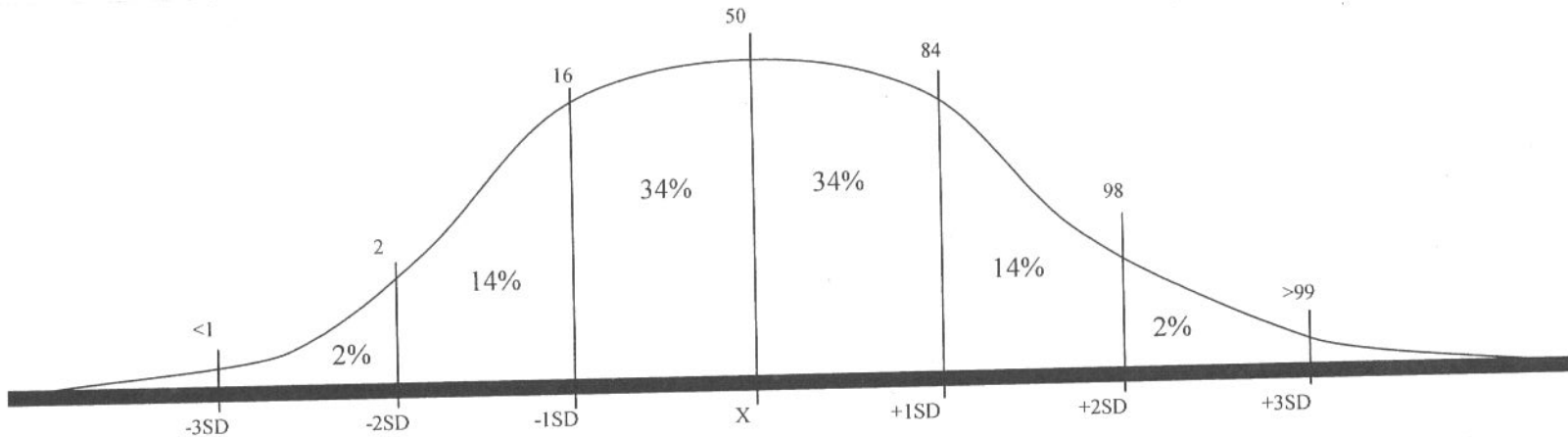


# THE BELL-SHAPED CURVE



	-3SD	-2SD	-1SD	X	+1SD	+2SD	+3SD	
Deviation IQ	55	70	85	100	115	130	145	(SD=15)
Wechsler SS	1	4	7	10	13	16	19	(SD=3)
t-score	20	30	40	50	60	70	80	(SD=10)
Z-score	-3	-2	-1	0	+1	+2	+3	(SD=1)

*Standard scores are simply different ways of representing the same thing. Standard scores can be converted back and forth from one scale to another but the corresponding percentile ranks will always stay the same.*

## UNDERSTANDING TEST SCORES

1. **Raw Score** – Represents the total number of items a student answered correctly. Used to derive other types of scores (e.g. standard scores, percentiles). Cannot be used for comparisons, or to measure progress over time

2. **Grade Equivalent** – Is found to be misleading. It tells you that your child scored on a test the same as the average student in a particular grade. It doesn't mean your child can do all the work of that grade level. Example: A Grade Equiv. of 6.2 means your child scored the same as the average child in second month of 6<sup>th</sup> grade on a test, not that your child has all the skills of the typical 6<sup>th</sup> grader.

3. **Age Equivalent** – Is found to be misleading for the same reasons as Grade Equivalents. An Age Equivalent of 10.2 does not mean your child has all the skills of a 10 year old; it means he scored the same on a given test as the average child aged 10 years 2 months.

