



UNDERSTANDING THE BELL CURVE

WHY THE BELL CURVE?

- We use the bell curve because biological and psychological assessment results naturally form a bell-shaped curve when graphed.
- This is because most scores tend to gravitate towards the middle with a few outliers at the low and high ends.

HOW DOES IT HELP?

Visual Supports aid in understanding and provide perspective.

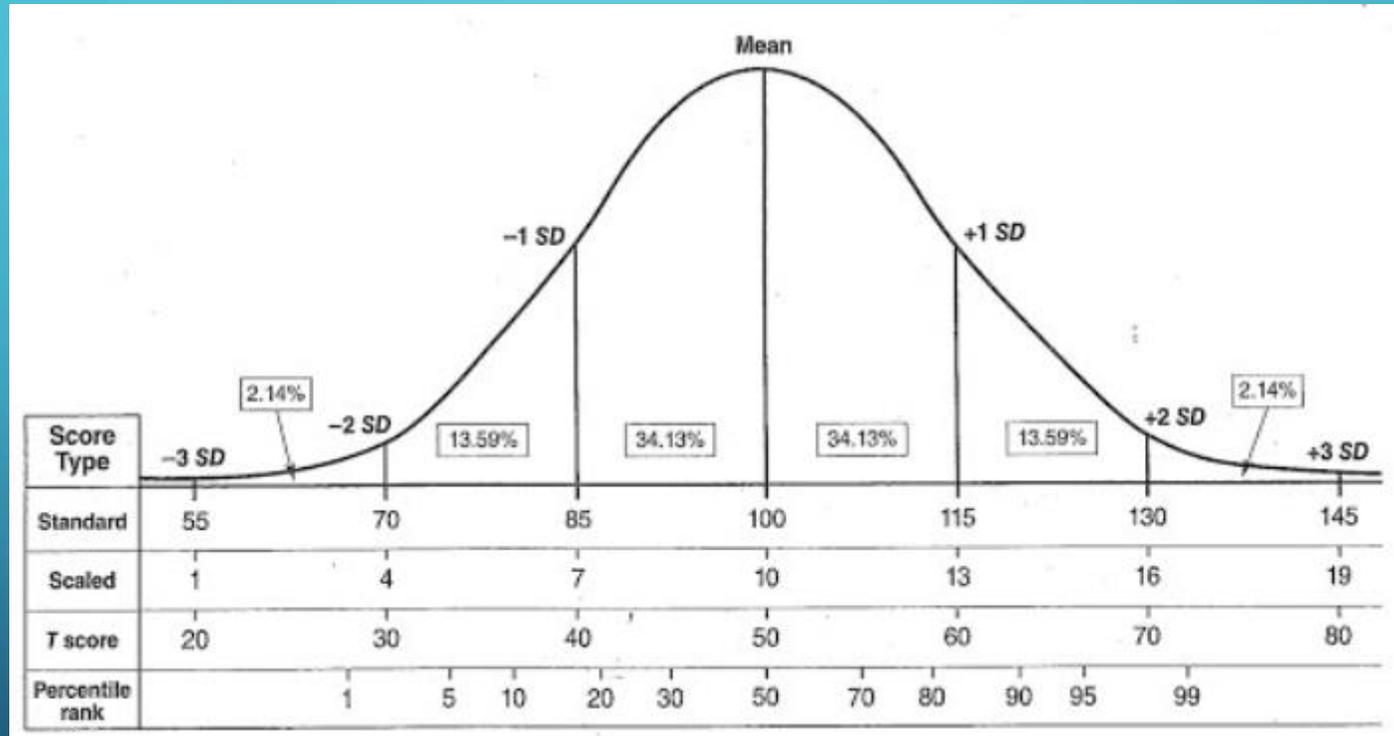
Parents feel more confident when they have a clear picture of what number scores and percentages the school may be verbally communicating.

Parents who have a clear understanding of where their child's scores fall on a bell curve are better prepared to ask questions and share concerns.

