

Grades 6&7 Math Workshop Practice Tasks

After the instructional routine to begin a Math Workshop session, students then most often move into practice tasks. These are sometimes called learning stations or table tasks.

Practice tasks:

- Are all games, routines, and tasks that students have done before and are familiar with so that they can do them independently or in small groups
- Are all focused on the same concept or learning goal such as “multiplication strategies” or “comparing fractions” and develop mathematics curricular competencies
- Math Workshop is done once or twice a week, all year long, and focuses on foundational math concepts: number concepts and computational fluency
- The goal is for students to be metacognitive and think about what they need to practice and make those choices for themselves, although the teacher may structure a rotation between tasks or determine set groups at the beginning of the year as Math Workshop expectations are being established
- Include the practice of using mathematical vocabulary and language
- Include the practice of representation and communicating mathematical thinking

Once the routine of practice tasks is established, you can then add a table for small group instruction with the classroom teacher or learning resource teacher.

Small Group Instruction considerations:

- Plan for short (5 minute) interactions with a small group of students (2-4)
- Plan around the learning goal and learning standards that you are focusing on
- Have a small set of materials that you can use efficiently for all groups
- Predetermine your groupings based on regular in-class assessment and students’ level of proficiency or invite small groups of students to join who to learn more about a specific strategy, tool, or material
- Have a clipboard with a class list and math learning standards (these are all available for K-5 on Richnet and are called “Class Profiles”) to document evidence of learning during small group instruction

When you introduce Math Workshop, it will take time to build students’ understanding of how to engage with materials, tools, and each other while doing intentional practice. A learning goal helps bring students together and provides a focus for the closing circle, discussion and consolidation. Students need to understand their responsibility to learn and practice during the practice tasks. One structure to use to support this is using a consistent framework at the end of Math Workshop when you bring the students together as a whole group again and have them share:


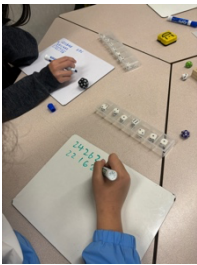

What did you do?

What math were you learning? What did you practice?

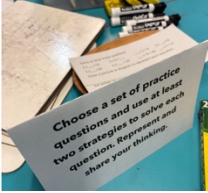

What’s next for your learning? What is your math goal for next time?


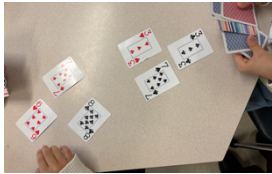
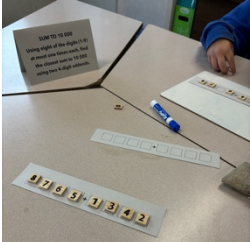
You might need to model what this looks like such as:

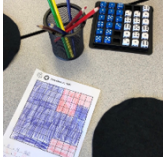
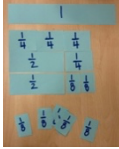

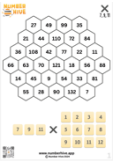
“I did clothesline. I am learning about ordering fractions. I was practicing thinking about the denominators to put fractions in order. Next time I want to try using different ways to make fractions.”

Task	Description	Materials and Resources	Math Content Areas
Splat	A task 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.	<p>After introducing Splat as a whole class routine, mini-splats made out of paper or felt can be used with counters or glass gems for students to create Splat problems for each other. Number cards can be added for students to add to their Splat! game.</p> 	<p>Algebraic thinking</p> <p>Connections between addition and subtraction, multiplication and division</p> <p>Composing and decomposing numbers</p>
Shakers	The students shake the shaker three times and then put it down on the table or counter. Students can use the dice to practice mental calculations and record and graph their results. Students can also use the dice to form large or decimal numbers (deciding where the decimal point goes) to then add or subtract.	<p>The Box Cars shakers are like “pill boxes” with seven compartments for dice.</p>  <p>https://boxcarsandoneeyedjacks.com/product/filled-dice-shakers-each/</p>	<p>Number</p> <p>Mental math addition strategies</p> <p>Place value, reading large numbers</p>
Ways to Make	Students compose and decompose a quantity with different materials. Students may also use equations to represent the quantity.	<p>Suggested materials:</p> <ul style="list-style-type: none"> Unifix cubes Cuisenaire rods Fraction bars and circles Numicon Shapes Two-sided counters (integers) Dotted dice Base ten blocks Multiple small ten frames and counters Grid paper <p>Mini Whiteboards and markers for recording using pictures and symbols (equations)</p> 	<p>Number, quantity, multiples, place value, number patterns, fractions, decimals, percentages, operations, positive and negative integers</p>
Estimation Jars	Students estimate the quantity of items in a jar or container. Leave one item or a group of 10 or 25 items out for students to use as a referent.	<p>Vary the shape and size of the container and the shape and size of the items used. Use a collection of cubes, buttons, gems etc but in different colours so students can also use percentages or ratios in their estimates (ie “I think it is about 50% red, 35% blue and 15% green”).</p> <p>Use a mini-whiteboard at the table for students to add their estimates. Include the counting of items and comparing of estimates as part of the closure to Math Workshop.</p>	<p>Estimation</p> <p>Number and quantity</p> <p>Percentage or ratio</p>

