

# *CogAT: Ability Insights for All Educators*

**Jeff Cachur, Riverside Insights**

**Sr Assessments Consultant**

**November 2023**



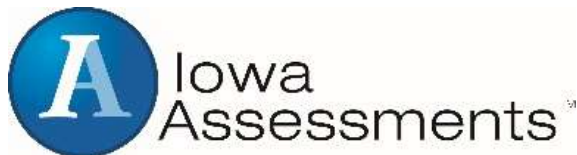
# *Agenda*

- Cognitive Abilities Test (CogAT)
- DataManager
- Q & A



## A Tradition of Assessment Excellence

- Dedicated to provide finest testing products and services
- Recognized leader in assessment publishing industry
- Decades of research-based design and format experience
- Assessments administered to millions of students
- Proven portfolio of valid and reliable tools to monitor individual growth and improve instruction



# Riverside Family of Assessments

Complete solution for measuring Performance, Potential, Personalized Learning, and Growth



- The gold standard of skill assessment
- Evaluate program effectiveness
- Advanced Online Reporting
- Measure impacts on student growth



*Abilities*

- Measure student ability & potential
- Understand how students prefer to learn
- Guide decisions on program placement aligned to student needs



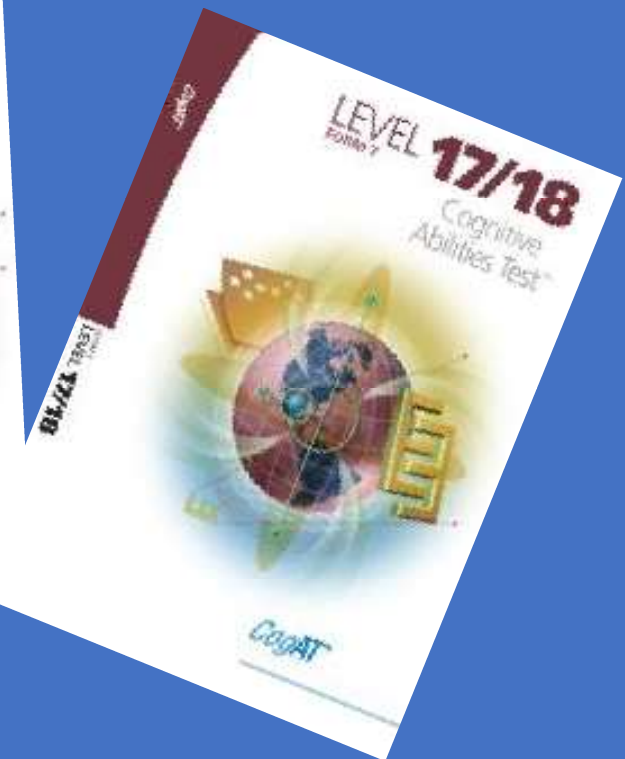
- Test what you teach as you teach
- Monitor mastery of concepts throughout the school year
- K-1 standards level reporting



*Diagnostic*

- Determine student readiness for Algebra I
- Interactive, online reporting
- Measure pre-algebraic concepts, math information interpretation, relationship representation, & symbol usage
- High IAAT score correlation to predictability of Algebra I course grades

# *Cognitive Abilities Test - CogAT*



# Value of Ability Information



- Provides another perspective on student potential
  - **Achievement Test:** *what a student knows*
  - **Ability Test:** *potential, how quickly/easily students can learn*
- Use ability data to accelerate learning and close gaps for all students
- What students can learn more independently?
- Which students need skill building vs. conceptual guidance?

CogAT scores provide information about the pace of instruction, complexity, and degree of structure that will be most effective for the student.

