions in pictures and draw.	Can identify, say, and write basic fractions
Solves written and oral story problems using the correct operation	Able to solve problem if given plan and correct operation	Able to solve written and oral story problem with guidance in developing plan	Consistently able to solve written and oral story problem by developing a plan, using correct operation, and evaluating the solution