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| **GRADE: 7** |
| **Unit Title: The Number System - Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational.****Lesson Title:** **Fractions, Decimals, and Whole Numbers** **Estimated Duration: 12 days** | **Real-World Purpose:** * **Read and understand recipes (fractions)**
* **Daily shopping, bank account, & solving problems (decimals)**
* **Counting, unit rate, & telling time (whole numbers)**
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| ***I Can:*****Standard(s): 7.NS.1 Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent**  **addition and subtraction on a horizontal or vertical number line diagram.** **7.NS.2 Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational**  **numbers.****Standard(s): 7.NS.3 Solve real-world and mathematical problems involving the four operations with rational numbers.** |
| **Performance Objective: (Evidence of Learning): The objective/purpose of this unit is to provide an opportunity for students to reinforce and extend their understanding of addition, subtraction, multiply, and divide with rational numbers. Positive and negative fractions, decimals, and whole numbers should be included in this unit.** **\*Student will be able to solve fractions whether they are adding, subtracting, multiplying, or dividing.** **-solve real-world based problems/activities/projects. 100 % mastery is expected on assessments, but if mastery is not met, then student(s) will be grouped and re-taught the skill through hands-on activities/other strategies. Two types of assessments that will be used are exit tickets (80-100 % mastery) and weekly quiz (80-100 % mastery).** |
| **Prerequisite Skills:*** **6 NS. 3 6. NS. 5 6. NS. 6 6. NS. 7**
* **7 NS. 1 7 NS. 2**
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| **Materials/Resources:** * **Ten-marks**
* **Technology**
* **Teacher pay teacher resources (worksheets/maze/games)**
* **Math manipulatives (playing cards/dominoes)**
* **School/classroom supplies**
 | **Key Vocabulary:** * **Addition -Operations**
* **Decimals -Rational numbers**
* **Fractions -Simplify/reduce**
* **Integers -Order of operations**
* **Mixed numbers -Whole numbers**
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| **Elements of Rigor:*** **Conceptual understanding of key concepts**
* **Procedural skill and fluency**
* **Rigorous application of mathematics in real-world contexts**
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| **Lesson Introduction** |
| **How will you introduce the lesson?** **Bell-work: Monday: Pre-test on (frontrow.com)**  **Tuesday: Provide students with 2 problems. (Writing) How are fractions used daily/weekly? (Math journal entry-** **(teacherpayteacher.com)** **Wednesday: Continue with assignment(s) on (frontrow.com); Doodle Fraction worksheet (teacherpayteacher)** **Student Exploration Activity: Games- “I Have, Who Has”; Pirate Math; Fractions w/ playing cards or dominoes; Budget game;**  **Fraction Zombie; Vocabulary Roll (roll letter die/select a word/define)** **\*\*Worksheets: Recipes (increase/decrease); Fraction word problem w/ drawing**  |
| **Lesson Activities** |
| **Monday: Review fractions; Ten-marks lessons; Camtasia (powerpoint); Exit ticket (2 problems).****Tuesday: Continue Ten-marks lessons; assign lessons in Ten-marks to students; Review (use slates or work as a group to solve**  **problems and rotate (one stay and one stray method)** **Wednesday-Friday: High Impact Centers (HIC) #1: Recipe activity #2: Fraction Trail Mix (worksheet) #3: Fractions with playing cards** **#4 Dominoes activity #5-6: Ten-marks assignment/technology website(s)** |
| **Lesson Closure** |
| 1. **Exit ticket with 2 problems**
2. **Technology (**[**www.nearpod.com**](http://www.nearpod.com)**)**
3. **Kahoot.com or buzzmath.com or front row (individualized assignments)**

 **\*\*Challenge: 5 min. Question/Activity (teacherpayteachers)** 1. [Summer workshop Fraction word problems.pdf](file:///E%3A%5CSummer%20workshop%20Fraction%20word%20problems.pdf)
 | **Essential Questions:*** **How can you use properties to simplify your calculations with rational numbers?**
* **In what situations do you get a smaller product when multiplying two rational numbers?**
* **In what situations do you get a larger quotient when dividing two rational numbers?**
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| **Standards for Mathematical Practice** (select all that apply) |
| * **Make sense of problems and persevere in solving them.**
* **Reason abstractly and quantitatively.**
* **Construct viable arguments and critique the reasoning of others.**
* **Model with mathematics.**
* **Use appropriate tools strategically.**
* **Attend to precision.**
* **Look for and make use of structure.**
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* **Look for and express regularity in repeated reasoning.**
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| **Supplemental Activities** |
| **Intervention*** **Teacher center: Fractions on a card (use the butterfly method) (4 cards)**

* **Peer-Think, Pair, Share (Fraction word problems (rotate)**
* **IXL**
* **Front row**
* **Game Budget Game (small group)**
* **Pumpkin Patch**
 | **Enrichment*** **Spin and Compare Fractions (partner)**

* **Declare War (TPT)**

* **Lemonade for Sale (hands-on activity)**
* **Scavenger hunt cards (Live binder.com/math7)**
* [**Summer Smoothie.pdf**](file:///C%3A%5CUsers%5Cuser%5CAppData%5CLocal%5CMicrosoft%5CWindows%5CTemporary%20Internet%20Files%5CContent.Outlook%5CJ3YPJ6AM%5CSummer%20Smoothie.pdf) **or (teacherpayteacher)**
* **Problem solving (puzzle pieces: problem & answer)**

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| **Performance Based Assessment Task**  |
| **Math Task***\*Adding, Subtracting, Multiplying, & Dividing Fractions (Recipe)*[*Summer Cooking with fractions.pdf*](file:///C%3A%5CUsers%5Cuser%5CAppData%5CLocal%5CMicrosoft%5CWindows%5CTemporary%20Internet%20Files%5CContent.Outlook%5CJ3YPJ6AM%5CSummer%20Cooking%20with%20fractions.pdf) *or (teacherpayteacher)**\*Change Fractions to Decimals-Decimals to Percent (Game)**\*Real world application activities/games/worksheets**\*Weekly quiz**\*Exit ticket (daily)**\*Video from Camtasia (review fraction)* | **Rubric/ Plausible Student Response(s)** *(See below)**\*Problem solving Task w/ rubric**\*Exit ticket grade based on the number of problems provided* |