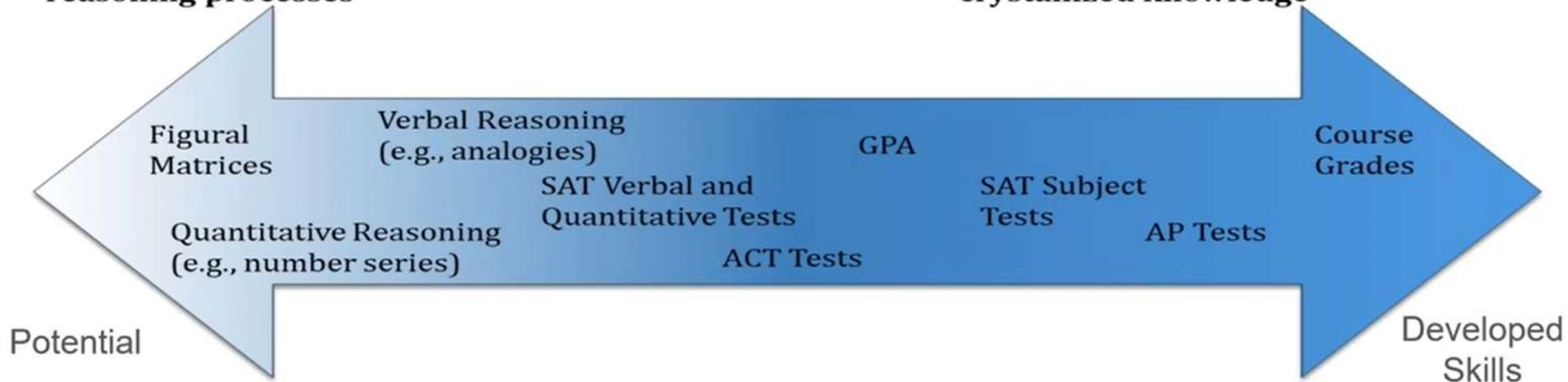
# Ability vs. Achievement

**Influenced by all learning opportunities**

**Requires novel problem solving and reasoning processes**

**Influenced more by formal education**

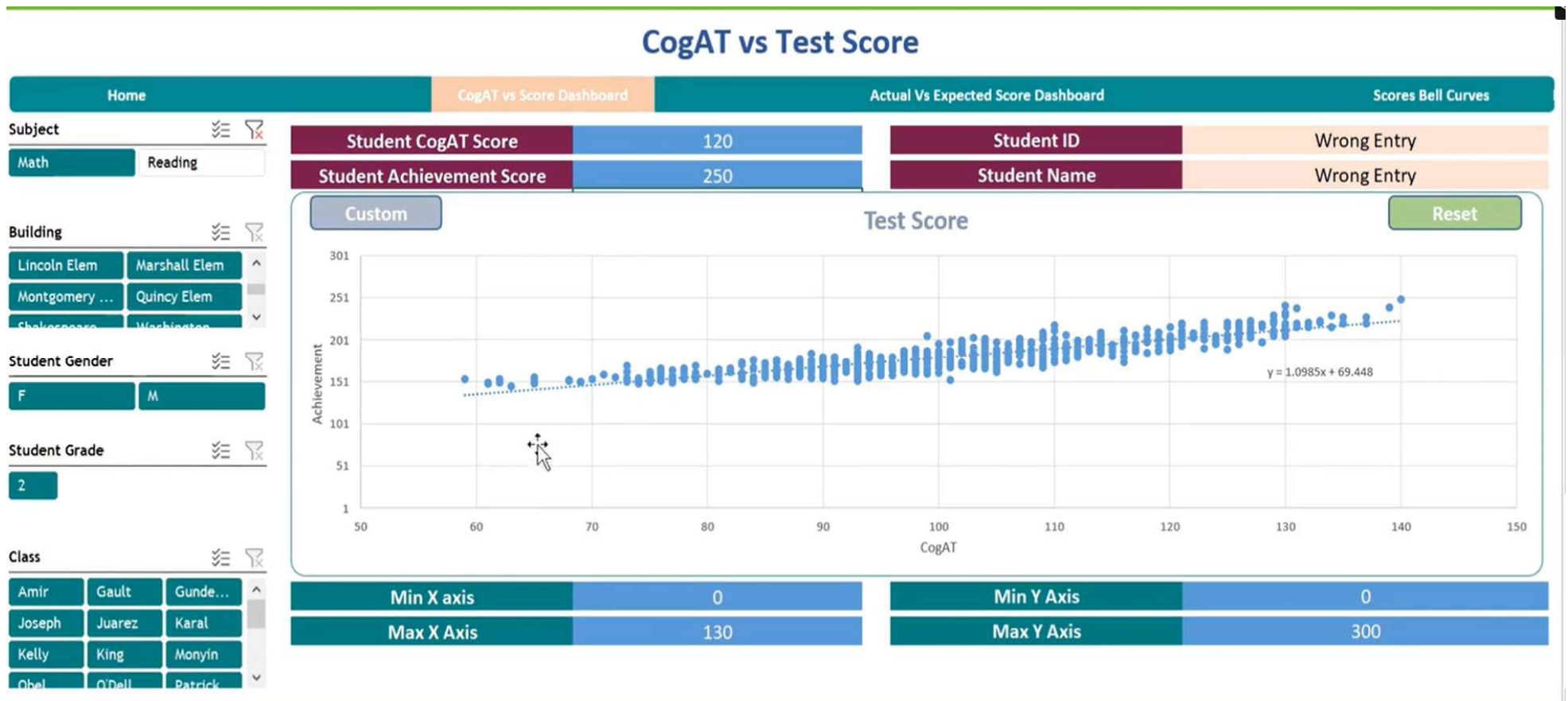
**Requires well practiced skills and crystallized knowledge**



# Ability vs. Achievement

Measuring ability allows you to unlock insights about student potential.

Teachers can tailor instruction to match how students learn, consider students for enrichment





# CogAT<sup>®</sup> Form 7



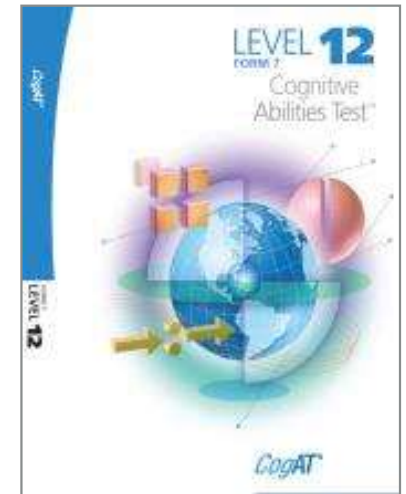
- Co-developed with *Iowa Assessments*
- Authored by renown expert Dr. David Lohman, Professor Emeritus at the University of Iowa
  - Winner of the National Association of Gifted Children's *Paper of the Decade Award* 2000-2010
- Today, Dr. Joni Lakin is Co-Author
  - Associate Professor at University of Alabama



# CogAT Form 7

*CogAT*®

- *CogAT* is the most highly regarded and widely used group-administered abilities test
  - The most current and updated test of student abilities in kindergarten – grade 12
  - Superior technical qualities
- Provides insight into abilities not fully measured by achievement tests across three domains
  - Verbal
  - Quantitative
  - Nonverbal/Figural



