

SRPSD Grade 5 Math Rubrics

Part A: Number Strand

N5.1 Represent, compare, and describe whole numbers to 1 000 000 within the contexts of place value and the base ten system, and quantity.

Beginning (1)	Approaching (2)	Proficiency (3)	Mastery (4)
Student needs assistance with creating a place value chart to represent quantities to 1 000 000.	Student only uses a place value chart to represent a quantity to 1 000 000.	Student is able to represent a quantity to 1 000 000 in more than one way. (standard, written, and expanded form)	Student is able to solve problems that explore the quantity of whole numbers to 1 000 000.

N5.2 Analyze models of, develop strategies for, and carry out multiplication of whole numbers.

Beginning (1)	Approaching (2)	Proficiency (3)	Mastery (4)
Student needs assistance in choosing a strategy and tool to use in order to multiply numbers.	Student is able to multiply 2-digit by 2-digit using a personal strategy and with the use of a tool (multiplication chart, calculator)	Student is able to multiply 2-digit by 2-digit whole numbers using a personal strategy.	Student is able to solve multiplication situational problems.

N5.3 Demonstrate, with and without concrete materials, an understanding of division (3-digit by 1-digit) and interpret remainders to solve problems.

Beginning (1)	Approaching (2)	Proficiency (3)	Mastery (4)
Student needs assistance in choosing a strategy in order to divide numbers.	Student is able to division 3-digit by 1-digit using a personal strategy and with the use of a tool (multiplication chart, calculator)	Student is able to demonstrate with and without concrete (base ten) materials division of 3-digit by 1-digit whole numbers using a personal strategy.	Student is able to solve division situational problems, including the interpretation of remainders.

N5.4 Develop and apply personal strategies for estimation and computation by front-end rounding, compensation and compatible numbers.

Beginning (1)	Approaching (2)	Proficiency (3)	Mastery (4)
Student needs assistance in estimating numbers.	Student is inconsistent in estimating using front-end rounding, compensation, and compatible numbers.	Student is able to estimate using front-end rounding, compensation, and compatible numbers.	Student is able to choose a strategy for estimation within a story problem and explain their choice.

N5.5 a Demonstrate an understanding of fractions by comparing fractions with like and unlike denominators.

Beginning (1)	Approaching (2)	Proficiency (3)	Mastery (4)
Student needs assistance to compare fractions.	Student is able to compare fractions with like denominators	Student is able to compare fractions with unlike denominators.	Student is able to order a set of fractions with like and unlike denominators and explain.

N5.5b Demonstrate an understanding of fractions by using concrete and pictorial representations to create sets of equivalent fractions.

Beginning (1)	Approaching (2)	Proficiency (3)	Mastery (4)
Student needs assistance to create equivalent fractions.	Student is able to create equivalent fractions.	Student is able to create equivalent fractions.(concretely, pictorially, symbolically)	Student is able to verify whether or not two fractions are equivalent.

N5.6 Demonstrate understanding of decimals to thousandths by describing and representing, relating to fractions, and comparing and ordering.

Beginning (1)	Approaching (2)	Proficiency (3)	Mastery (4)
Student needs assistance to describe and represent decimals to 1000ths.	Student is able to describe and represent decimals to 1000ths.	Student is able to relate fractions and decimals to 1000ths.	Student is able to use personal strategies to compare and order fractions and decimals to 1000ths.

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N5.7a Demonstrate an understanding of addition of decimals (limited to thousandths).

Beginning (1)	Approaching (2)	Proficiency (3)	Mastery (4)
Student needs assistance adding numbers to 100ths.	Student can add decimals limited to 1000ths that do not require regrouping.	Student is able to add decimals limited to 1000ths using a regrouping strategy.	Student is able to solve situational addition story problems.

N5.7 b Demonstrate an understanding of subtraction of decimals (limited to thousandths).

Beginning (1)	Approaching (2)	Proficiency (3)	Mastery (4)
Student needs assistance subtracting numbers to 1000ths.	Student can subtract decimals limited to 1000ths that do not require regrouping.	Student is able to subtract decimals limited to 1000ths using a regrouping strategy.	Student is able to solve situational subtraction story problems.

Part B: Pattern & Relations Strand

P5.1 Represent, analyse, and apply patterns using mathematical language and notation.

Beginning (1)	Approaching (2)	Proficiency (3)	Mastery (4)
Student needs assistance to extend a pattern and identify the pattern rule.	Student is able to describe a pattern using concrete models (chart, table or diagram).	Student is able to use a mathematical expression to represent a pattern.	Student is able to use a mathematical expression to solve a problem involving patterns.

P5.2 Write, solve, and verify solutions of single-variable, one-step equations with whole number coefficients and whole number solutions.