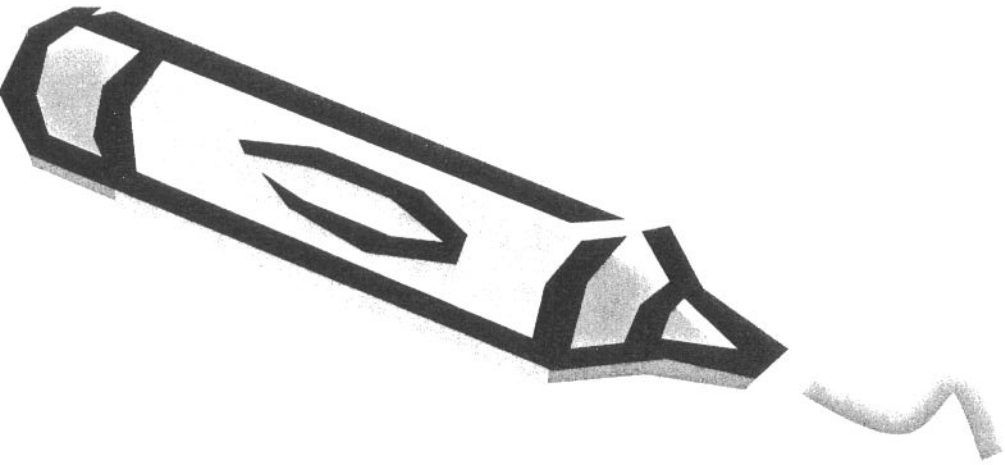
4. **Standardized Tests** - Standardized tests are called standardized because they are administered and scored in a standard/controlled manner. The two types are norm-referenced tests and criterion-referenced tests. In a norm referenced test, individuals are tested and their results are compared to a sample of his or her peers. Criterion-referenced tests evaluate students and compare skills against high standards (e.g. law or medical boards – you either pass or fail).

5. **Standard Score** – Derived from a raw score. Indicates how far above or below the average (or “mean”) a child’s score falls. For example, on the WISC, an IQ of 100 is the average score. This standard score allows you to compare apples and oranges, using the same scale. A standard score of 100 on an IQ test can then be compared to a standard score of 75 on an achievement test. Examples of Standard Scores are IQ scores, Wechsler Scaled Scores, t-scores, z-scores. Standard scores tell us where your child is performing compared to other children his age, and to measure progress over time.

6. **Percentile** – Not the same as percentage correct given for classroom tests. The percentile indicates the rank of a student compared to a hypothetical group of 100 children of his age or grade level. So, a percentile rank of 95 means the child scored higher than 95 out of 100 children on a particular test or subtest. A percentile rank of 25 is well within the average range [see the bell shaped curve], whereas a score of 25% on a spelling test is not very good (the child only got 4 out of 10 words right).

7. **Stanine**. A stanine (which is abbreviated from "standard nine") is a standard score ranging from 1 to 9; average scores range from 3<sup>rd</sup> to 7<sup>th</sup> stanine. Not used much today.

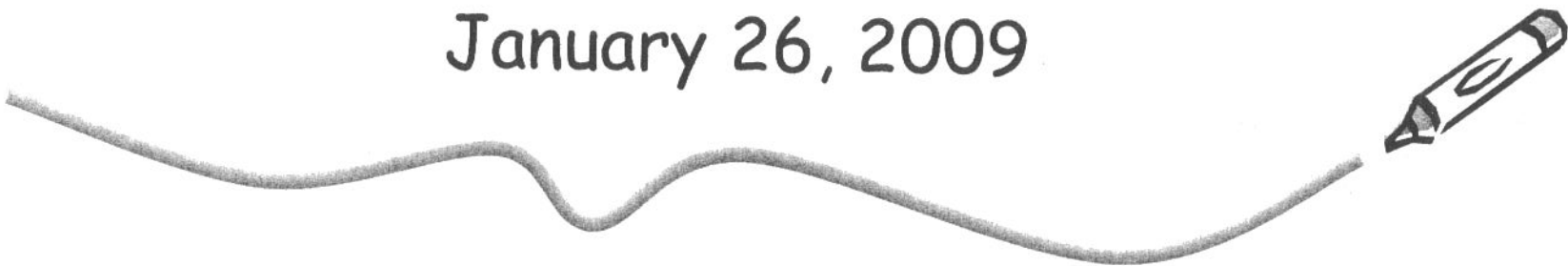
8. **Confidence Interval** – This is the range in which the “true” score is expected to fall. It is sometimes reported because no test is 100% reliable.



