

NUMBER SENSE

K-2

Number sense is an understanding of numbers that allows for students to be flexible and fluent with their use of numbers. Young children with number sense can think flexibly about quantities such as knowing that five is two more than three and one less than six. Young children with number sense see patterns in our number system and can use language, visuals and materials to explain what they know about numbers.

KEY CONCEPTS

- Counting
- Subitizing
- Decomposing numbers
- Representing numbers
- Comparing and ordering numbers
- Place value (tens and ones)

click [HERE](#) for more information



Pedagogical Design

- Choice of materials to count and represent quantities
- Opportunities for whole class, small group and individual practice
- Provide concrete, pictorial & symbolic representations of numbers
- Use of whiteboards, pencil, paper and digital tools to represent and communicate mathematical thinking
- Time for play, exploration, open investigation with materials
- Opportunities for mathematical discourse and collaboration
- Begin task and lesson design with quantities and representations accessible to all

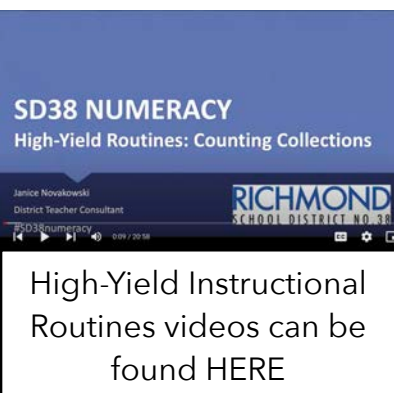
an example week plan shows how instructional strategies connect to pedagogical design

GRADE ONE WEEK PLAN

click [HERE](#) for this document

Instructional Strategies

- Number Talks
- High-Yield Routines: Number Talk Images, Counting Collections, Choral Counting, Quick Images, Unit Chats, Splat
- Soft Start Exploration with Materials
- Provocations/invitations focused on concepts and materials
- Math Workshop with small group instruction
- Math Games
- Math Stories and Storytelling



developed in collaboration with the SD38 Early Numeracy Working Group

NUMBER SENSE

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K-2 Materials

Five frames and ten frames
Counters/blocks
Unifix cubes
Cuisenaire rods
Rekenreks
Numicon Shapes
Dice & Dominoes
Dot cards
Base Ten Blocks
SumBlox

click [HERE](#) for more information



for some ideas for using Cuisenaire Rods, view a reel [HERE](#)



for some ideas for using Numicon Shapes read this blog post [HERE](#) (kit available at DRC)

One way to have students apply their understanding of number is through numeracy tasks. K-2 Numeracy Tasks can be found [HERE](#).

COUNTING COLLECTIONS

Counting collections is a routine during which a pair of students counts a collection of materials in different ways, developing many counting principles and an understanding of our number system. More information can be found [HERE](#).



MATH GAMES

Math games are a way to practice important math concepts and skills with concrete and visual materials that support understanding. Some math games can be found [HERE](#).



ASSESSMENT of Number Sense

There are many district resources to support your assessment of student learning in mathematics.

Indicators of Proficiency

Grade One Indicators of Proficiency (curricular content focus)

Representing numbers to 20	Represent, compare, order numbers to 20. Demonstrate understanding of teen numbers as ten and ones.
Counting to 20	Count to 20 in various ways (by 1s, 2s, 5s, ascending and descending, counting on from a number).
Ways to make 10	Compose and decompose 10 in many ways using concrete, pictorial and symbolic forms (e.g. $5+5$, $5+3+2$, $6+3+1$).

click [HERE](#) for this document

Computational Fluency Assessment Questions

Kindergarten Number Concepts and Computational Fluency

show different ways to represent 7

click [HERE](#) for this document

SD38 Early Numeracy Assessment Tool

SD38 K-2 Numeracy Assessment Support Document

click [HERE](#) for this document