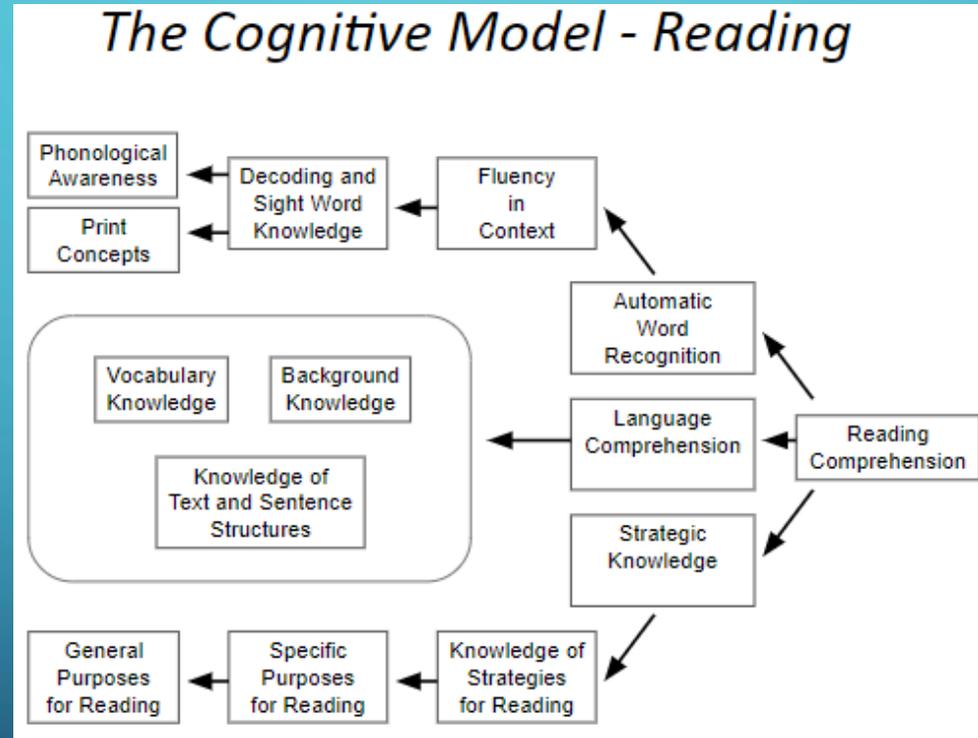
Teams who can understand the data together can develop their goals more easily.



