CASE STUDY:

Measuring Academic Achievement and Growth with TerraNova in the Archdiocese of Philadelphia Schools

TERRA**NOVA**³

ARCHDIOCESE
of PHILADELPHIA
SCHOOLS
AMERICA'S FIRST CATHOLIC SCHOOLS

The Archdiocese of Philadelphia Schools (AOPS) is a diocesan educational institution committed to developing students' scholastic abilities to their greatest potential. As America's first Catholic schools, AOPS has served the southeastern Pennsylvania region for over 200 years. Today, the Archdiocese includes 102 elementary schools, 15 high schools, and 3 schools of special education.

AOPS has used the TerraNova assessment for many years as a standardized measure of academic achievement across the Archdiocesan schools. TerraNova provides highly accurate measurement of important skills and knowledge, and helps educators understand how their students are progressing toward standards and performing relative to their peers.

"Using our TerraNova data, our schools have gone beyond looking at test scores as rankings and have focused more on growth, mastery, and challenging students to reach their potential."

-Sister Edward William Quinn, IHM, Assistant
 Superintendent for Curriculum, Instruction and Assessment
 at Archdiocese of Philadelphia Schools

COMPONENTS OF THE ARCHDIOCESE OF PHILADELPHIA SCHOOLS ASSESSMENT PROGRAM

- TerraNova, Complete Battery—Kindergarten
- TerraNova Multiple Assessments—Grades 1–2
- TerraNova College- and Career-Ready Edition plus InView (Cognitive Abilities Test)—Grades 3–8

Tests are administered to all students in Grades 3–7 and are optional in grades K, 1, 2, and 8.

Using a combination of Achievement testing along with Ability testing helps to determine if students are working to their potential.

AOPS AND TERRANOVA 2022 ASSESSMENT HIGHLIGHTS

AOPS recently presented their 2022 academic achievement results at the Pennsylvania Catholic Conference. The TerraNova assessment data revealed outstanding achievement and growth in the Archdiocesan schools across grade levels and content areas.

> **Key Assessment Results**
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> - At every level, more than 30% of students performed in the top 25% (national quartile).
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> - Students' mean achievement scores were above the national norm (50 percentile) in every content area and at every level tested.
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> - At every grade level and in every content area, there was at least a full year's growth.

In recognition of their strong academic achievement, 41 schools in the Archdiocese of Philadelphia have been awarded the National Blue Ribbon School status by the U.S. Department of Education since the awards began, and have been recognized and honored by the Pennsylvania Department of Education. Only 50 non-public schools in the country receive the coveted Blue Ribbon award each year.

"The positive results achieved in the Spring, 2022 testing are a credit to the dedication and hard work of our administrators, teachers, and students. Their efforts were affirmed in the results."

-Sister Edward William Quinn

OVERVIEW OF RESULTS

The following results provide a more detailed view of the assessment data, including a breakdown of national quartiles, achievement in terms of national percentiles, mastery levels, anticipated and obtained scores, and academic growth.

These results encompass all five counties of the Archdiocese including the large urban area of Philadelphia. It is important to consider that the norms used for 2022 testing are pre-pandemic norms.

NATIONAL QUARTILES

- At every level at which all students were tested (Grades 3–7), fewer than 12% of Archdiocesan students were in the bottom quartile.

    o At the highest level at which all students were tested (Grade 7), fewer than 6% of students were in the bottom quartile.

- At every level, more than 30% of the students performed in the top 25%, with 46.6% of the 7th grade achievement scores in the top quartile.

ACHIEVEMENT IN TERMS OF NATIONAL PERCENTILES

- Students' mean achievement scores were above the national norm (50 percentile) in every content area at every level tested with a range of 7 points above to 27 points above the norm.

    o Language skills were strongest at all levels.

    o Skills which generally require student collaboration and interaction appeared to be most challenging. (e.g., Measurement, Geometry, Science experiments). These were limited in the past year because of social distancing and will call for more focus in the coming year.

MASTERY LEVELS

- This table shows the high mastery of AOPS, the rigor of their programs, and the benefits of in-person learning to support academic achievement and growth.

Level	Low Mastery	High Mastery
K	<5% Math <10% Reading	➤ 65% in Math > 55% in Reading
1	<5% in Science, Social Studies; <10% Math; , 14% in Reading	➤ 55% Social Studies; > 50% Math; >45% Reading, Science
2	<5% Reading, Social Studies; < 10% Math, Science	➤ 50% Reading, Math, Social Studies; .40% Science
3	< 5% Science, Social Studies; <10% Reading, Language, Math	➤ 30% Language > 35% Math; 45% Reading; >50% Science, Social Studies
4	<5% Reading, Science Social Studies; < 15% Language, Math	➤ 45% Reading. Science, Social Studies> 40% Math ; >35% Language;
5	< 5% Reading, Language, Science Social Studies; 10% Math	➤ 50 % Reading; > 40% Math, Science, Social Studies; 35% Language
6	<5% Reading, Language, Social Studies, Science; <10%Math	➤ 50 Science; >45% Math: >Reading, Social Studies; >35% Language
7	<5% Reading, Language, Science; <10% Math, Social Studies	➤ 50% Language; >45% Math, Reading, Science; >40% Social Studies
8	<5% Language, Reading Social Studies; <10% Math, Science	➤ 50% Language, Reading; > 40 % Math, Science, Social Studies

ANTICIPATED AND OBTAINED SCORES

Anticipated and obtained scores are derived from the analysis of two types of standardized testing:

- **InView Ability testing.** The results of this testing indicate what students are capable of achieving, reported as anticipated scores.

