Parents' Guide
Cognitive Abilities Test (CogAT)

Grades 3 and 5

The CogAT is a measure of a student's potential to succeed in school-related tasks. It is NOT a tool for measuring a student's intelligence or IQ. Rather, it measures the reasoning skills that have developed during a student's educational career, even though they have not been explicitly taught. These general cognitive skills are not specific to any content area, but are skills that are used in all areas of a student's academic experiences. The CogAT also measures general "school skills," such as the ability to listen, follow directions, and focus attention.

The CogAT scores are measured as:

- Verbal (verbal classification, sentence completion, and verbal analogies);
- Quantitative (quantitative relations, number series, and equation building);
- Nonverbal (figure classification, figure analogies, and figure analysis).

The standardization of the CogAT was designed to provide national norms based on a sample of the entire U.S. school population. This "norm group" includes representative samples from 6,000 to 9,000 students drawn from public and private schools; from all geographic regions; from rural, suburban, and urban schools; and from schools of all sizes.

Profile Narrative

This profile shows two comparisons for your child's performance. The first box compares your child's performance to other children of the same age, and the second box compares performance to children in the same grade nationwide. Usually the percentile ranks and stanines (defined later in this document) are similar for age and grade if your child is approximately the right age for his/her grade. If a child is younger or older for his/her grade, the age percentiles and stanines will differ from the grade percentiles and stanines.

Benefits of Ability Testing

The Orange Elementary Schools administer the CogAT to obtain one view of a child's ability to be successful in school and to look for dominant learning strengths. CogAT results are most commonly used when a teacher has concerns about a student's classroom performance or lack of progress. A teacher will look at the CogAT score to get a general sense of a student's abilities and learning styles, which may lead to further analysis. A student's CogAT results, along with other test data, assist teachers in designing effective instructional programs.

Items to Remember

Standardized testing is only one way to measure student ability and achievement—it's not the only way. Human capabilities are much more diverse and complex than what is measured by standardized achievement tests or school ability tests. As we learn more from the fields of cognitive science and brain research, definitions of human learning are changing and becoming broader. Educators consider scores from these tests as one view of a student. Classroom performance and teacher assessments are equally important. Teachers also recognize that students' test-taking skills and attitudes during testing sessions affect their results. Accurately measuring how each student is progressing is an essential component of a school's program.

*The results of any one test must not be used as a sole criterion for judging student performance. It is important to use this information in conjunction with other assessments to get a full picture of a child's level of performance.

Helpful Definitions

Scaled Score (SS)

A scaled score is a transformation of a raw score (i.e., the number correct) into a standard based on the norm group. In this way a comparison can be made of the scaled score from test administration to test administration and from year to year. It is NOT a percentage score. Scaled scores help communicate student performance by indicating performance across years on the same scale. Scaled scores range from a low of about 55 to a high of about 145. Scaled scores of 90-109 are solidly in the Average range.

All test scores contain a certain margin of error. Most scaled scores can fluctuate by about five points. Therefore, it is crucial that any scaled scores must be viewed within a range of about plus or minus five points from the actual reported score rather than as an absolute or exact score.

How do you use this SS?

This score is used to track progress over time, from fall to spring or year to year, as a sort of educational yardstick.

National Percentile Ranking (NPR)

The NPR is a conversion of the SS used to compare the student to members of the Performance Series Norm Group within the same grade level nationally. The percentile score indicates the percentage of students that the selected student would be expected to score above in comparison to the norm group. Percentile scores range from a low of 1 to a high of 99. A percentile score of 50 is statistically Average.

How would you use the NPR?

For example, an NPR of 74 for a student would mean that his/her score is above 74% of his/her peers in the national norm-group. Percentile scores are not related to state standards nor are they comparable over time.

National Stanine (NS)

Stanines ("standard nine") range from 1-9 (one being low, 9 being high). Stanines are groupings of percentiles into nine groups and are convenient to use to help students and parents quickly identify areas of strength and weakness. A stanine score of five is solidly in the Average range.

Are there materials I can purchase to help my child?

There are many resources available on the market that address the areas of problem solving and reasoning. One resource to consider is www.thinktonight.com/CogAT

Cognitive Abilities Test (CogAT)

Sample Questions

- **Verbal Battery**- verbal classification, sentence completion, verbal analogies.
- **Quantitative Battery** - quantitative relations, number series, equation building.
- **Non-Verbal Battery** - figure classification, figure analogies, figure analysis.

Cognitive Abilities Test (CogAT) Verbal Subtests

The Verbal Battery tests a student's vocabulary, as well as his/her comprehension of ideas, efficiency and verbal memory, and ability to discover word relationships. Statistics show a high correlation between high verbal ability and success in a variety of school subjects.

Three sub-tests are administered in the **verbal section**. Each sub-test has about 20 questions and the student is given 10 minutes to complete each sub-test. These three sub-tests comprise the verbal score.

Verbal Classification: The student is given a list of three words that are alike in some way. The student is asked to choose a word, from a selection of five words that is also alike in the same way.

    Example: Green Blue Red

    Choices: color; crayon; paint; yellow; rainbow

Sentence Completion: The student is given a sentence with a word left out and is asked to choose a word that makes the best sense in the sentence.

    Example: Apples _____ on trees.

    Choices: fall; grow; show; bloom; spread

Verbal Analogies: The student is given three words in dark type. The first two words go together. The third word goes with one of the answer choices. The student is asked to choose the word that goes with the third word the same way that the second word goes with the first.