***Provides insight for differentiation:***

- *Pace of Instruction*
- *Complexity*
- *Degree of Structure*

# CogAT Form 7

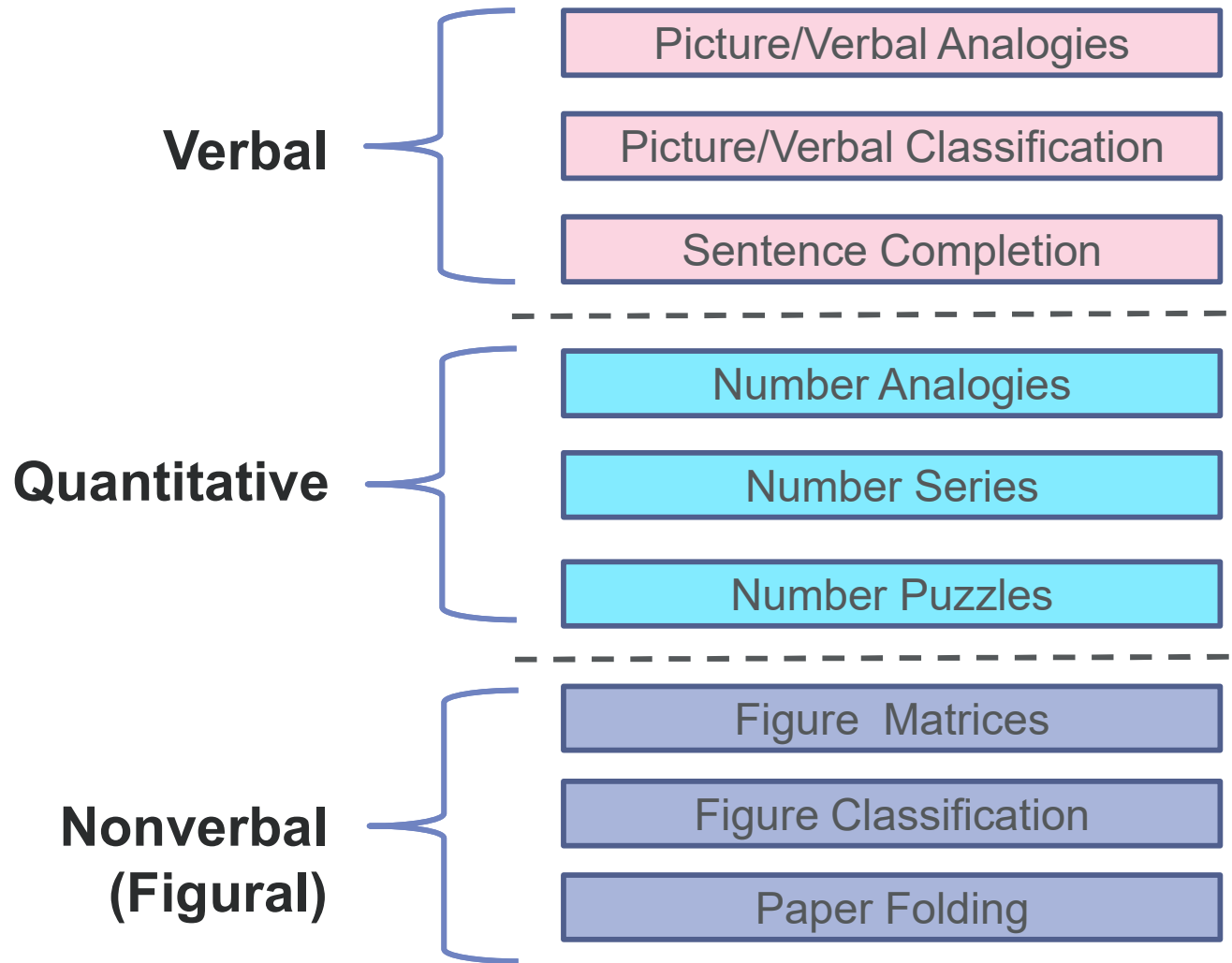
CogAT®

- Bright 4-color design
- Completely revised to be more “ELL friendly”
  - Levels 5/6 – 8 (grades K – 2) bilingual primary battery
  - 8 of 9 subtests use only pictures, shapes and integers
  - **Online testing:** test directions in 8 languages
  - **Paper/Pencil:** Spanish and English directions
- Untimed kindergarten - 2<sup>nd</sup>
- 90 minutes 3<sup>rd</sup> grade +
- 2017 Norms
- Provides predicted achievement scores when administered with Iowa



# CogAT Batteries

- Measures general and abstract inductive and deductive reasoning
- Across 3 areas of cognitive reasoning
- Three subtests within each battery
- Helps teachers to adapt instruction so all students can succeed



# Age-Based Level Designations

Form 7 Level Designations	Approximate US Grade Levels
5/6	K
7	1
8	2
9	3
10	4
11	5
12	6
13/14	7 – 8
15/16	9 – 10
17/18	11 - 12

