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Fourth Grade Math Choice Board

Whole Numbers – 1st Nine Weeks

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| **Number Line**  Create a number line. Model how you can use the number line to add and subtract. | **Video**  Create a video to define place value. Explain how the place affects the value of a digit. Include what happens to the value of a digit once it is moved to another place. | **Bake Sale**  Your school is having a bake sale. Each student must bring between 30 and 50 servings of dessert to sell. Find a recipe for the dessert you would like to sell. Explain how you could figure out how much of each ingredient you would need to buy. |
| **Place Value Creations**  Construct a place value figure with ones, tens, hundreds, and thousands. List the number of ones, tens, hundreds, and thousands used to create the figure. Then, identify the number in standard form, word form, and expanded notation. | **Reading Calculation**  Choose a novel. Read for twenty minutes, and keep track of how many pages you read in that tune. How long will it take to read the whole book? If you read for 20 minutes every day, estimate how many books you could read in one year. Show your work in expressions and variables. | **Directions**  Create a multi-digit addition problem with regrouping. Write step-by-step directions for how to solve the problem. Then, do the same for a multi-digit subtraction problem with regrouping. |
| **Poster**  Create a poster to show how the equal sign is like a balance scale. Use the number 16 to show as many examples as possible. | **Word Problems**  Construct four word problems, one with each operation. Write two strategies for solving each problem. | **Build Arrays** – from MOCC  Build five or more arrays with base ten blocks using a number greater than 10 multiplied by a single digit number.  Example: To illustrate 154 x 6 use base 10 blocks or drawings to show 154 six times. 154 x 6 = (100 + 50 + 4) x 6 = (100 x 6) + (50 X 6) + (4 X 6) =600 + 300 + 24 = 924. |

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Fourth Grade Math Choice Board

Fraction Equivalents, Adding and Subtracting Fractions –

2nd Nine Weeks

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| **Poster**  Create a poster with five diagrams that show equivalent fractions for ¾. | **Would You Rather…?**  Write five “Would you rather” questions involving fractions. Answer each of your questions. See if a friend can answer the questions.   |  | | --- | | Example: Would you rather have ½ of a pie or ¼ of a pie? | | **Picture Dictionary**  Create a picture dictionary with key vocabulary terms: fraction, denominator, numerator, improper fraction, increment, mixed number, proper fraction, term, unit fraction, whole  number, equivalent, equivalent sets, compare, and like fractions. Include the definition and an illustration for each word. |
| **Crossword**  Trevor has 4 1/8 pizzas left over from his soccer party. After giving some pizza to his friend, he has 2 4/8 of a pizza left. How much pizza did Trevor give to his friend? Draw an illustration and write an explanation for how to solve.  from *Analyzing the Standards* on the MOCC | **Advertisement**  Create an advertisement that features a special item for sale. Use equivalent fractions to try to trick the buyer into paying more money for the same amount of product. | **Predicting Patterns**  Create a repeating pattern with attribute blocks. Predict what the 15th shape will be and explain why. Then, extend the pattern to check your prediction.  from *Analyzing the Standards* on the MOCC |
| **Hundreds Chart**  Use a hundreds chart to color multiples of a given number. Investigate the patterns for 2, 3, 4, 5, and 6. Each sequence can be represented with a different color crayon. Write sentences about the patterns.  from *Analyzing the Standards* on the MOCC | **Live By My Rules**  [http://nrich.maths.org/](http://nrich.maths.org/content/id/7192/JulySh.swf)  [content/id/7192/JulySh.swf](http://nrich.maths.org/content/id/7192/JulySh.swf)  Organize attribute blocks to follow a rule you create. Write the rule. Then, ask classmates to determine the rule. | **Video**  Create a how-to video that shows students how to compare two fractions. |

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Fourth Grade Math Choice Board

