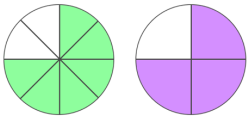
FRACTIONS, DECIMALS, RATIOS & PERCENTAGES PLANNING COMPONENTS: Grades 4-7

When designing a lesson in mathematics, we consider three parts of a lesson, drawing from the work of John van de Walle and Marian Small. These three parts can be thought of as before the lesson (activating prior knowledge and language, exploration of concepts and materials, building math community together), during the lesson and after the lesson (connecting, reflecting and consolidating learning through sharing and discussion facilitated by the teacher).

When designing and planning for mathematics learning about fractions, decimals, ratios and percentages, choose from the following components including routines, questions, tasks and prompts.

BEFORE



Same but Different
WODB
Fraction Talks
Open Questions (If 3:2 is the answer, what could the question be?)
Materials Exploration (How can you represent ____ with these materials?)
Notice and Wonder (recipe with fractions, infographic with percentages, news article with decimal measurements etc)

DURING

Open Questions
Place the Digits game using decimal numbers
Unit Fraction Cover Up Game
Sample Week Plan - Percentages
CGI and financial literacy problems
Math Learning Center apps: Number Frames, Number Pieces, Pattern Shapes
Math Tappers apps: EstimateFractions, Equivalents

210% 2.1

To consider:

- Use a range of concrete materials such as base ten blocks and pattern blocks as well as visual tools such as ten frames and hundred grids to deepen understanding of these types of numbers and to nudge connections between them.
- Use materials and tools to investigate these types of numbers through area models (fraction circles, base ten blocks, pattern blocks), set models (counters/blocks, ten frames, hundred grids) and linear models (Cuisenaire rods, rulers).
- Use digital tools such as the Number Pieces (fractions, decimals, ratios, percentages), Number Frames (fractions, decimals, percentages) or Pattern Shapes (fractions, ratios) apps to represent, analyze and compare numbers.

$\frac{3}{4}$ 3:4

AFTER

Closing Circle, Discussion, or Math Journal

Share and Compare: Teacher selects a few students (based on what they did and strategies they used that will move the class' learning forward) to share strategies or problems/investigations they thought through and records these on board or shares on screen so that class can compare and discuss.

Reflections and Self-Assessment: *What did you do/practice today? What did you learn? What is next for your learning? What is your learning goal?*

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RICHMOND SCHOOL DISTRICT NO.38