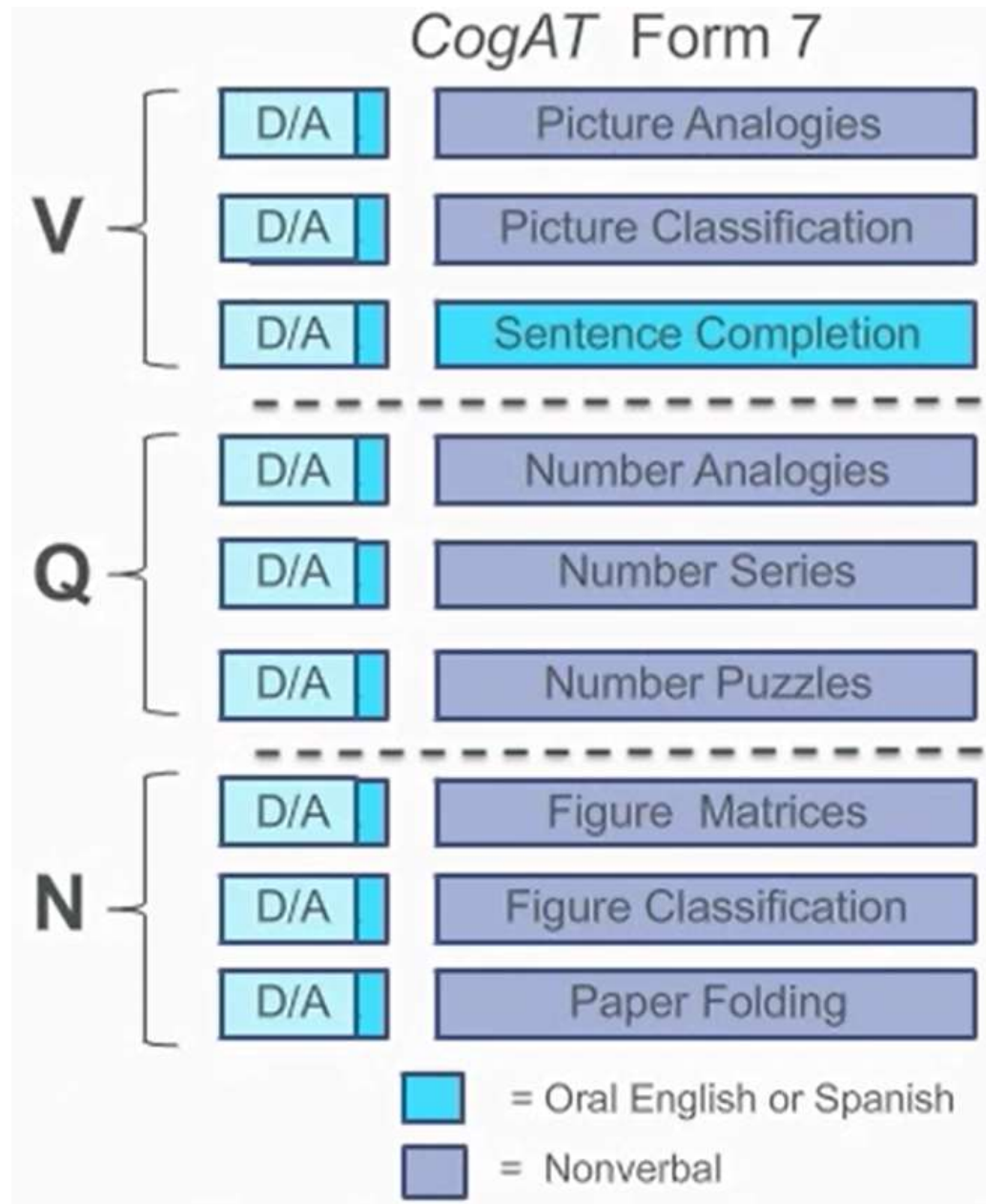
**NOTE:**

Students must use the same **Test Level** for the Iowa and the CogAT when using a combined answer document.

# Primary Grades K-2: Subtests

مرحبا العالم! Hallo Welt!  
Hej Värld! Hello World!  
Ciao Mondo  
ハローワールド!  
¡Olá mundo! 世界您好!  
Salut le Monde!

- *Picture-based items*
- *No language load for English and Spanish speakers*
- *Printed test directions in English and Spanish*
- *8 audio languages for online test directions*
  - **English**
  - **Spanish**
  - Arabic
  - Cantonese
  - Mandarin
  - Russian
  - Somali
  - Vietnamese



# Primary Grades K-2: Subtests

## Verbal

Levels 5/6-8—Verbal Battery—Picture Analogies

1

○ ○ ●

Levels 5/6-8—Verbal Battery—Sentence Completion

Which animal swims in the ocean?

