

## Structuring Mental Math Minilessons, Grades 1 to 8 November 2013

Initially students require concrete and pictorial learning opportunities to develop conceptual understanding of the operations. Later, mental math activities provide opportunities for explicit instruction to support students in connecting symbolic and abstract thinking, and to develop efficiency with a range of strategies.

Mental math minilessons:

- always address curriculum specific expectations which indicate ‘using a variety of mental strategies’
- have a specific goal and the student thinking that is chosen to annotate is related to your specific goal
- are 10 minutes in length outside the 60 minute numeracy block (it is not designed to link to your math lesson of the day)
- are a whole class, oral activity
- have students gathered in the meeting area to facilitate turn and talk
- opportunities to ensure visual quantity representations (e.g. 5/10 frame, rekenrek, 20 snap cubes number line, open number line, 100 chart, arrays) are always used to ensure student thinking is visible to others
- allow for primary students to have their own tool (e.g., 5 frame, 10 frame, rekenrek) when appropriate
- honour place value in the language used (e.g., when referring to “23”, instead of “2”, say “2 tens” or “2 groups of ten”)
- focus the conversation on strategies used rather than the answer
- provide time for turn and talk to build student engagement and have some students share with the class what they discussed with their partner
- ensure each student continues to use all the “think time” provided (e.g., once students determine a strategy, have them indicate with a thumbs-up on their knee and continue to think about additional strategies).
- ensure students are sharing their thinking with classmates (e.g., Teacher can say “Tell **us** what you were thinking”; have students explain why their classmate chose a particular number or strategy)
- are an assessment for learning opportunity only
- are based on the minilessons in the professional resources provided to all schools (see page 2 for a complete list)