# Types of Tests and What they Measure

SEPTA

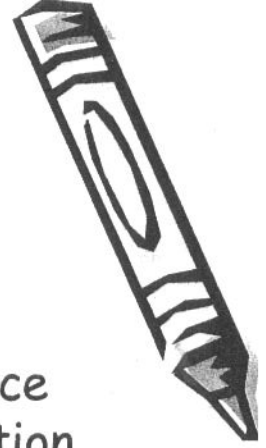
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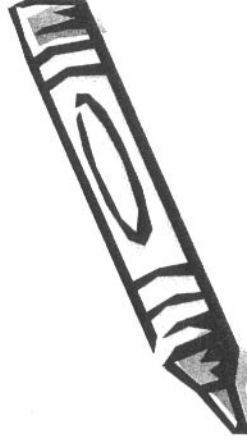
# Cognitive Tests- "IQ" tests.

## Measure intellectual ability

- **Generally stable over time**- some factors that would influence significant changes in IQ are culture, injury, language acquisition
- **Wechsler Intelligence Scales**- Wechsler Preschool and Primary Scale of Intelligence-Second Edition (WPPSI-II), Wechsler Intelligence Scale for Children-Fourth Edition (WISC-IV), Wechsler Adult Intelligence Scale-Fourth Edition (WAIS-IV), Wechsler Abbreviated Scale of Intelligence (WASI)
- Woodcock-Johnson Tests of Cognitive Abilities, Third Edition (WJ-III)
- Stanford Binet Intelligence Scales, Fifth Edition (SB-V)



# WISC-IV



- Ages 6:0-16:11
- **Full Scale IQ** -Overall intelligence quotient.
- **Four Indexes**- Verbal Comprehension, Perceptual Reasoning, Working Memory, Processing Speed.
- **1. Verbal Comprehension Index**-verbal knowledge. Crystallized intelligence-based upon past experiences and learning.

Subtests: Vocabulary (definition of words), Similarities (abstract verbal reasoning task), Comprehension (knowledge of social concerns).



# WISC-IV

- **2. Perceptual Reasoning Index** -ability to organize and interpret visual/spatial information. New learning.

Subtests: Block Design (copying patterns with colored blocks), Picture Concepts (nonverbal categorical reasoning), Matrix Reasoning (complete the missing portion of a visual pattern).

- **3. Working Memory** -ability to store and manipulate information for a short period of time.

Subtests: Digit Span (repeat a series of digits forward and backward), Letter-Number Sequencing (given numbers and letters and asked to repeat numbers in order and letters in alphabetical order).

- **4. Processing Speed** -the rate at which we make sense of information, mental quickness. Attention plays a role.



# WJ-III Cognitive Test

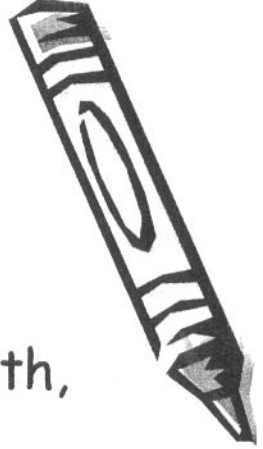


- **General Index Ability (GIA)**- Broad measure of general intelligence
- Used with ages 2-90
- **Seven Factors Assessed:**
  - 1. Long Term Retrieval (long term memory)
  - 2. Short Term Memory
  - 3. Processing Speed
  - 4. Auditory Processing (perceive and analyze auditory stimuli)
  - 5. Visual Processing (analyze and manipulate visual patterns and stimuli)
  - 6. Comprehension-Knowledge (general knowledge learned over time, crystallized intelligence).
  - 7. Fluid Reasoning (ability to perform a new task or problem solve).