2

○ ● ○

Levels 5/6-8—Verbal Battery—Picture Classification

3

● ○ ○

## Quantitative

Levels 5/6-8—Quantitative Battery—Number Analogies

4

● ○ ○

Levels 5/6 and 7—Quantitative Battery—Number Puzzles

5

○ ○ ○ ●

Levels 5/6 and 7—Quantitative Battery—Number Series

6

● ○ ○

## Figural / Nonverbal

Levels 5/6-8—Nonverbal Battery—Figure Matrices

7

○ ● ○

Level 5/6—Nonverbal Battery—Paper Folding

8

○ ○ ●

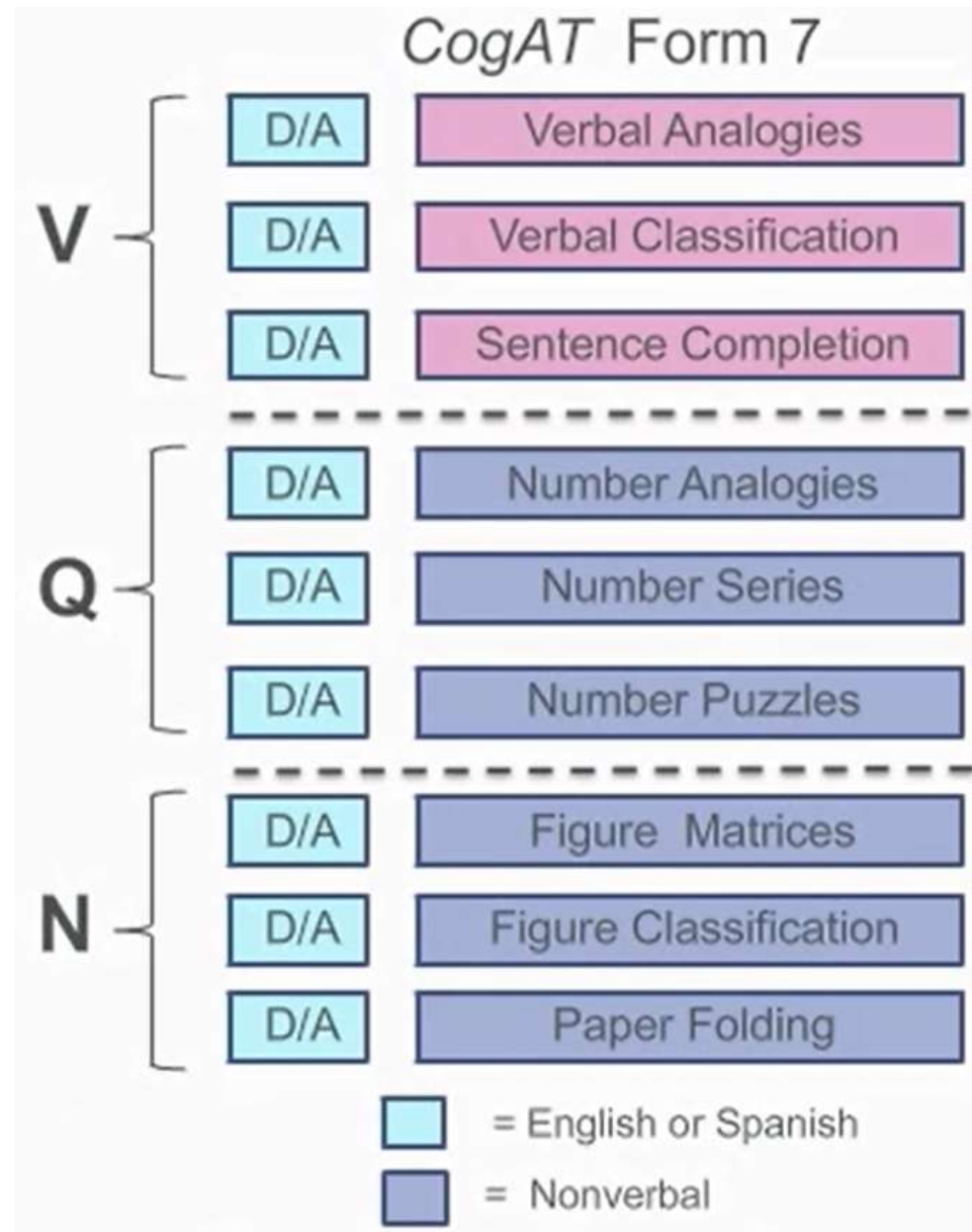
Level 8—Nonverbal Battery—Figure Classification

9

○ ● ○ ○

# Grades 3 - 12: Subtests

- Paper/Pencil test directions available in English or Spanish
- 8 audio languages for online test directions
  - English
  - Spanish
  - Arabic
  - Cantonese
  - Mandarin
  - Russian
  - Somali
  - Vietnamese





# Grades 3 - 12: Subtests

## VERBAL BATTERY

### Levels 9–10—Verbal Battery—Verbal Analogies

- 1 TV → watch : newspaper →  
 A deliver    B comics    **C read**    D magazine    E listen

### Levels 9–10—Verbal Battery—Sentence Completion

- 2 The fastest runner \_\_\_ the race.  
**A wins**    B loses    C watches    D starts    E makes

### Levels 9–10—Verbal Battery—Verbal Classification

- 3 apple orange pear  
 A fruit    B carrot    C pea    **D lemon**    E onion

## FIGURAL / NONVERBAL

### Figure Matrices

1

### Paper Folding

1

### Figure Classification

1

2

## QUANTITATIVE BATTERY

Number Analogies
[1 → 2]    [3 → 4]    [5 → ?]
<b>A 2</b> <b>B 4</b> <b>C 6</b> <b>D 8</b> <b>E 12</b>
Number Puzzles
$?\square = \diamond + 6$ $12 = \diamond - \bullet$ $\bullet = 5$
<b>A 23</b> <b>B 17</b> <b>C 13</b> <b>D 11</b> <b>E 7</b>
Number Series
1 2 4 5 7 8 →
<b>A 7</b> <b>B 8</b> <b>C 9</b> <b>D 10</b> <b>E 11</b>

# Administration



Flexibility for different schools' needs

## Option 1: Paper and Pencil Testing with Central Scoring

- Administer tests on Riverside's answer documents or within scannable test books then ship to Riverside Insight Scoring Service
- Access to web-based reports in *DataManager* within 10 days after receipt of testing materials
- Or, paper-based reports shipped out with 10 days after receipt of testing materials

## Option 2: Online Testing

- Students may use PCs, Macs, iPads or Chromebooks
- Administer tests online with access to online reports in *DataManager* within 24-48 hours after closure of test event
- Successful completion of system check and training are required
- Online Testing? Contact: ACSI at [OnlineTesting@acsi.org](mailto:OnlineTesting@acsi.org)

# Norm Referenced Scores for CogAT



- CogAT scores may be compared and evaluated in multiple ways within and between students and groups
- **National norms:**

## Grade Norms

Compare scores to those of a nationally representative sample of students in the same grade for Fall, Midyear, and Spring

- Our expectations for students differ across periods of the school year

## Age Norms

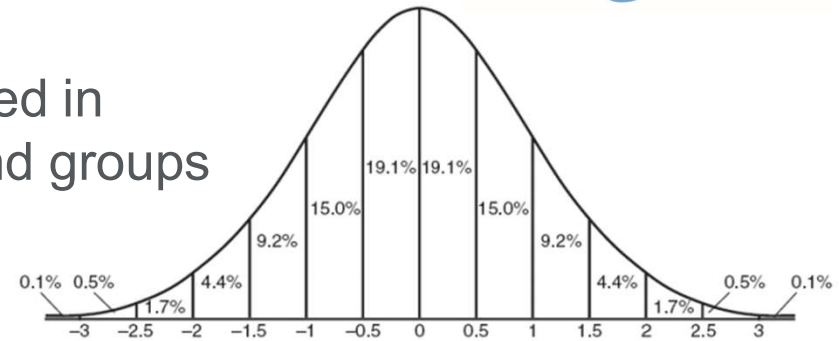
Compare scores to those of a nationally representative sample of students of the same age, using one-month intervals

- Age-related developmental differences affect our expectations for students, particularly in the early grades

- **Local Norms**

- Created from the distribution of standard age scores for the group within your system that is tested and scored at the same time

- **Scores by individual Battery - V, Q, N**



# Ability Profile Scores



Every student assessed with *CogAT* Complete receives an Ability Profile score that highlights both the level and pattern of a student's ability. *CogAT* is unique in offering this score that provides educational guidance for all students, not just high-ability ones.