- **TerraNova testing.** The results of this testing indicate what the students have actually accomplished, reported as achievement scores.

With the exception of seventh grade science and social studies, mean achievement scores exceeded anticipated scores at every grade and in every content area.

GROWTH BASED ON MEAN NORMAL CURVE EQUIVALENT

At every grade level and in every content area, there was at least a full year's growth. At one level, in mathematics, there was more than a year's growth.

Test Date: March 11, 2021

Grade	Reading Mean NCE	Language Mean NCE	Mathematics Mean NCE	Science Mean NCE	Social Studies Mean NCE
03	57.40	56.00	55.50	58.40	58.00
04	57.60	57.40	53.90	54.90	58.00
05	57.30	57.40	56.60	55.40	54.00
06	59.40	61.30	56.30	55.40	56.30
07	59.40	65.40	59.40	54.70	57.40

Test Date: March 4, 2022

Grade	Reading Mean NCE	Language Mean NCE	Mathematics Mean NCE	Science Mean NCE	Social Studies Mean NCE
03	57.4	55.4	55	58	58.1
04	57.5	58.1	55.8	54.9	59.6
05	56.2	57.8	56.8	54.4	56.3
06	57.2	60.1	54.1	53.9	55
07	60.3	60.3	65.8	55	57.7

* Grade 3 not compared as there is no testing in Grade 2

IMPACT OF DIFFERENTIATED INSTRUCTION ON ASSESSMENT RESULTS

Another key finding in the assessment data was that there was no falter in academic achievement as a result of the pandemic for students across the Archdiocese of Philadelphia. This was not only due to the Archdiocese being able to continue with in-person learning, but also because they used data from the DRC INSIGHT Interactive Reporting System to support student interventions and placement in programs.

"Having access to mastery levels in each of the content area subcategories provided teachers with opportunities to differentiate instruction and provide a more intense focus on areas of weakness. They were also able to develop school and class goals and personal goals for professional development."

-Sister Edward William Quinn

ABOUT TERRANOVA

The TerraNova assessment provides critical data to help teachers make informed decisions that drive student achievement and growth. The current edition, TerraNova 3, is a norm-referenced assessment that also provides comprehensive criterion- and performance-level (standards-based proficiency level) data. TerraNova 3 promotes student achievement and learning with a full range of research-based standardized achievement tests, reports, and services.

COMING SOON: TERRANOVA NEXT

The Archdiocese of Philadelphia Schools piloted the new TerraNova NEXT assessment in fall 2021 and late spring 2022, helping to establish OPI cutpoints for the new assessment. The transition to TerraNova NEXT will bring many benefits for educators and students. Learn more about TerraNova NEXT here.

TerraNova Program Overview

RESEARCH

DRC's test development and research professionals began the development of *TerraNova 3* by conducting an extensive analysis of national, state, and local standards and curricula. DRC staff worked with teachers, administrators, and curriculum specialists to ensure that *TerraNova 3* assessments present content that matches instruction and reflects the design of contemporary Catholic classroom materials. DRC's test development staff created detailed specifications and learning objectives, including rigorous standards for content, page design, and grade-level appropriateness. The *TerraNova 3* assessments continue to build on best practices and recommendations about how students should be assessed.

NORMING

TerraNova 3 features 2018 (pre-pandemic) norms. These norms describe individual student performance relative to the performance of a large, nationally representative group of students. This information includes National Percentiles, Normal Curve Equivalents, Stanines, and Grade Equivalents. *TerraNova 3* items were carefully selected to ensure that the assessment avoids bias for culturally diverse students and is reliable and valid so that student data are accurate and useful in order to make sound educational decisions. The developers of *TerraNova 3* gave careful attention to questions of ethnic, racial, gender, regional, and age bias.

SCALING

Final item parameters were obtained using data collected in a large standardization study with a nationally representative student sample. This allows scores obtained from *TerraNova 3* to be comparable to other editions of *TerraNova 3*. It also allows users to track student progress over time across different test forms and levels.

DIAGNOSTIC STUDENT DATA

TerraNova 3 also provides in-depth diagnostic student data as well as normative scores, objective mastery information by skill, and proficiency performance levels to target specific instruction to students at all levels. DRC uses sophisticated three-parameter logistical Item Response Theory (IRT) scoring methods to ensure the most reliable test information for individual students. DRC's IRT scaling procedures place selected-response and constructed-response items on a common score scale, providing for a rich description of student proficiency more closely related to instructional experience and ongoing classroom assessment. These procedures minimize interpretation errors that can result from combining scores from separate scales.

FOR ADDITIONAL INFORMATION ON TERRANOVA AND THE ARCHDIOCESE OF PHILADELPHIA SCHOOLS ASSESSMENT PROGRAM, PLEASE CONTACT:

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