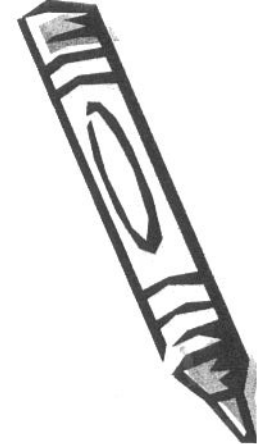
# Achievement Tests

- **Measures knowledge and skills in a specific area-** math, reading, writing.
- Scores not necessarily stable over time- goal is to see progress in deficient areas.
- **Some of the achievement tests you may see:** Wechsler Individual Achievement Test, Second Edition; Woodcock-Johnson Tests of Achievement, Third Edition; Woodcock Reading Mastery, Test of Math Abilities, Second Edition; Gray Silent Reading Test, Test of Written Language, Third Edition; Test of Reading Comprehension, Third Edition.
- **Individual or group administration.**





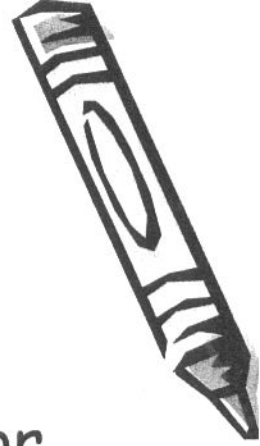
# WIAT-II



- Ages 4-85
- **Reading Composite**- word reading, pseudoword decoding, reading comprehension
- **Math Composite**- numerical operations, math reasoning
- **Written Language Composite**- spelling, written expression
- **Oral Language Composite** -Listening comprehension, oral expression



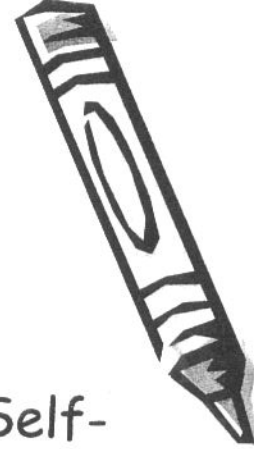
# Behavioral and Adaptive Skill Assessment



- When looking at social/emotional functioning or adaptive skills, we use rating scales to gain information about behaviors.
- Rating scales help compare a child's behavior to other children of the same age.
- Teachers, Parents, and Students can fill out these rating scales, or in some cases, structured interviews take place to gain information about behavior.



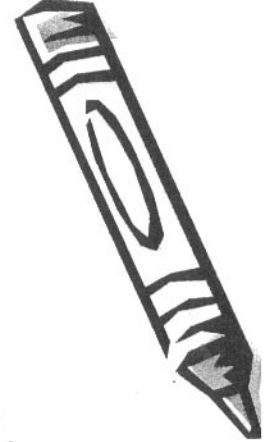
# Behavioral and Adaptive Skill Assessment



- **Conners' Rating Scale-Revised.** Parent, Teacher, and Self-Report. Used for assessing symptoms of ADHD and problem behaviors in children and adolescents. Ages 3-17.
- **Behavior Assessment System for Children-Second Edition** Parent, Teacher, and Self-Report. Used for assessing behavior and emotions. Ages 2:0-21:11.
- **Conners' Rating Scales and BASC-2 are reported in T Scores- mean=50, standard deviation=10.**



# Behavioral and Adaptive Skill Assessment



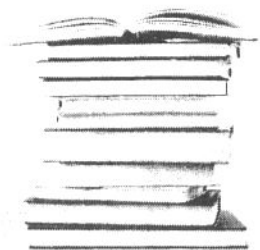
- **Adaptive Skills Assessment**- daily living skills, socialization, motor skills, communication. Vineland Adaptive Behavior Scales, Second Edition (birth-adulthood). Standard Scores (mean=100,  $SD=15$ ).
- Adaptive scales are typically used when looking at developmental delays and mental retardation.



