**Topic: Median**

**GRADE LEVEL:** **Grade 5**

**DURATION:** **1 hour**

**SPECIFIC OBJECTIVES**:

***At the end of this lesson, students should be able to:***

* find the median of a set of data
* solve problems based on median

**PREREQUISITE KNOWLEDGE**

***Students should be already be able:***

a) to apply the four basic arithmetic operations

**MATERIALS/MANIPULATIVES**

Counters, number cards, tape measure

**CONTENT OUTLINE**

Median is measure of central tendency. The median value of a set of numbers is the middle number when they have been placed in ascending or descending order. If there is an even number of members in the set, the median is found by calculating the average or mean of the two middle values after they have been placed in ascending or descending order.

**Engage**

* Place a chair at the front of the class and ask a student to sit in it. Ask 6 students to stand beside the one seated – 3 on either side. Discuss the position of the one seated – draw students’ attention to the fact that
  + this child is in the 4th position
  + the 4th position is in the middle
  + there are 3 persons on either side

**Explore**

Ask 4 other persons to join the 7 already at the front of the class and to ensure that the person seated is still in the middle. Discuss the formation. explore other possibilities such as:

* + Suppose 3 students are added to the left of the seated child but only 2 are added to his/ her right – would the seated child still be in the middle?
  + Suppose, instead, the second person on the left of the seated one was sitting on the chair:
    - Can you now arrange the students around him/her so that he/she is in the middle?

**Explain**

Students will complete the activities below and make their presentation to the class.

* Students will be placed in groups of seven and/or nine (depending on the class size).
* Students will be asked to arrange themselves in their groups in ascending or descending order based on their height.
* Teacher will question the class to bring out the concept of median n height of the group. From this, a discussion about the median will be conducted and its properties will be outlined.
* Each group of students will be given a tape measure and asked to arrange themselves in ascending or descending order based on the length of their arms.
* The groups will be rearranged to form groups of 8 or other suitable even number.
* Students will use tape measure to measure the distance around the waist of group members and record the measurements.
* Students will then be asked to find the median value of the measures now that there are 8 members in the group.
* Students will then be asked to explain how they got their answers.
* The teacher will help students to recognize that when the set of numbers for which the median is to be found has an odd number of members then the numbers are arranged in ascending or descending order and the number in the middle is the median.
* However, when the set of numbers for which the median is to be found has an even number of members then the numbers are arranged in ascending or descending order and the mean of the two middle values are found which would be the median.

**Evaluate**

* Remaining in groups of four, students will use tape measure to measure the length of group members’ feet (shoe size) and find the median length of group members’ feet (shoe size).
* Students will be asked to explain how they arrived at their answers.
* The class will have a discussion to review what was done in the lesson.

Students will work individually to find the median of the following numbers:

1. 5, 12, 4, 6, 9, 8, 1, 16, 20
2. 9, 20, 5, 6, 23, 21, 12, 14
3. 10, 7, 2, 5, 6, 50, 51, 52
4. 24, 25, 26, 31, 30, 24, 0, 5, 25, 32