

Math:

Numbers and Operations

Strengths:

- Rounding (10s, 100s, 1,000s) with and without a number line.
- Comparing and ordering three-digit numbers using appropriate symbols. $>$, $<$, $=$
- Adding three- and four-digit numbers without regrouping.
- Using models to represent fractions.

Learning Goals:

- Place value through the hundred thousands. Example: 154,290 choose the number in the thousands place. The student said 9.
- Adding three- and four-digit numbers with regrouping. The student added, going from left to right.
- Subtract multi-digit numbers without regrouping. Example: $155-143 = 12$. The student said the answer was 112. When 112 was not available, she said, "Let's do 22."
- Subtract multi-digit numbers with regrouping. Example: $432-59 = 373$. The student answered 437. I noticed on several occasions, the student would subtract going from left to right.
- Multiplication facts (multiply single digits) Examples of errors: 4×6 (36), 9×9 (99), 6×6 (12). Student's comments about multiplication: "I'm not good at multiplication." "I don't know the 7's, 8's, and 9's, and I'm not very good at the 3's and 4's."
- Multiplication (powers of 10)
- Multiplication (commutative, associative, and distributive properties) Example: $3 \times (9+1)$ "I changed the 9 into a 10 and I got 30 and then subtracted 3."

- Multiplication (2-digit and 3-digit numbers by a 1-digit number)
- Multiplication (2-digit and 3-digit numbers by a 2-digit number)
- Division with and without remainders. Student's comment: "I'm guessing because I don't know division."
- Identify equivalent fractions, compare fractions, and order fractions.

Measurement

Strengths:

- Telling time on a clock.
- Reading the temperature on a thermometer.
- Measuring length, converting units of length, and comparing units of length.

Learning Goals:

- Identify the value of a group of coins and bills.
- Measure weight using customary units.
- Measure capacity using customary units.

Data Analysis

Strengths:

- Likelihood and simple probability.

Learning Goals:

- Identify the missing number in linear number patterns.
- Solve word problems involving linear patterns.

- Multiple representations of the same data.
- Identify the range, minimums, and maximums of data sets.

Geometry

Strengths:

- Identify 3-D shapes.
- Location and direction – identify objects as on top, below, left of, or right of.

Learning Goals:

- Identify polygons by name. Examples: hexagon, quadrilateral, pentagon.
- Identify attributes of triangles.
- Area vs. perimeter.

Algebraic Thinking

Learning Goals:

- Identify what groups of objects have in common or how an object is unlike the others.
- Solve word problems using addition and subtraction from data represented in tables.
- Problem-solving with equations.