

SAINT PIERRE LEARNING RESOURCES

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MATHEMATICS | QUARTER 1 | DAY 4

5TH GRADE

Place-Value Shifts: $\times 10$, $\times 100$, $\div 10$, $\div 100$

STANDARDS-FIRST PLANNING

Verified NC alignment: NC.5.NBT.1 - Explain base-ten place-value relationships and product/quotient patterns when multiplying or dividing by powers of ten.

Student target: I can explain how a digit's value changes when a number is multiplied or divided by 10 or 100.

Success criteria: Use a place-value chart to justify whole-number and decimal shifts and compute accurately.

Teaching overview

Place-value relationships from whole numbers through hundredths, emphasizing the value of digits rather than a shortcut of "adding zeros". Q1 conceptual base-ten foundation.

Materials & setup

- Place-value slider / chart from thousands to thousandths
- Digit cards and decimal-point marker
- Base-ten grids and 0.1/0.01 models
- Dry-erase markers

Exactly 80 minutes: daily flow

COMPONENT	TIME
Warm-Up / Spiral Review	8 min
Visual Mini-Lesson	12 min
I Do	10 min
We Do	12 min
Small Group / Centers	18 min
Independent Practice + Early Finisher	15 min
Exit Ticket / Closure	5 min

Early finisher work is completed within the independent-practice block; it does not add time beyond 80 minutes. Quarter placement is a proposed local instructional sequence, not a state-mandated pacing map.

8 min | Warm-Up

Spiral prior Day 3 numerical expressions and Day 2 multiplication.

12 min | Visual Mini-Lesson

Show 3.6 on a place-value chart. Multiply by 10: digits move one place left in value; divide by 10: one place right. Contrast with 0.36.

10 min | I Do

Model $4.27 \times 100 = 427$ and $427 / 100 = 4.27$. Discuss why digit values, not the decimal point itself, change.

12 min | We Do

Students use digit cards to show four examples including $\times 0.1$ or $\times 0.01$ and $/10$.

18 min | Centers

Rotate 6 minutes: place-value slider, pattern tables, and error detective.

15 min | Independent / Challenge

Twelve new whole/decimal tasks with explanations. Early finishers compare $\times 0.1$ with $/10$.

5 min | Exit

Compute two transformations and justify the value of one digit.

Differentiation and access

Support: Use only $\times 10$ and $/10$ with whole numbers; physically move digit cards.

Core: Use $\times 10$, $\times 100$, $/10$, $/100$ with numbers including decimals.

Extension: Compare multiplying by 0.1 and dividing by 10; justify equivalence.

Language: Frame: "The digit ___ moves to the ___ place, so its value becomes ___."

Misconception to watch

"Add two zeros" fails for decimals and for division. Ask students to explain how the value of EACH digit changes using the place-value chart.

Evidence to collect

Collect one chart explanation for a multiplication and one for a division, not just answers.