# State Testing

- New York State ELA (English Language Arts) and MATH Tests-
  - Given to students in grades 3-8.
  - Administered in a group.
  - Teachers may report in IEP.
  - Scored on Levels 1-4.
  - Sample questions given on the next pages...





The English Language Arts Test is administered in two or three sessions depending on the grade. The test includes both literary and informational passages and measures the skills and knowledge specified in the English Language Arts Learning Standards.

Students read both literary and informational passages and then answer questions that test their understanding of what they read. They also listen to a short passage and then respond to what they heard, demonstrating their listening comprehension.

Students will be asked to draw conclusions, compare and contrast information and ideas, interpret meaning, and explain cause-and-effect relationships. At Grades 4, 6, and 8, students will also be scored on their use of writing skills to effectively communicate ideas and information, and on their use of correct sentence structure, spelling, grammar, and vocabulary. At Grades 3, 5, and 7, students will be given an editing task to assess their writing skills.

The English Language Arts Test contains questions in a variety of formats, including multiple-choice, short-response, and extended-response questions, as well as editing tasks.

For multiple-choice questions, students select the correct response from four answer choices. For short- and extended-response questions, students write an answer to an open-ended question. Extended responses are scored for writing as well as for reading comprehension. For the editing task, students are required to make corrections and revisions to a short piece of writing.

The following pages show examples of the types of questions that will appear on the test for each grade.

The **complete text** and answers to these sample questions, as well as additional sample questions and answers, can be found in the *Introduction to the Grades 3–8 Testing Program in English Language Arts and Mathematics* at <http://www.emsc.nysed.gov/3-8>.

## Grade 3

### Multiple Choice

The student reads a story about a chipmunk who notices that his animal friends are wearing their pants legs folded up. He asks each animal why but no one is sure of the reason for the new style. Then he asks Bear who says he folded them up to keep his pants from getting wet when he crossed the river. The student then chooses the most appropriate response to the following question.

According to the story, which animal started the new style?

- A Bear
- B Beaver
- C Rabbit
- D Squirrel

### Editing Task

The student is given a paragraph and asked to correct errors in capitalization and punctuation.

Here is a paragraph a student wrote. The paragraph has some mistakes in capital letters and punctuation. Some sentences may have no mistakes. There are no mistakes in spelling.

Read the paragraph and find the mistakes. Draw a line through each mistake in the paragraph. Then write the correction above it.

Winter is a fun season. It snows a lot where i live. I like to play in the snow. My Brother likes to play in the snow, too. We make snowballs and snow houses. when it gets dark, we go inside, but we know we can go out again the

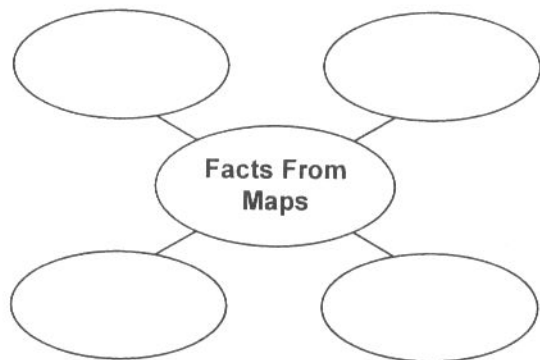
## Short Response

The student reads an article about the usefulness of maps that includes the following paragraph:

You can use different maps to find different kinds of facts. A road map shows you how to find your way. Other maps show which crops are grown in different places. Maps can show how many people live in different places. Some maps show what the weather is like. Some maps tell you about the land. These maps might show mountains or tell how high the land is above sea level.

The student then fills in the following web:

What are **four** different kinds of facts you can learn from maps? Write your answer in the empty circles of the web below.



## Short Response

The student reads a poem about floating down a river. The student then describes the meaning of a specific phrase in the poem.

What is the "right place" mentioned in the title of the poem? Use details from the poem to support your answer.

