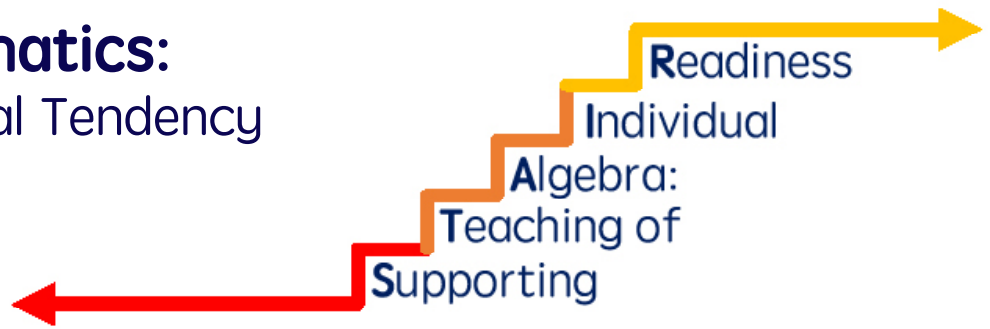


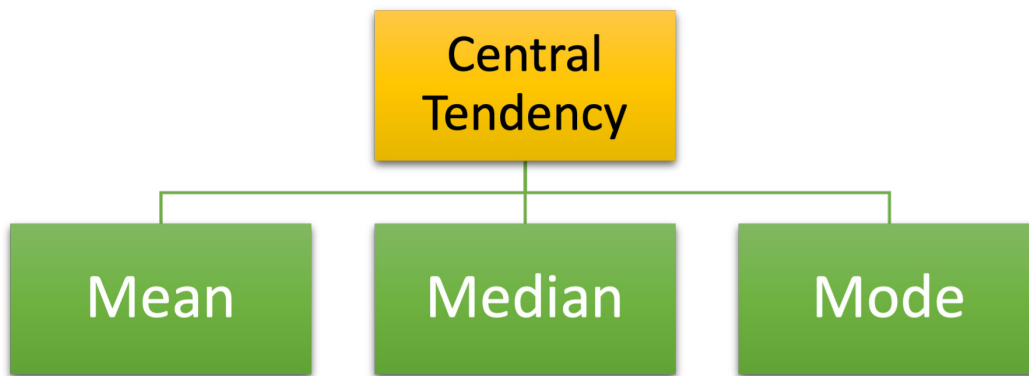
Ideas in Mathematics:

Measures of Central Tendency



1. What is Central Tendency and why it is important?

- The most common measures of central tendency are the arithmetic mean, median, and mode.
- Measures of central tendency help you find the middle, or the average, of a data set. The goal of central tendency is to find the single score that is most typical or most representative of the entire group. It is also useful for making comparisons between groups of individuals or between sets of figures.



2. Definition and Measures of Central Tendency

Mean	<ul style="list-style-type: none">• The mean is the sum of all the values, divided by the number of values.• The average or norm.
Example	$\frac{\text{Sum of values}}{\text{Number of values}}$ <p>2, 3, 4, 4, 5, 5, 5, 6, 6, 7, 8</p> <p>Sum of values = $2 + 3 + 4 + 4 + 5 + 5 + 5 + 6 + 6 + 7 + 8 = 55$ Number of values = 11 $55 / 11 = 5$</p> <p>-> The mean of this set of numbers is 5.</p>

Ideas in Mathematics:

Measures of Central Tendency



Median • The median is the middle value in an ordered data set.

Example

The middle value

↓

2, 3, 4, 4, 5, 5, 6, 6, 7, 8

The number of values = 5 The number of values = 5

1. Order the values from least to greatest.
2. Locate the middle values.

-> The median of this set of numbers is 5.

Mode • The mode is the most frequent value.

Example

2, 3, 4, 4, 5, 5, 5, 6, 6, 7, 8

Value	Frequency
2	1
3	1
4	2
5	3
6	2
7	1
8	1

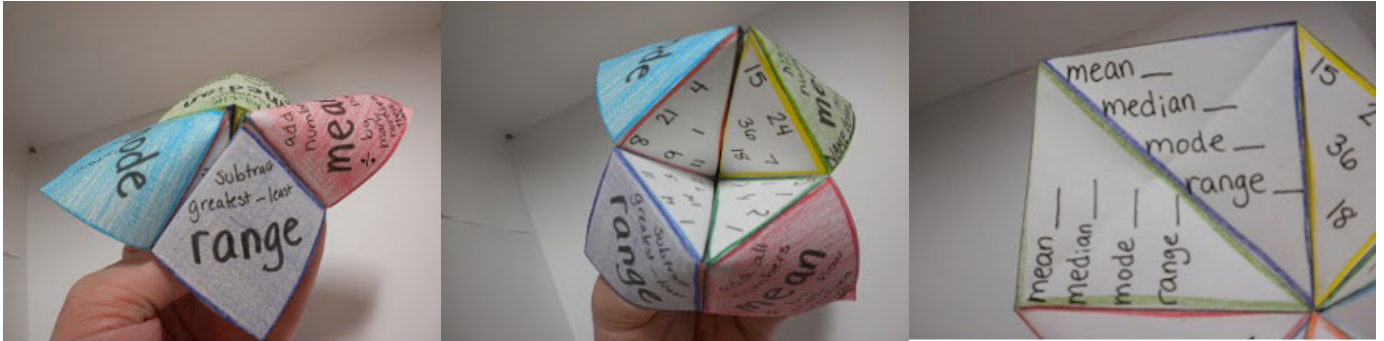
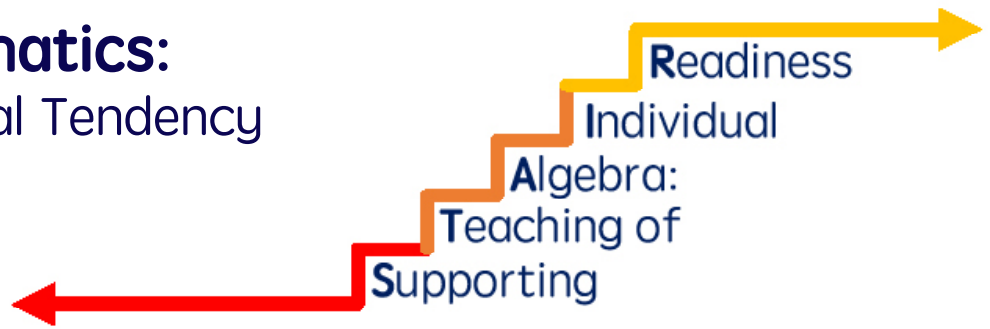
-> The most frequent value is 5.