Educators can visit [www.cogat.com](http://www.cogat.com), plug in a student's profile, and receive:

- General characteristics of learners with this profile
- Instructional strategies tailored to the individual profile
- Additional lists of resources and support materials

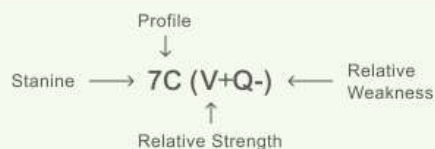
## Ability Profile Finder



### Cognitive Abilities Test™ (CogAT®) Form 7 and Form 8

INPUT

TABLE



#### Directions

Enter a student's Stanine and Profile type in the appropriate drop down boxes from left to right (see sample for clarification). Select the student's Ability Profile from the resulting options below the drop down boxes.



Resources for Parents

Test Result

## Profile 7C (V+ Q-)

About This Type of Learner



Typical Areas of Strength



How These Learners Learn Best



Potential Areas of Challenge



Strategies to Support These Learners



# CogAT Dashboard Reporting

- CogAT dashboard offers easily accessed interactive functionality for greater visibility into the data providing insights relevant to all levels of educators and administrators
- The CogAT Dashboard, enables educators to become more engaged with the vital information CogAT provides – to fully realize the value of this unique tool

**CogAT Form 7 - Spring 2017 Norms**

PERCENTAGE OF STUDENTS BY AGE STANINE

Composite (VQN)

Composite (VQN) Students by Age Stanine

IDENTIFIED STUDENTS BY SCHOOL

**23** Total Identified Students

School	No.	1	50	100+
CALHOUN ELEMENTARY	3			
GALLATIN ELEM	1			
HAMILTON ACADEMY	6			
PUTNAM ELEMENTARY	7			
SCOTT CHARTER SCHOOL	3			
STARK ACADEMY	4			

Content Area	1	2	3	4	5	6	7	8	9
Verbal	4	12	5	21	30	27	7	2	2
Quantitative	0	5	8	26	18	27	19	7	1
Nonverbal	2	5	11	27	23	24	7	10	2
Composite (VQ)	0	9	8	21	21	31	15	5	0
Composite (VN)	3	9	10	24	23	21	12	8	0
Composite (QN)	1	3	9	24	21	30	12	9	2
Composite (VQN)	3	4	11	23	23	28	8	10	0


**Legend**  
VQ: Composite Verbal and Quantitative  
VN: Composite Verbal and Nonverbal  
QN: Composite Quantitative and Nonverbal  
VQN: Overall composite score for Verbal, Quantitative, and Nonverbal  
●: Percent of Students Nationally

**STUDENT ROSTER**

Student Name	V	Q	N	VQ	VN	QN	VQN
	APR	APR	APR	APR	APR	APR	APR
ACOR, BENJAMIN	65	71	55	71	60	66	62
AGUERO, HALEY	71	81	97	77	94	96	92
ALESSANDRINI, CARLY	55	40	55	50	52	50	52
ALEXION, JONATHAN	50	91	65	79	55	79	71
ALLEN, GABRIEL	71	25	21	55	48	26	38
ANDES, KYLIE	55	77	71	69	65	73	69
BAKLUND, RIVER	48	57	27	52	33	40	40
BAKOWSKI, DILEH	62	55	60	60	60	57	57
BALSIGER, AMY	5	57	33	23	12	48	23

# New! Differentiated Instruction Report

- Differentiated instruction guidance for individuals and groups of students
- Informs pace of instruction, complexity, and degree of structure that will be most effective



