Unit Plan Grade 6/7 – Number Sense and Numeration Fractions, Ratios and Percents –Term 3

Grade 6 OEs and SEs:

OEs:

- read, represent, compare, and order whole numbers to 1 000 000, decimal numbers to thousandths, proper and improper fractions, and mixed numbers;
- demonstrate an understanding of relationships involving percent, ratio, and unit rate.

SEs:

- represent, compare, and order fractional amounts with unlike denominators, including proper and improper fractions and mixed numbers, using a variety of tools (e.g., fraction circles, Cuisenaire rods, drawings, number lines, calculators) and using standard fractional notation.
- estimate quantities using benchmarks of 10%, 25%, 50%, 75%, and 100% (e.g., the container is about 75% full; approximately 50% of our students walk to school)
- represent ratios found in real-life contexts, using concrete materials, drawings, and standard fractional notation (Sample problem: In a classroom of 28 students, 12 are female. What is the ratio of male students to female students?)
- determine and explain, through investigation using concrete materials, drawings, and calculators, the relationships among fractions (i.e., with denominators of 2, 4, 5, 10, 20, 25, 50, and 100), decimal numbers, and percents (e.g., use a 10 x 10 grid to show that 1/4 = 0.25 or 25%)
- represent relationships using unit rates (Sample problem: If 5 batteries cost $4.75, what is the cost of 1 battery?)

Summative Task: Demonstrate an understanding of fractional relationships. EQAO question.

Grade 7 OEs and SEs

OEs:

- demonstrate an understanding of addition and subtraction of fractions and integers, and apply a variety of computational strategies to solve problems involving whole numbers and decimal numbers;
- demonstrate an understanding of proportional relationships using percent, ratio, and rate.

SEs:

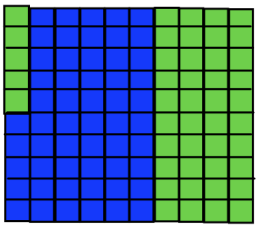
- determine, through investigation, the relationships among fractions, decimals, percents, and ratios;
- solve problems that involve determining whole number percents, using a variety of tools (e.g., base ten materials, paper and pencil, calculators) demonstrate an understanding of rate as a comparison, or ratio, of two measurements with different units (e.g., speed is a rate that compares distance to time and that can be expressed as kilometres per hour);
- solve problems involving the calculation of unit rates

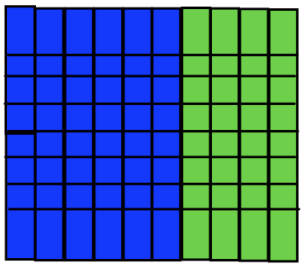
Summative Task: Demonstrate an understanding of fractional relationships. EQAO question.

Day	Problem/Checkpoint	Intent
1 WAAAAC	Warm-up: Is ½ always the same? **If students have trouble with warm up, ask:** Would you rather have ½ a small pizza or ½ a large pizza? Explain. Activity: Make fraction strips. Determine if 2/3 is < or > ¼. Would you rather have 5/6 or 5/8 of one hundred dollars? Explain your thinking. Consolidation: The ½ is only the same if the whole is the same. Homework: Use your fraction strips to determine if 3/5 is < or > 1/3. Would you rather have 3/6 or 3/12 of a pie? Show all your work and explain your thinking.	A 1/2 is only the same if the whole is the same. A fraction is a descriptor of something.
2 WAAAAC	Warm-up: Use fraction strips to create the most interesting equivalent fractions. Activity: Madeleine says she can use a clock to show that 5/60 and 1/12 are equivalent fractions. Do you think she is correct? Explain. (MMS Grade 6- pg. 290 #8) Consolidation: How can we say that 60 and 12 as different denominators are the same? BANSHO Homework: Tuan sold 2/3 of his raffle tickets on Saturday and 2/9 of them on Sunday. Did Tuan sell more tickets on Sunday than Saturday? Explain your thinking. (MMS Grade 6 pg. 290 #11)	Exploring Unlike Denominators