Task	Description	Materials and Resources	Math Content Areas
<p>Concept Circle</p>	<p>A concept word (pattern) or a number ($\frac{1}{2}$, 5879, etc) is written in the centre of a circle with spaces around it for students to build and connect representations of that concept.</p>	<div data-bbox="560 222 734 457" data-label="Image"> </div> <p>Students can use materials to represent the concept in each section of the circle. If laminated, students can use dry erase markers to draw or write in each section.</p> <p>Near the end of the Math Workshop time, bring students together to compare two of the representations: How are these the same? How are they different?</p> <p>Source: Dr. Cathy Marks Krpan</p>	<p>Numbers, fractions, decimals, percentages</p> <p>Composing, decomposing, representing</p> <p>Operations</p>
<p>If the answer is...</p>	<p>In the middle of a piece of chart paper, write a number (25, 150 etc) and ask, if the answer is ____, what could the question be?</p>	<p>Students can draw, write, add equations or “story” problems to the chart.</p> <p>Source: Dr. Marian Small</p> <div data-bbox="956 699 1151 957" data-label="Image"> </div>	<p>Numbers, place value, decimals, percentages</p> <p>Addition, subtraction, multiplication, division</p> <p>Problem solving</p>
<p>Clothesline</p>	<p>Students order and compare numbers by placing tent cards along a clothesline or interactive number line.</p>	<div data-bbox="560 999 730 1224" data-label="Image"> </div> <p>A mini-clothesline for small group learning can be created using repurposed materials such as chopsticks and could be an ADST project.</p> <p>Mini tent cards can be created using pictorial and symbolic representations of numbers.</p> <p>For grades 6&7, this is an excellent task to practice the relationship between fractions, decimals and percentages as well as ordering and comparing positive and negative integers. Clothesline can also support students’ understanding of improper fractions and mixed numbers.</p> <p>https://clotheslinemath.com</p> <p>https://kristenacosta.com/clotheslines/</p>	<p>Numbers, place value, fractions, decimals, percentages</p> <p>Comparing and ordering</p>

Task	Description	Materials and Resources	Math Content Areas
Practice Questions	<p>Students choose a set of practice questions and answer them in a math notebook or on a mini-whiteboard.</p> <p>Students are often asked show more than one strategy or way of making a number.</p>	<p>For Richmond teachers, a year's worth of practice questions for different grade bands are available on Richnet on a tile under each Numeracy Foundations Framework.</p>  <p>These can either be printed out on cardstock and used all year (students choose questions from a basket) or projected on a screen.</p>	All math content areas
Number Talk Images	<p>After using Number Talk Images an opening routine several times, it can be used for small group practice. Question prompts are: How many? How do you know/How do you see them?</p>	<p>Number talk images can be printed out and put into plastic sleeves for use with whiteboard markers to annotate or printed and students use pencils to circle the items and record equations for the different ways they see the quantity.</p> <p>https://ntimages.weebly.com</p>	Quantity, multiples, arrays, addition, multiplication, fractions, percentages, ratios
Choosing Game	<p>Students choose two dice and then complete an operation. Range of types of dice and number ranges allows for students to practice at their just right level.</p>	<p>Different types of dice are available at toy and games stores, educational suppliers and through BoxCars and One-Eyed Jacks.</p>  <p>https://boxcarsandoneeyedjacks.com/product-category/game-type/dice/</p> <p>Students can also roll three or more dice to create multi-digit numbers to operate with.</p>	Addition, subtraction, multiplication, division
Salute	<p>Using cards Ace-10 (Ace=1), two players stand or sit facing each other, each with a half deck of cards face down in front of them. The third person says Salute and each of the other two players holds a card up to their forehead, with the face of the card visible to the other player; the third player adds (or multiplies) the two numbers together and says the sum (product) out loud; the other two players have to figure out what number they have on their forehead; first one to correctly say number wins the two cards for that round. Play continues until you have played ten rounds or one player has won all the cards.</p>	<p>Written instructions: https://blogs.sd38.bc.ca/sd38mathandscience/wp-content/uploads/sites/14/2023/08/SD38_Salute_Math_Game.pdf</p> <p>For grades 6&7, this game supports practice with addition and multiplication facts as well as algebraic thinking (solving for the unknown).</p>	<p>Addition/subtraction</p> <p>Multiplication/division</p> <p>Algebraic thinking</p> <p>Operations with positive and negative integers</p>