3. Applied examples

- Download the PDF version of the basic template from Goggle Docs – <https://drive.google.com/file/d/0B7ciNQ8KxMIDRHRMnk9tcnZuc2s/view?resource-key=0--Jp8slP6Vvxsc0zxocR1Kg>
- Introduce and define each vocabulary for measures of central tendency (including ‘range’).
 - **Range:** The difference between the largest and smallest value in the data set.
- The four corner squares can be labeled mean, median, mode, and range.
- There are 8 data sets given and there are places for the kids to write in the mean, median, mode, and range for each of the sets.
- Work in partners to play the game and collaborate on finding the answers for each data set

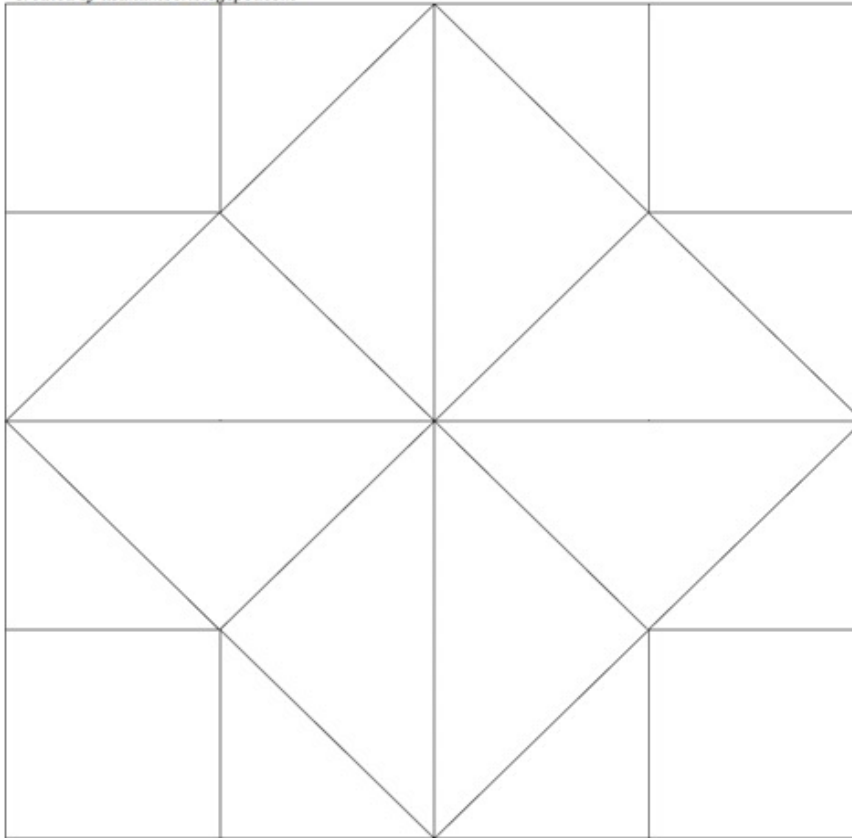
Ideas in Mathematics:

Measures of Central Tendency



Resources

Created by iisanumber.blogspot.com

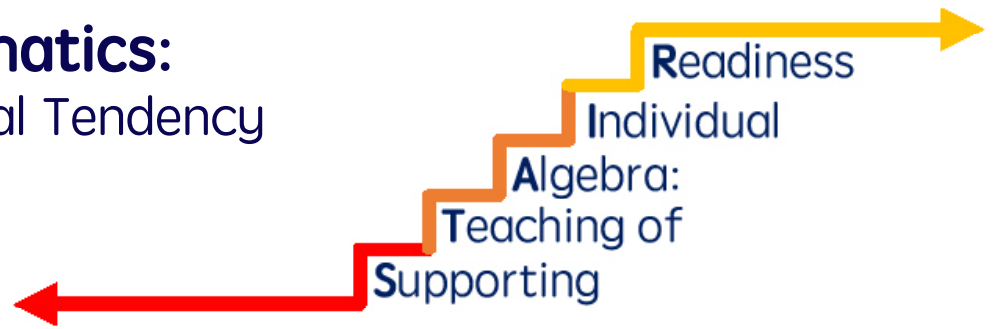


Folding directions:

- Cut out the large square *neatly*.
- Place the paper face down.
- Fold each corner into the center, making a smaller square.
- Turn the paper over.
- Fold each new corner into the center, making a smaller square.
- Turn the paper over.
- Gently lift each of the four flaps and place the thumb and index finger of each hand inside.

Ideas in Mathematics:

Measures of Central Tendency



References

- <http://iisanumber.blogspot.com/2012/08/measures-of-central-tendency-cootie.html>
- Groth, R. E. (2009). Characteristics of teachers' conversations about teaching mean, median, and mode. *Teaching and Teacher Education*, 25(5), 707-716.