Day	Problem/Checkpoint	Intent
3	Warm-up: Here is a fraction 3 2/5. Find a single fraction that represents the same amount. Activity: Dusan and Sasha sold chocolate bars as a fundraiser for their choir. The bars were packaged in cartons, but sold individually. Dusan sold 2 2/3 cartons. Sasha sold 5/2 cartons. Who sold more chocolate bars? (MMS Grade 6, Pg 294 #1) Consolidation: Improper fractions – a fraction that shows an amount greater than one whole. Proper fraction – describes an amount less than one; a proper fraction has a numerator that is less than its denominator. BANSHO Homework: Kendra watched a TV program for 1 ½ hours. Garnet watched 5 half-hour programs. Who watched TV for a longer time? Which is greater 5/4 or ½? Explain. (MMS Grade 6 Pg. 294 #2)	Improper and proper fractions
4	Warm-up: Represent 2 7/8 as an improper fraction. Represent 13/2 as a mixed number. Activity: Order these fractional parts from greatest to least: 2 1/4, 3/21, 25%, 10/4, 5/3 Explain your thinking. Consolidation: Ordering different fractional parts. BANSHO Homework: Order these fractional parts from least to greatest: 3 2/4, 15/6, 75%, 6/4, ½. Explain your thinking.	*Learn how to order different fractional parts.*

Day	Problem/Checkpoint	Intent
5 Checkpoint	Checkpoint- Independent Activity (Taken From EQAO) Consider the fractions $\frac{3}{2}$ and $1\frac{3}{4}$. • Which of these fractions is larger? Justify your answer. The larger fraction is _____. • Find a fraction between $\frac{3}{2}$ and $1\frac{3}{4}$. Justify your answer. A fraction between $\frac{3}{2}$ and $1\frac{3}{4}$ is _____.	- *Review improper and proper fractions, and ordering and comparing fractions.*

Day	Problem/Checkpoint	Intent
6 WWAAAC	Warm Up: (MMS Gr. 6 pg. 309, Connect) This hundredths grid has 100 small squares. The grid represents 1 whole. Green part of the grid: Write a fraction. Write a decimal. Write a percent. Blue part of the grid: Write a fraction. Write a decimal. Write a percent.  Activity: Use a 10 cm by 10 cm grid. Design a floor plan for an apartment unit. Your plan should include: - 2 bedrooms - a kitchen and dining area -a living room - a bathroom - a laundry room The living room should be the largest space. The kitchen and the dining area should be L shaped. One bedroom can be larger than the other. The laundry room should be the smallest space. Describe each part of your floor plan as a fraction, a decimal, and a percent. (MMS Gr. 6 Pg. 312 Explore) Consolidation: A percent is a comparison of a number to 100. A fraction, a decimal, and a percent can represent the same number. Homework: Ravi got 18 out of 20 on a math quiz. Karli got 85% on the quiz. Whose mark was greater? Justify your answer. (MMS Gr. 6 Pg. 215 #10)	*- use benchmarks to find percent* *- a fraction, a decimal, and a percent can represent the same amount.*

Day	Problem/Checkpoint	Intent
7 WWAAAAC	Warm Up: How many different ways can you write each ratio?  blue squares : green sqaures blue squares: all squares green squares: all squares (MMS Gr. 6 pg. 324 Explore) Activity: Jordon's recipe for bean salad calls for 3 cans of lima beans, 2 cans of pinto beans, and 1 can of kidney beans. Jordon is making bean salad for his family reunion. Suppose he uses 9 cans of lima beans. How many cans of pinto beans will he use? How many cans of kidney beans will he use? (MMS Gr. 6 Pg. 327 #10) Consolidation: A ratio is a comparison. The numbers in the ratio are called terms of the ratio. Order is important in a ratio. e.g. 5 to 4 is not the same as 4 to 5. Equivalent ratios are equal ratios. Homework: The ratio of players to soccer balls at practice sessions are 5:2. How many soccer balls are needed for 20 players? Show all your work and explain your thinking. (MMs Gr. 6 Pg. 326 #6)	*Demonstrate an understanding that ratios are comparisons. Understand equivalent fractions.*

Day	Problem/Checkpoint	Intent
8	Warm-up: A lion can run 550 m in 25 s. A zebra can run 270 m in 15 s. Which animal is faster? (MMS Gr. 7 pg.70 #9) Activity: You go shopping and notice that 25kg of Ryan's Famous Potatoes cost $12.95, and 10kg of Gillian's Potatoes cost $5.78. Which is the better deal? Justify your answer. (Grade 7 Curriculum Question) Consolidation: A rate is a ratio that compares two items measured in different units. Homework: Ribbon costs $1.44 for 3 m. a) What is the cost per metre? b) How much would 5m of ribbon cost? c) How much ribbon could you buy with $12? (Grade 7 text book p.g. 65 #4)	*Represent relationships using unit rates.*
10 Summative Task	Summative Task- Independent Activity EQAO Question **27** Josie, Christina, Audrey and Manny go shopping. Josie spends $\frac{4}{5}$ of her money, Christina spends 75% of her money, Audrey spends 0.68 of her money and Manny spends $\frac{17}{20}$ of his money. Who has the largest percentage of their money left? Justify your answer.	