**Profiles 4A, 5A, 6A**  
Differentiated Instruction Report:

**Grade/Level:** Grade 3 / Level 9  
**Test Date:** 07/01/2019 - Spring 2019

**Class:** Avinger  
**School:** GRANITE BAY ACADEMY  
**District:** SOUTHVIEW

---

<b>Students</b>	<b>Recommendations</b>
ANUMAKONDA, JULISSA DEETJEN, ALEXANDR KOEPCKE, KALEB WELLS, PRISCILL	<p><b>Profile Explanation</b></p> <p>Students with these profiles have consistently low-average (stanine 4), average (stanine 5), or high-average (stanine 6) scores on CogAT. An "A" profile means that the scores are at about the same level on the verbal, quantitative, and nonverbal (spatial) reasoning batteries.</p> <p><b>Characteristics of Students with These Profiles</b></p> <p>Profile 4A to 6A students have adequate cognitive resources for learning in most academic situations. Although the majority of these students have similar levels of achievement in all academic areas, some show high levels of interest and achievement in particular domains. Because their knowledge base is often not extensive or well organized in memory, these students may encounter difficulty recalling and applying their knowledge and skills to accomplish unfamiliar tasks. By middle school, students with average levels of reasoning abilities typically have developed a number of learning and problem-solving strategies. Often, these strategies are fairly context-bound, so these students may not always choose the most effective strategy for a task. Their flexibility is limited, and, if they try a strategy that does not work, they may not know what to do next. Profile 4A to 6A students need help to achieve objectives requiring transfer such as high-level reading comprehension skills, problem solving, and critical thinking.</p> <p><b>Instructional Suggestions for Profiles 4A, 5A, 6A</b></p> <p><b>Build on Strength.</b> Since these students have comparable levels of verbal, quantitative, and spatial reasoning abilities, strengths will be primarily evident in interests, and, to a lesser extent, in levels of achievement in particular domains. At all ages, but especially during adolescence, students strive to achieve individuality. One route is through recognition of excellence from peers and adults. Although such recognition is commonly attained through nonacademic activities such as sports, music, and other extracurricular activities, teachers should find ways to encourage student's particular academic accomplishments. Profile 4A to 6A students can be recognized for their high levels of knowledge in particular domains. Sometimes they excel in other ways, such as in leading discussions, presenting reports, creating science projects, writing essays, or assisting other students in learning. Finding and nourishing the islands of excellence in all student's schoolwork spreads encouragement.</p> <p><b>Focus on Working Memory.</b> Students with levels of reasoning abilities that are typical for their age frequently must learn at the limits of their working memories, especially when tasks are new or require the simultaneous execution of several processes. Changes in instructional methods that reduce these burdens on working memory can, therefore, have a significant impact on their success in learning. For example, if a task involves comparing two concepts, it will be much easier if both are simultaneously in view. Have students put all the needed information in one place--on a single sheet of paper or a single concept map.</p> <p>Educators can also reduce working-memory burdens for these students by using familiar concrete concepts rather than unfamiliar abstract symbols. Familiarity is greatest for overlearned concepts and skills. Practice on low-level skills can free working memory for higher-level processing. Monitoring themselves as they execute a skill is especially troublesome for these students, particularly in the primary grades. Offloading monitoring to another individual by having students work in pairs can be especially effective early in the process of acquiring a new skill or strategy.</p> <p><b>Scaffold Wisely.</b> Students with all average scores tend to learn more effectively in school environments that are somewhat, but not highly, structured. These students tend to learn best when instruction is moderately paced and</p>

Abilities	Age Scores			APR Graph
	Standard Age Score	Age Stanine	Age Percentile Rank	
Verbal	108	6	66	
Quantitative	96	4	35	
Nonverbal	94	4	31	
Composite (VQN)	99	5	44	

Abilities	Raw Scores			Grade Scores		Local Scores	
	Number of Items	Number Att.	Number Correct	Grade Stanine	Grade Percentile Rank	Local Stanine	Local Percentile Rank
Verbal	62	62	52	6	69	6	75
Quantitative	52	52	32	4	38	5	44
Nonverbal	56	56	38	4	34	4	40
Composite (VQN)				5	47	5	53

Notes:

Aiden's ability profile is 5A. Visit [www.cogat.com](http://www.cogat.com) for more detailed information on profile 5A. Click on the "Interactive Profile Interpretation System" button. Enter 5A in the "Input Your Score Profile" section. Click "Search".

### Overview

Aiden recently took the Cognitive Abilities Test (CogAT). CogAT measures the development of verbal, mathematical, and spatial reasoning abilities that are essential for success in school. Students with different patterns of scores on CogAT have different learning styles. By knowing Aiden's learning preferences, teachers can help him achieve greater success in school.

### Aiden's Profile of Test Scores

Aiden's scores on the three batteries do not differ significantly. All three of his scores are in the range typically observed in students of this age. For students who have reasoning scores in the average range, the following steps may be helpful:

- Build on Aiden's strengths by encouraging academic accomplishments in areas that interest him.
- Point out how new skills and information build on knowledge and skills Aiden already has.
- Show Aiden how to break complex tasks into simpler steps. Model the steps as you explain them. Write the steps on a sheet of paper and let Aiden work with a partner to follow them.
- Teach Aiden study skills such as planning use of time, formulating questions to guide study, and taking notes.

### More Information on Aiden's Scores

The sections to the left explain Aiden's performance using different types of comparisons and score scales.

- The Age Scores section compares his performance to students across the nation who are also 8.6 years old.
- The Grade Scores section compares his performance to students across the nation who are also in grade 3.
- The Local Scores section compares his age score performance to students in your local area who are also in grade 3.

Each of these sections includes one or more scores. The Stanine reports Aiden's performance on a scale from 1 (lowest) to 9 (highest). The Percentile Rank indicates the percentage of students in each comparison group whose scores fell below the score obtained by Aiden.





### LIST OF STUDENT SCORES Cognitive Abilities Test™ (CogAT®)

Class: Class 1  
Building: Building 1  
District: District 1  
System: System 1  
Region: Region 1  
State: State 1

