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| Date: | | | Duration of Lesson: 30 minutes | |
| Title of Unit: Statistical Reasoning | | | Title of Lesson: Find the Median | |
| Lesson Objectives: Students will use their understanding of place value, ordering and magnitude to find the median of a data set. | | | | |
| Groupings: any arrangement | | | | |
| Skills & Standards:  [CCSS.MATH.CONTENT.6.SP.B.5.C](http://www.corestandards.org/Math/Content/6/SP/B/5/c/) Giving quantitative measures of center (median and/or mean) and variability (interquartile range and/or mean absolute deviation), as well as describing any overall pattern and any striking deviations from the overall pattern with reference to the context in which the data were gathered. | | | | |
| **Progression of Learning & Teaching** | | | | |
| Opener: | Show a photo of a [median divider](https://epg.modot.org/files/b/be/231.1_Photo2_Barrier_Median.jpg), the local Intermediate School and size medium shirt. Focus on discourse that elicits same/different/what do you notice? What do these things have in common in the language? The goal of this activity is for students to derive the definition of median Mid/med= middle | | | **Points to Remember**  Model and expect conventions of notation for data sets. |
| Activities & Tasks: | 1. Distribute a set of numerical cards for students to analyze and order *(note this lesson uses odd quantities in data sets- next lesson addresses median calculation with even quantities in data sets)*. 2. Invite them to analyze and describe their data. Focus on mean, mode and range from previous lessons. Challenge them to find the middle/median of their data set. 3. Invite them to justify their thinking using reasoning and appropriate language. | | | Resources:  See below for possible set of number cards (copy and paste table into word document to add other numbers)  Key Vocabulary:  Data: factual information (such as measurements or statistics) used as a basis for reasoning, discussion, or calculation  Mean: The mean is the same as the average. Add up a series of numbers and divide the sum by the total number of values to find the mean.  Median: The median is the "middle value" in a series of numbers ordered from least to greatest. When the total number of values in a list is odd, the median is the middle entry. When the total number of values in a list is even, the median is equal to the sum of the two middle numbers divided by two.  Mode: The mode in a list of numbers are the values that occur most frequently.  Range**:** The difference between the maximum and minimum values of a data set  Measure of Central Tendency: numbers that describe what is average or typical within a distribution of data  Monitoring/Scaffolding:   * Consider students’ math ability with respect to adding/dividing. Are calculators needed or should the data sets be adjusted so the focus is on the concept not on their math skills? * Remind students to refer to anchor charts and data sets and notes from previous lessons. * Students will be using card decks of numbers that can be moved and reordered. * Card deck sizes and magnitude of number can be customized to students’ needs. This may include fractions, decimals and integers. |
| Level of Cognitive Complexity: | ☐ Creating ✅  ☐ Evaluating ✅  ☐ Analyzing✅ | ☐ Applying ✅  ☐ Understanding ✅  ☐ Remembering | |
| Key questions: | * What would be the median of the set of data? How did you know? Describe the process. * What if we added some other number cards? * Why is it important to represent data using measures of central tendency? | | |
| Closure: | * Students will take another data set and go through the protocol with that set of data. Calculating the median * Add to the anchor chart the definition of median | | |
| Next Steps: | * Identify in review of closure if students need additional practice before beginning the even data sets * Students will be assigned a number card, a specified number of data points and have to create a data set with the assigned number as the median. * Students will next learn about finding the median when you have an even number of data. | | | **Evidence of Mastery /Criteria for Success:** The evidence of mastery today would be their classwork assignment working independently and their participation. |

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| **31** | **32** | **33** | **34** | **35** | **36** | **37** | **38** | **39** | **40** |
| **41** | **42** | **43** | **44** | **45** | **46** | **47** | **48** | **49** | **50** |
| **51** | **52** | **53** | **54** | **55** | **56** | **57** | **58** | **59** | **60** |
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| **71** | **72** | **73** | **74** | **75** | **76** | **77** | **78** | **79** | **80** |