Task	Description	Materials and Resources	Math Content Areas
Sum What Dice Game	Using a gameboard from 1-9, students roll two dice to find a sum and then cover spots on the gameboard that are operated on to reach that sum.	Written and video instructions: https://blogs.sd38.bc.ca/sd38mathandscience/wp-content/uploads/sites/14/2021/02/SD38_Sum_What_Math_Game.pdf https://youtu.be/YXmZhKPMhmM	mental math strategies addition, subtraction, multiplication, division relationships between operations
Game of Nine Cards	In pairs, students take turns choosing a card from a row of nine cards, face up, in order from Ace-9. The goal is to be the first to make a sum of 15 using three cards.	Need regular playing cards Written and video instructions: https://blogs.sd38.bc.ca/sd38mathandscience/wp-content/uploads/sites/14/2020/06/SD38_Game_of_Nine_Cards-1.pdf https://youtu.be/l8G4RxS6-Po	mental math strategies probability
Sweet Sixteen	Sweet Sixteen can be played collaboratively or in solitaire form. It focuses on developing computational fluency and flexibility and understanding the relationship between all four operations, exponents, and order of operations.	Written and video instructions: https://blogs.sd38.bc.ca/sd38mathandscience/wp-content/uploads/sites/14/2020/05/SD38_Sweet_Sixteen-1.pdf https://youtu.be/Sq2S7y9O6Wk 	addition, subtraction, multiplication, division, exponents, order of operations
Face-Off	Students each turn over two cards and add them together. The person with the “greatest” or “least” sum (players decide) wins the card. Other ways to play: 4, 5, or 6 cards and compare numbers, multiplication, multi-digit addition, creating fractions (numerator and denominator)	Can be played with regular playing cards beginning with Ace(1) -10. To adapt the game to practice operations with positive and negative integers, the players agree that black cards will be positive, and red cards will be negative. For example, if one student turns over a red 4 and a black 5, the player would say the product (multiplying) -20 and compare this number to their partners.  https://blogs.sd38.bc.ca/sd38mathandscience/wp-content/uploads/sites/14/2020/05/SD38_Face_Off_Game.pdf https://janicenovkam.typepad.com/files/bcrim_faceoff_game.pdf	addition, multiplication, mental math strategies, place value, comparing quantities, operations with positive and negative integers
Open Middle Tasks	A variety of tasks where students move digit cards around to complete equations.	Add stickers to wooden tiles, use sharpies on plastic colour tiles or print number tiles on cardstock (printable for these is on the open middle website)  https://www.openmiddle.com	addition, subtraction, multiplication, division, estimation, mental math strategies

Task	Description	Materials and Resources	Math Content Areas
How Close to 100?	Students take turns rolling a pair of dice and colouring in the corresponding array and recording the equation.	<p>Written instructions and printable gameboard:</p>  <p>https://www.youcubed.org/tasks/how-close-to-100/</p> <p>https://www.youcubed.org/wp-content/uploads/2017/03/How-close-to-100-handout.pdf</p> <p>Can adapt so that students express their score in a fraction ($/100$) or a percentage.</p>	Arrays, addition, multiplication, multiples, arrays, spatial reasoning, percentages
Spin and Cover	Use fraction bars or fold and cut fraction strips for 1, $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{1}{8}$ fractions. Spin and cover the whole with the fraction spun, keep spinning until a whole (1) is composed.	 <p>Make fraction strips by folding strips of paper in half and then cutting and labelling each part, and then in fourths, etc.</p>  <p>Create a spinner (one is also pre-made in the SD38 20 Day Kit for grades 3&4)</p>	decomposing and composing fractions
Number Hive Games	Students take turns calculating and covering numbers, trying to get four in a row. Games involve strategic thinking and develop fluency with operations.	<p>Printable gameboards available here: https://www.numberhive.app</p> <p>App also available through Self-Service for SD38 devices</p> 	operations fractions, decimals time

Materials to introduce in Grades 6&7 Math Workshop:

- Counters (two-sided counters specifically to use for positive and negative integers)
- Regular dotted six-sided dice, ten-sided dice (0-9), 10s, 100s and 1000s dice
- Playing cards (A-9 or 10, Ace=1)
- Base ten blocks (for decimal numbers and percentages)
- Cuisenaire Rods for multiples and ratios
- Pattern blocks (for fraction representations)
- Unifix cubes (for fraction representations)
- Fraction bars
- Fraction circles to connect to percentages

Tools to introduce in Grades 6&7 Math Workshop:

- 10x10 blank grids for percentage representation
- Grid paper for multiplication, arrays, fractions, and percentages
- Number line for positive and negative integer operations

SD38 K-5 Inclusive Practices in Mathematics: Math Workshop

This video is shared on the Numeracy Playlist on our district's YouTube channel:

https://youtu.be/W38rzoDhJJQ?si=5YqCiTdMYqgkl_v1

On Learn38 under each Numeracy Foundations Framework, there is a MATH WORKSHOP tile with resources that will be added to and updated:



[Math
Workshop](#)

Grades 6-7

- [Instructional Routines Gr 6-7](#)

Inclusive Practices

- [Math Workshop Inclusive Practices in Math K-5](#)
- [Math Workshop Inclusive Practices in Math 6-9](#)