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## Editing Task

The student is asked to edit a short passage.

Here is a report a student wrote. There are some mistakes in the paragraph. Some sentences may have more than one mistake, and other sentences may contain no mistakes at all. There are no mistakes in spelling.

Read the paragraph and find the mistakes. Draw a line through each mistake in the paragraph. Then write the correction above it.

Last weekend, my family and I went to the new aquarium downtown. It is one of the most largest aquariums in the state. When we first arrive at the aquarium, we saw real otters sharks, and penguins. Then we went to the aquarium's Theater and saw a show called "The amazing Oceans." I learned about different oceans across the world and about interesting creatures that lives in those oceans. It was so much fun to visit the aquarium. I can't wait to go back!

# Sample Mathematics Questions

The **complete text** and answers to these sample questions, as well as additional sample questions and answers, can be found in *Appendix B Sample Mathematics Questions* at <http://www.emsc.nysed.gov/3-8>.

## Grade 3

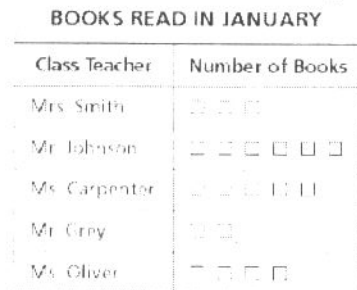
### Multiple Choice

Sam and Jenna have been saving pennies. Sam has 232 pennies, and Jenna has 151 pennies. How many more pennies does Sam have than Jenna?

- A 71
- B 81
- C 121
- D 181

## Extended Response

The pictograph below shows the number of books read by students in five different classes during the month of January.



**KLY**  
= 5 Books

### Part A

Which teacher's class read exactly 20 books?

**Answer** \_\_\_\_\_

### Part B

How many more books would Mr. Johnson's class have to read to make a total of 50 books?

**Show your work.**

**Answer** \_\_\_\_\_ books



## Short Response

Anna is trying to save some money by putting one-dollar bills in a jar each month. The table below shows the total number of one-dollar bills in the jar at the end of each month.

ONE-DOLLAR BILLS SAVED

Number of Months	Number of One Dollar Bills
1	3
2	6
3	9
4	12

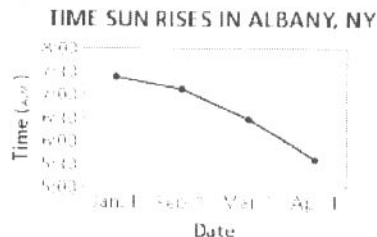
If the pattern continues, how many one-dollar bills will Anna have in the jar at the end of seven months?

**Show your work.**

**Answer** \_\_\_\_\_ one-dollar bills

## Extended Response

On the first day of each month, Suzanne records the time the sun rises in Albany, New York. She uses the line graph below.

**Part A**

At approximately what time did the sun rise on April 1?

**Answer** \_\_\_\_\_ A.M.

**Part B**

On which date did the sun rise at 6:30 A.M.?

**Answer** \_\_\_\_\_

**Part C**

Based on the graph, describe the change in the time the sun rises during the first three months of the year.

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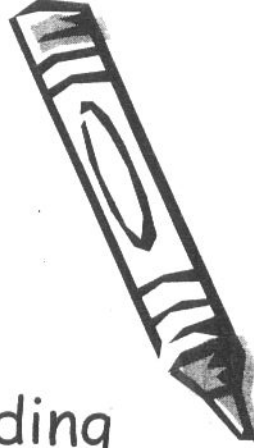


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# Developmental Reading Assessment-Second Edition



- Grades K-3
- Monitor and document change in students' reading over time-test can be given twice per year or even more frequently.
- Assessments are conducted during one-on-one reading times.
- Assessed in the following areas of reading proficiency: Reading Engagement, Oral Reading Fluency, and Comprehension.
- Results can assist with goals on the IEP.
- Levels indicate whether student is meeting state and local reading standards.

