Grades K&1 Math Instructional Routines

Instructional routines are inclusive and responsive pedagogical practices that support the development of core and curricular competencies while learning mathematics content. The use of instructional routines as part of your designing for math learning supports the development of mathematical discourse and developing a math community. Specific mathematics curricular competencies that are developed during most math instructional routines include:

- Estimate reasonably
- Demonstrate and apply mental math strategies
- Visualize to explore mathematical concepts
- Use mathematical vocabulary and language to contribute to mathematical discussions
- Explain and justify mathematical ideas and decisions
- Communicate mathematical thinking in many ways
- Reflect on mathematical thinking

Prompts to support student thinking during math instructional routines:

- What do you notice? What do you wonder?
- How many? How do you see them?
- How do you know?
- What is a different way…?

Each routine could be about 10-15 minutes at the beginning of a lesson to recall and develop math knowledge, practice and use math vocabulary and language through discourse, explain thinking, and building an understanding that math can be creative and approached in many ways.

Routine	Description	Link	Content Areas
Splat	Routine that develops algebraic thinking and solving for an unknown. Students see total number of dots and then some dots are covered by a splat/s with remaining dots visible. Students figure out how many dots are under the splat/s.	https://stevewyborney.com/?s=splat	Algebraic thinking Connections between multiplication, division, addition and subtraction
Quick Images	The teacher holds up an image for 1-2 seconds and students "hold" the image in their head and then are asked to describe the quantity or spatial orientation of the items in the image.	https://tedd.org/quick-images-2/ https://numbertalkscom.wpcomstaging.com/number-talks-models/	Number Shape, spatial reasoning
Counting Collections	A pair of students counts a collection of items in multiple way) and records the count using pictures, words and symbols.	https://tedd.org/counting-collections/ https://blogs.sd38.bc.ca/sd38mathandscience/2015/11/03/counting-collections/	Number, quantity, skipcounting, place value
Choral Counting	As students count a sequence aloud together, such as counting by 1s starting at 5, the teacher records the count in rows and columns and then the students share the different number patterns they see.	https://tedd.org/choral-counting/	Number, quantity, skipcounting, place value, number patterns
Number Talk Images	Students determine how many items are in an image and explain how they know and different ways of seeing the quantity.	http://ntimages.weebly.com/photos.html	Number and quantity Application of operations
Estimation Clipboard	Students estimate the quantity or measure of different items through four sets of images.	https://stevewyborney.com/2018/04/the-estimation-clipboard/	Estimation Number and quantity

Same but/or/and Different	Students compare two images and discuss how they are the same and how they are different.	https://samedifferentimages.wordpress.com/about/ https://www.samebutdifferentmath.com	Images available for all content areas
Clothesline Math	Students order and compare numbers by placing tent cards along a clothesline or interactive number line.	https://clotheslinemath.com/numbers/ https://kristenacosta.com/clotheslines/	Numbers

Coast Metro Elementary Mathematics Project: Instructional Routines

https://coastmetro.ca/elementary-math-project/instructional-routines/