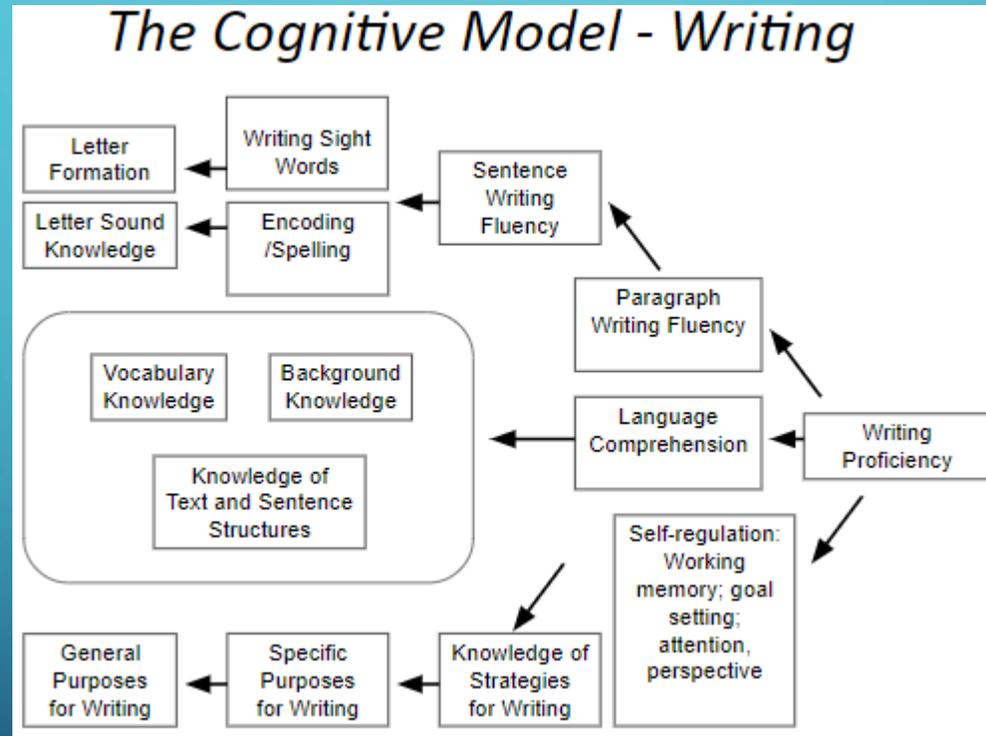
THE BELL CURVE



UNDERSTANDING WHERE YOU ARE HELPS YOU CREATE MEANINGFUL GOALS



HELPING A PARENT BETTER UNDERSTAND THE CONVERSATION KEEPS THEM PART OF THAT CONVERSATION.

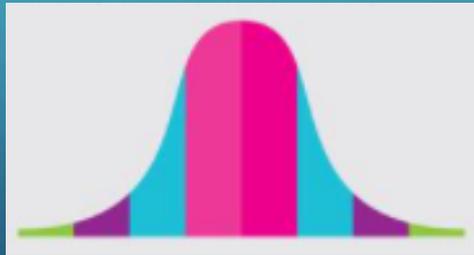


TERMS & DEFINITIONS

- **Bell Curve:** The term "**bell curve**" is used to describe a graphical depiction of a normal probability distribution
- **Mean:** The average of all data points in the data set and will be found at the highest point on the bell curve. For assessments, this is the average score of the students who took the test.

TERMS & DEFINITIONS

- **Standard Deviation:** A measurement **used** to quantify the variability of data dispersion, in a set of given values around the mean.
- The standard deviation defines the average range because the average range for a test will fall 1 standard deviation below the mean to 1 standard deviation above the mean.



TERMS & DEFINITIONS

- **Percentile:** The middle score of the student sample is equal to the 50th percentile. An exact “average” score would fall at the 50th percentile. A percentile of 25th means that this score is higher or equal to 25% of the total scores in the sample.
- Percentile is not to be confused with percentage accuracy or percentage correct.

SCALED SCORES & T-SCORES

- **Scaled Score:** The student's number of correct responses on a subtest is converted into a Scaled Score. The conversion process allows the score to be compared to other students of the same age because it has been converted to follow the normal distribution range, with 10 matching the 50th percentile. Scaled Scores below 7 would fall below the average range and Scaled Scores above 13 would fall above the average range.
- **T-Score:** Similar to Scaled Scores, T-Scores are converted from students' original scores to follow the normal distribution. A T-Score of 50 falls at the 50th percentile and is the middle score of the student sample. T-Scores between 40 and 60 fall within the average range. T-Scores below 40 would be below average and 60 would be above average.

CRITERION-REFERENCED VS NORM-REFERENCED (IT'S NOT ALWAYS ABOUT THE BELL CURVE!)

- **Criterion-Referenced Assessment**
Examples

- Driving Tests are designed to determine if a driver has mastered the skills required to drive on the road safely. Driving tests do not rank drivers against other drivers.
- End-of-Unit Exams in school are designed to determine whether students have mastered the material presented in a specific unit.

- **Pediatric Growth Charts** are commonly used by pediatricians to track a child's growth as compared to the growth of other children of the same age.
- **The SAT** is designed to determine one high school student's abilities as compared to the abilities of other high school students.



QUESTIONS?