Multiply and Divide Fractions, Fractions and Decimals, Geometry –

3rd Nine Weeks

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| **Chart**  Visit [http://illuminations.nctm.](http://illuminations.nctm.org/ActivityDetail.aspx?ID=11)  [org/ActivityDetail.aspx?ID=11](http://illuminations.nctm.org/ActivityDetail.aspx?ID=11).  Explore different representations for fractions including improper fractions, mixed numbers, decimals, and percentages. Adjust numerators and denominators to see how they change the representations. Keep a record of ten fractions. | **Logo**  Design a logo. Your logo must have one line of symmetry, one right angle, one obtuse angle, and seven different polygons including the three types of triangles. Explain how your logo meets the design requirements. | **Art**  Create a geome-tree, a tree with geometric shapes. Include several triangles; label or color-code the triangles. Include five or more additional 2-dimensional shapes with labels. |
| **Scrapbook**  Keep a scrapbook of ten or more photos or pictures that show triangles. Classify each triangle. | **Drawing**  Draw two different types of quadrilaterals that have two pairs of parallel sides.  Is it possible to have an acute right triangle? Justify your reasoning using pictures and words. How many acute, obtuse, and right angles are in the shapes? Draw and list the properties of a parallelogram. Draw and list the properties of a rectangle. How are your drawings and lists alike? How are they different? | **Sorts**  [http://www.crickweb.co.uk/](http://www.crickweb.co.uk/ks2numeracy-shape-and-weight.html" \l "quad)  [ks2numeracy-shape-and-weight.html#quad](http://www.crickweb.co.uk/ks2numeracy-shape-and-weight.html" \l "quad)  Play Symmetry Sort and Triangle Sort. Argue why you placed the items in each category. |
| **List**  Select five decimal numbers with tenths and five with hundredths. Write them as decimals and as fractions. Order them from least to greatest. | **Party Planner**  Visit [http://www.mathplayground.com](http://www.mathplayground.com/PartyDesigner/PartyDesigner.html)  [/PartyDesigner/PartyDesigner.html](http://www.mathplayground.com/PartyDesigner/PartyDesigner.html). Create a party space with given area and perimeter. | **Number Line**  Create a number line with decimal numbers: 6.5, 6.25, 6.36, 6.72, and 6.9. Create a second number line with five decimal numbers of your choice.  from *Analyzing the Standards* on the MOCC |

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Fourth Grade Math Choice Board

Measurement – 4th Nine Weeks

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| **Geoboards** – from MOCC  Use circular geoboards to construct angles. Measure the angles. Identify the angles as acute, obtuse, or right. Virtual and printable geoboards can be found at <http://nrich.maths.org/2883>. | **Helpful Hint Sheet**  Create a Helpful Hint Sheet. Include the following units of measurement: km, m, cm, kg, g, lb, oz, l, ml, min, and sec. Tell what the units measure, like volume or mass. Give two or more examples of things that would be measured with that unit. | **Dog Fence**  You have 24 meters of fence to create a rectangular play area for your new puppy. Decide how to lay out the fence to make the area as large as possible. Show how you know. |
| **New Pool**  Your neighbors are purchasing a new pool. Their backyard is 20 meters wide and 25 meters long. They also want to have a vegetable garden and patio. Using grid paper, design their backyard so all three areas are reasonable sizes. Argue why this is the best layout for their backyard. | **Patterns**  Design a 5 X 5 tiled floor with a repeating pattern using three colors. How many of each color tile would you need to continue the pattern for a 25 X 25 area? Include the pattern rule and a table to explain how you know. | **Styrofoam Protractors**  Construct a Styrofoam plate protractor. 1. Glue a construction paper circle to the center of one plate. Mark the center of the paper with a dot. 2. Stack two plates together so that the thumbprints are nested on top of each other. 3. Use scissors to make a cut on the edge of one thumbprint to the center of the circle. Make sure the cut is on the EDGE of the thumbprint and not inside the thumbprint. Repeat with the other plate. 4. Separate the plates and number the thumbprints on the bottom plate starting with the thumbprint immediately to the right of the cut. Count by 10’s from 10 to 360 going clockwise. 5. Insert one plate through the other along the cut line. Angles are formed by the 2 cuts (rays) and the center of the circle.  6. Demonstrate various angles and give the measurement of each.  from *Analyzing the Standards* on the MOCC (pictures also available) |
| **List**  Create a list of ten real-life examples of when you need to be able to calculate perimeter. Create a list of ten or more real-life examples of when you need to be able to calculate area. | **Demonstration**  Design a demonstration to show how you can use water to find the volume of an irregular object. Explain why this works. | **Rap**  Create a math rap or rhyme that will help someone remember the following units of measurement and what they measure: km, m, cm, kg, g, lb, oz, l, ml, min, and sec. |