    Example: new (is to) old : wet (is to) _____

    Choices: rain; drip; hot; sun; dry

Cognitive Abilities Test (CogAT) Quantitative Subtests

The Quantitative Battery tests the student's quantitative reasoning and problem solving ability and provides an appraisal of the student's general level of abstract reasoning.

Three sub-tests are administered in the **quantitative battery**. The first test has twenty-five questions and students are given 8 minutes to finish. The second has 20 questions with a 10 minute testing time. The third has fifteen questions with a 12 minute testing time.

Quantitative Relations: The student is given two problems numbered one and two with three answer choices. The student is to solve the two problems and determine if the answer is greater, less than, or equal to.

Example:

1. 0 + 3
2. 3+0

Choices: a) 1 is greater than 2; b) 1 is less than 2; c) 1 is equal to 2

Number Series: The student is given a series of numbers and is asked to decide which number should come next in the series.

Example: 5 10 15 20

Choices: 25; 30; 35; 40; 45

Equation Building: The student is given numbers and signs. The student is asked to combine the numbers and signs to get a solution that is an answer choice.

Example: 1 +2 + 3 = x

Choices: 1; 2; 3; 4; 6

Cognitive Abilities Test (CogAT) Nonverbal Subtests

The Nonverbal Battery presents the most novel problems to students. The items on these tests use only geometric shapes and figures that have had little direct relationship to formal school instruction. The tests require no reading. It is argued that the nonverbal battery is particularly suitable for obtaining an accurate estimate of development for students, who have difficulty with reading; who have limited competency in English; or who have limited opportunities. The tests in the nonverbal battery are between fifteen and twenty-five questions each and students are given ten minutes for each test. (For examples of how these might be presented on the test see the Figural section of the relevant level of Building Thinking Skills.)

Figure Classification: The student is given three figures that are alike in some way. They are asked to decide which of five options goes best with the three figures.
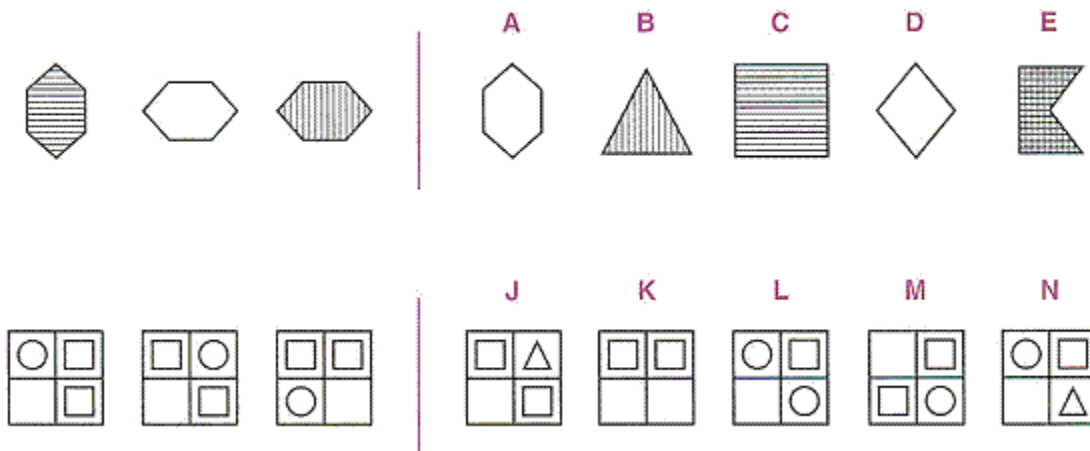

Figure Analogies: The student is given three figures. The first two figures go together in some way; the third figure goes with one of the answer choices in the same way.
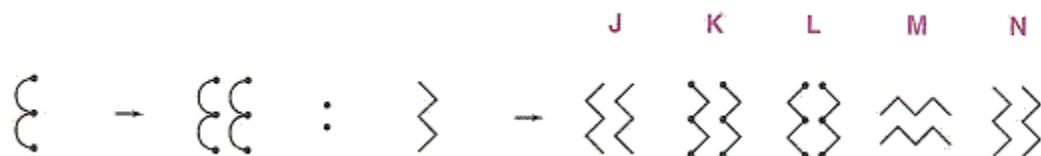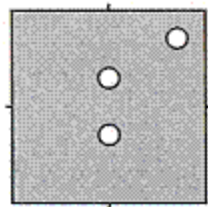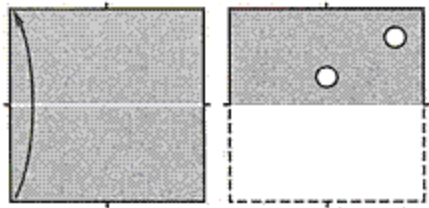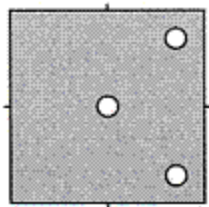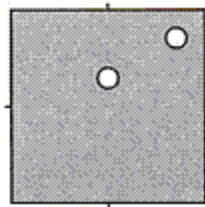

Figure Analysis: The student is shown how a square piece of dark paper is folded and where holes are punched in it. The student is to figure out how the paper will look when it is unfolded.
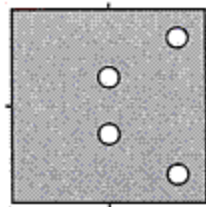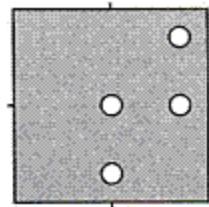
J   K   L   M   N