Form Level: 7-9  
Test Date: 10/2013  
Norms: Fall 2011  
Grade: 3

STUDENT NAME I.D. Number 1 I.D. Number 2 ABCDEFGHIJKLMNOPZ	Birth Date Age Form	Level (Gender) Form	Program L M NOPZ		AGE SCORES				GRADE SCORES				LOCAL SCORES				Student Profile APR Graph	Profile	
					No. of Items	No. Att	Raw Score	USS	SAS	PR	S	PR	S	PR	S				
Barajas, Santiago 0000131842	03/05 06-07 7	9 (M)			Verbal	62	62	129	178	99	48	5	35	4					9E (V-)
					Quantitative	52	50	24	230	134	98	9	97	9					
					Nonverbal	56	56	18	245	139	99	9	99	9					
					Composite (VQN)				218	131	97	9	95	8					
Bagsby, Aiden 0000147548	04/05 06-06 7	9 (M)			Verbal	62	62	58	251	123	92	9	99	9					9E (N-)
					Quantitative	52	52	45	236	112	77	9	98	9					
					Nonverbal	56	56	40	213	131	97	7	96	7					
					Composite (VQN)				233	124	93	9	99	9					
Delgado, Cira 0000133627	09/04 08-11 7	9 (F)			Verbal	62	62	27	177	91	29	6	59	7					6B (V-)
					Quantitative	52	47	29	191	104	80	7	63	7					
					Nonverbal	56	55	38	207	112	77	7	71	5					
					Composite (VQN)				192	103	57	6	65	6					
Brigerton, Ryan 0000152607	12/04 09-02 7	9 (M)			Verbal	62	62	48	210	118	87	7	89	8					6C (V+N-)
					Quantitative	52	52	32	195	109	71	6	73	6					
					Nonverbal	56	56	31	191	101	52	5	54	5					
					Composite (VQN)				199	110	73	6	76	6					
Sullivan, Reagan 0000142618	11/04 09-01 7	9 (F)			Verbal	62	62	43	189	108	89	8	77	7					5A
					Quantitative	52	52	28	190	102	55	5	63	6					
					Nonverbal	56	56	32	193	101	52	5	58	5					
					Composite (VQN)				194	104	60	6	67	6					
Frazier, Emma 0000131198	07/05 08-03 7	9 (F)			Verbal	62	62	30	180	97	43	5	40	4					4C (V+Q-)
					Quantitative	52	52	+10	165	81	12	3	7	2					
					Nonverbal	56	56	20	173	89	25	4	20	3					
					Composite (VQN)				173	88	23	3	21	3					
Gambosi, Olivia 0000146921	05/05 08-04 7	9 (F)			Verbal	62	62	26	176	98	23	3	31	4					3B (N+)
					Quantitative	52	52	16	173	84	16	3	21	3					
					Nonverbal	56	56	30	189	97	43	5	50	5					
					Composite (VQN)				179	88	23	3	32	4					
Kuehn, Payton 0000151260	01/05 08-09 7	9 (F)			Verbal	62	62	56	239	136	99	9	98	9					9A
					Quantitative	52	52	45	226	133	98	9	99	9					
					Nonverbal	56	56	43	224	124	93	8	93	8					
					Composite (VQN)				233	136	99	9	99	9					
Zheng, Li 0000139927	10/04 09-00 7	9 (M)			Verbal	62	62	-9	150	71	3	1	1	1					1E (Q+)
					Quantitative	52	52	19	179	99	48	5	36	4					
					Nonverbal	56	56	-8	149	68	2	1	1	1					
					Composite (VQN)				159	76	7	2	2	1					

+ = Targeted score, ± = Inconsistent response pattern

# Digital Resource Library

CogAT®

- Use resources to
  - Plan for testing
  - Download practice activities
  - Understand reporting options
  - Interpret test results
- Enhanced suite of ancillary materials
  - Free in the *DataManager* platform
  - CogAT Practice activities
  - Planning and Implementation Guide
  - Web Reporting Guide
  - Score Interpretation Guide
  - **NEW!** Guide for Teachers
    - Provides instructional guidance
    - Build on strengths
    - Shore up weaknesses



# *DataManager – One Platform*



# DataManager – One Platform

DataManager is your online resource for streamlining the management of your assessment program using:

- *Iowa Assessments*
- *IowaFlex*
- *CogAT Test*
- *Logramos*

## Preparing for Testing

- Construct and manage student rosters
- Create events
- Assign students
- Provides step-by-step guidance through ancillaries

## Administering Tests

- Supports central scoring of answer documents
- Includes roster and bar code file templates and instructions
- Supports online test administration
- Provides guidance through Directions for Administration



## Interpreting Results

- Provides guidance through digital resources
- Links to next steps, such as making adjustments to curriculum or grouping learners
- Enables targeted instruction via Lexile and Quantile measures

## Reporting

- Delivers web-based reports
- Combines results from different assessments
- Enables disaggregation of results
- Enables local printing of reports
- Allows exporting of results


# CogAT info at [your.acsi.org/CogAT](http://your.acsi.org/CogAT)





## CogAT: Cognitive Abilities Test

### Ability Data: Bridging the Gap Between Student Potential and Student Achievement

CogAT is the most trusted assessment for measuring students' capacity to learn.

 Grades: K - 12

 Administration Time:  
Approx. 90 minutes

 Online and Paper/  
Pencil Administration



### Benefits:

- Age-specific (in years and months), up-to-date national norms and local norms calculated to the same exacting standards
- Detailed information on students' Verbal, Quantitative, and Figural (Nonverbal) reasoning



Order Forms & Quoting Tools

Professional Development

Explore Our Videos

Events Page

Online Testing

Spring and Fall

## Scoring and Reporting

To gain the rich insights into student abilities that CogAT offers, you can choose from a variety of reports that serve the needs of different stakeholders, from families to teachers to administrators. Watch the videos below to learn more about the new CogAT Reporting Dashboard.

**Reporting Options:** Age and grade normative scores, local norms, separate and composite scores for ability batteries, and the Ability Profile Score provide multiple data points for use in identification and instruction.



The CogAT Dashboard Administrator Preview



The CogAT Dashboard Teacher Preview

## *Contact Information*

### Questions for Association of Christian Schools International?

**Lisa Chubbic**, ACSI Assessment Program Manager

AssessmentSupport@acsi.org

719.867.0139

### Interested in testing online?

**Gina Kinnard**, ACSI Assessment Program Coordinator

OnlineTesting@acsi.org

719.867.0246

## *Looking For More Information?*



For more information about Iowa Assessments and CogAT, go to [www.purposefuldesign.com](http://www.purposefuldesign.com)

Select Assessment Support, then Iowa Assessments

- Materials Pricing Tool
- Scoring Cost Estimation Tool
- Quick Facts
- Product Information
- Complete the Connect with Us form
- Program Details

For additional assistance, contact ACSI Care Team

[careteam@acsi.org](mailto:careteam@acsi.org)

800-367-0798

---

Q&A



***Thank You!***