

# Statistics: The Study of Data

Where is the center?

## Measures of Central Tendency

**Mean**  
average

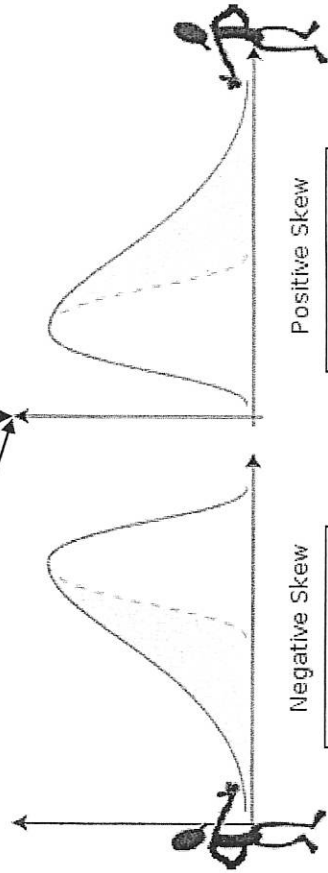
- when there is a big outlier the mean becomes useless

**Median**  
middle number

- when there is a big outlier, use the median instead of the mean

**Mode**

Most often occurring



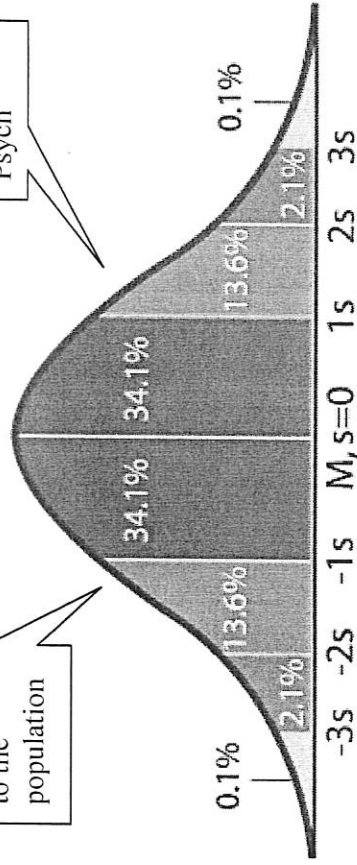
How much to things vary around the center?

## Measures of Variation

Things that are naturally occurring (happen by chance) most often form a normal distribution

Allows us to compare individuals to the population

You'll see this a great deal in Psych



**Range** – subtract the lowest value from the highest value

**Standard Deviation** – shows how much scores varied around the mean. Higher the standard deviation the more scores varied.