Beginning (1)	Approaching (2)	Proficiency (3)	Mastery (4)
Student needs assistance to solve one step addition/subtraction equations.	Student is able to solve one step addition/subtraction /multiplication/division equations where the variable is the sum/difference.	Student is able to solve one step addition/subtraction/multiplication/division equations and verify the solution.	Student is able to write, solve, and verify single variable one step equation related to situational problems.

Part C: Shape & Space Strand

SS5.1 Design and construct different rectangles given either perimeter or area, or both (whole numbers), and draw conclusions.

Beginning (1)	Approaching (2)	Proficiency (3)	Mastery (4)
Student needs to assistance to determine the area and perimeter of a rectangle.	Student is able to determine the area and perimeter of a given rectangle.	Student is able to construct a rectangle using perimeter, area or both.	Student is able to draw conclusion between perimeter and area.

SS5.2 Demonstrate understanding of measuring length (mm) by: ••selecting and justifying referents for the unit mm ••modelling and describing the relationship between mm, cm, and m units.

Beginning (1)	Approaching (2)	Proficiency (3)	Mastery (4)
Student needs help selecting a referent for mm.	Student is able to name a referent for mm.	Student is able to give a situation where an appropriate referent for mm, cm, and m would be used.	Student is able to justify the referent.

SS5.3 Demonstrate an understanding of volume by: ••selecting and justifying referents for cm^3 or m^3 units ••estimating volume by using referents for cm^3 or m^3 ••measuring and recording volume (cm^3 or m^3) ••constructing rectangular prisms for a given volume.

Beginning (1)	Approaching (2)	Proficiency (3)	Mastery (4)
Student needs help understand what volume is.	Student is able to select referent for cm^3 or m^3 .	Student is able to construct/draw rectangular prisms for a given volume.	Student is able to estimate using a referent.

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SS5.4 Demonstrate understanding of capacity by: ••describing the relationship between mL and L
 ••selecting and justifying referents for mL or L units ••estimating capacity by using referents for mL or L ••measuring and recording capacity (mL or L).

Beginning (1)	Approaching (2)	Proficiency (3)	Mastery (4)
Student needs help understanding capacity.	Student is able to select a referent for ml or l.	Student is able to measure, record capacity and estimate.	Student is able to describe the relationship between mL and L.

SS5.5 Describe and provide examples of edges and faces of 3-D objects, and sides of 2-D shapes that are:

- parallel
- intersecting
- perpendicular
- vertical
- horizontal.

Beginning (1)	Approaching (2)	Proficiency (3)	Mastery (4)
Student needs help with understanding terms like parallel, intersecting, perpendicular, vertical, and horizontal.	Student can identify parallel, intersecting, perpendicular, vertical, and horizontal.	Student is able to describe 3D-objects using words like parallel, intersecting, and perpendicular.	Student is able to draw and identify 3-D objects that have lines that are parallel....

SS5.6 Identify and sort quadrilaterals, including:

- rectangles
- squares
- trapezoids
- parallelograms
- rhombuses

According to their attributes.

Beginning (1)	Approaching (2)	Proficiency (3)	Mastery (4)
Student needs help identifying quadrilaterals.	Student is able to identify the quadrilaterals (rectangle....).	Student can sort set of quadrilaterals and explain their sorting rule.	Student justifies quadrilateral according to its attributes.

SS5.7 Identify, create and analyze single transformations of 2-D shapes (with and without the use of technology).

Beginning (1)	Approaching (2)	Proficiency (3)	Mastery (4)
Student needs help understanding single transfer motions.	Student is able to identify single transformations.	Student is able to draw a single transformation including rotations, reflections, and translations.	Student is able to analyze and explain a single transformation.

Part D: Statistics & Probability Strand

SP5.1 Differentiate between first-hand and second-hand data.

Beginning (1)	Approaching (2)	Proficiency (3)	Mastery (4)
Student needs help understanding second-hand data.	Student knows what second-hand data is.	Student can differentiate between first and second hand data	Student is able to justify use of first and second hand data.

SP5.2 Construct and interpret double bar graph to draw conclusions.

Beginning (1)	Approaching (2)	Proficiency (3)	Mastery (4)
Student needs help drawing a bar graph.	Student is able to draw a double bar graph.	Student can interpret a double bar graph.	Student is able to predict and justify reasoning.

SP5.3 Describe, compare, predict, and test likelihood of outcomes in probability situations.

Beginning (1)	Approaching (2)	Proficiency (3)	Mastery (4)
Student needs help with understanding probability.	Student is able to describe a situation relevant to themselves that are possible, impossible and certain.	Student is able to describe the likelihood of an outcome.	Student is able to give the result based on the likelihood in a given situation.