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| ROMAN NUMERALS | 3.20.2019 |

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| Subject |  | Overview |
| |  | | --- | | Mathematics | | Prepared By | | [Instructor Name] | | Grade Level | | 3 | |  | This lesson plan covers teaching content for:   1. Instructional Content Pages about Roman Numerals. 2. Hands on homework activities giving students practice on determining the rules for using Roman Numerals and when to use them. 3. Answer Keys |

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| Materials Required - whiteboard  - Number chart  - Blank paper  - Pencils |
| Additional Resources  * <https://www.educationworld.com/a_lesson/02/lp276-03.shtml> * <http://www.teachnology.com/teachers/lesson_plans/math/35romannumer.html> * <https://www.clarendonlearning.org/lesson-plans/roman-numerals-2/> * <https://www.brighthubeducation.com/lesson-plans-grades-1-2/47434-lesson-on-reading-roman-numerals/> |
| Additional Notes |

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| **Objectives** By the end of the lesson, students should be able to;  1. Count in Roman Numerals from 1 to 100  2. Perform addition and subtractions using Roman Numerals.  3. Fully understand the rules guiding labeling and operations in Roman Numerals. |  | **Activity Starter/Instruction**  1. Display the month, date, and year using Roman Numerals or an important date in history. (For example: January 7, 2020 is I – VII – MMXX) Ask students: What do the letters mean? 2. Allow for responses and discussion. Ask students where else they may have seen these types of letters written. 3. Allow for responses and discussion. Introduce Roman Numerals. 4. Distribute Roman Numerals content pages. Read and review the information with the students. Use the additional resources to enhance understanding.  **Teacher’s Guided Practice** **Day 2/ Lesson 2: 15 Mins**   1. Below are the rules for Roman numerals. Read them to your students and help them understand how these rules apply by giving them the demonstration that follows each rule in this section. 2. Only one smaller digit can be on the left side of the larger digit. For example, the number 7 would be written as "VII" rather than "IIIX". 3. If the digit to the left represents a smaller amount than the digit to the right, it is to be subtracted from the digit on the right. For example, "IV" means 4. 4. If the digit to the right is smaller than the digit on the left, the numbers shall be added together. For example, "VI" means 6. 5. The least amount of digits must be used without breaking any of the other rules. For example, thought XXXX can mean "50", you would instead use the "L". 6. Give the students an example by listing series of numbers and using the rules above to write them in roman numeral form. Ask the students to attempt some other questions on the board. |  | **Teacher’s Guided Practice** **Day 1/ Lesson 1: 15 Mins**   1. Introduce Roman Numerals and a little of the history behind them 2. During the presentation, explain the way we identify, count, and write Roman Numerals.   I = 1 II = 2 III = 3 IV = 4  V = 5 X = 10 L = 50  C = 100  D = 500   1. Use the dry erase white board to demonstrate how each number is written, the additive and subtractive principles, how to write the date, and how to write large numbers (such as the year). 2. Explain that Roman Numerals can also be added together (To be considered later in the lesson).   **Guided Practice**  **Day 3/ Lesson 3: 15 Mins**   1. Write the following Roman numerals on the board and ask students to tell you if this is the correct way for them to be written. Walk through the rules for each number. 2. Ask students to look at the number and review the rules to decide if the answer is correct. For instance, if the number is IIX, you would first ask the students to look at rule #1, which demands that there be only one smaller digit to the left of the larger digit. 3. Ask students to change the way the number is written so that it follows rule #1. Students should change it to "VIII". 4. Move on to rule #2 There are no smaller digits to the left anymore. 5. Rule #3 is used to add the V+I+I. 6. Give examples such as X + III = XIII or 13, X + X = XX or 20, V + X + I = XVI or 16, and M + C + L = MCL or 1150. 7. Rule #4 is not considered because the answer has been changed so that no smaller digit is on the left. |
| Assessment Activity |  | Assessment Activity  1. Students will be assessed on their charts/exercises and the correct Arabic/Roman numeral correspondence. 2. When this is done with the students, the number of numerals I've requested will determine the point value for each. 3. The student compares the decimal (base 10) number system to the Roman numeral system using the Roman numerals I, V, X, L, and C. 4. The student reads, writes, and compares the decimal number system to the Roman numeral system using the Roman numerals I, V, X, L, C, D, and M. |  | **Assessment Activity** |
| Summary |  | Review and Closing In closing, as a review, ask students how to write the following using Roman Numerals: (Students will answer aloud.)  • Age  • Birth year  • Year America was founded (1776)  • Number of days in current month  • Number of days in the year  • Their home address  • Score of a local sporting event |  | 1. Review the information that you have given the students in this lesson plan. 2. Make sure that they understand the rules of Roman numerals before moving on to the next lesson plan. |