

Pompton Lakes School District
A Curriculum Report to the Board of Education



Lakeside Middle School
Academic Program

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I. INTRODUCTION

The objective of the Lakeside School academic program is to help students bridge the gap between the self-contained structure of the elementary school and the departmental structure of the high school. To accomplish this goal, the teaching and administrative staff provides numerous supports for students to become increasingly self-directed. Lakeside's curriculum, which includes the core academic and related arts subjects, offers students a wide variety of learning experiences. The use of technology in daily activities is a critical component to the overall student learning experience. A summary of the academic program below highlights how the Lakeside experience shapes academic skills and develops the confidence needed for every child to progress to high school.

II. INSTRUCTIONAL PROGRAM

English/Language Arts

Student achievement in English/language arts at Lakeside School has consistently been a highlight for the school. For example, Lakeside's students outperformed their peers in the state on the 2015-2016 PARCC assessment by 14%-28% (grade 6: 14% above; grade 7: 18% above; and grade 8: 28% above). This level of success can be attributed, to an organized approach to the writing process and a focus on developing essential analytical reading skills. Furthermore, a commitment to embedded professional development and collaboration among the members of the department, ensure that every student leaves Lakeside with the requisite skills.

The department implements a feedback-driven blended literacy approach to writing with teachers focusing on literary analysis and the narrative. Teachers assign a mix of process piece essays to be workshopped in class in several stages with teacher guidance. The curriculum also requires independent essays to be completed at home, and during in-class timed writing tasks which are completed in a class period. Each essay is tied to at least one, and sometimes two, works of literature from reading class. The writing prompts used will always require students to analyze text, think critically about theme and characterization, and identify a number of other narrative techniques used by the author of the given text(s).

English/language arts teachers also utilize a close-reading approach. These "close-reads" are taken from novels or poems that are thematically linked. The process focuses on responding to higher-order thinking questions focused on author purpose, the development of theme, and defining vocabulary words through context. To maintain a vibrant and engaging selection of materials, the department regularly reviews its reading list and continuously recommends additions for approval. For example in the past year alone, the department added *The Nest*, *The Maze Runner*, and *Ungifted*.

For those individuals who are currently reading below grade level and/or who need further development with writing, Lakeside uses Achieve 3000, a web-based adaptive reading and writing

program. Achieve 3000 is used to assess a student's current reading level, identify areas of weakness and then create an individualized program to address those needs. The program draws from a wide range of high-interest reading material and creates questions to build essential comprehension and analytical reading skills.

Mathematics

The Lakeside mathematics department implements lessons that follow the NJ Student Learning Standards for Mathematics and the NJ Model Curriculum. Each member of the department attends multiple professional development training sessions during the year and applies the learned information to regular planning and teaching practice. Lakeside's math teachers work collaboratively, sharing lesson ideas and resources and offering constructive feedback to one another.

To help students develop a deep knowledge of mathematics, the Lakeside teachers focus on building a student's understanding of concepts rather than simply the memorization of rules. Teachers encourage students to "learn by doing" and initiate cooperative activities that build mathematical fluency and competency. During lessons, teachers act as facilitators in an environment of self-discovery. Teachers provide specific feedback while accommodating students' questions and needs.

In the 6th grade, students learn the mathematical concepts of multi-digit division, operations with decimals, division of fractions, statistics & probability and ratios & proportions. Seventh grade students learn to solve linear equations, complete multi-step ratio and percent problems and are introduced to the basic concepts of geometry. In addition, a group of students are selected for the 7th grade accelerated course. During the final quarter of the school year, these students are introduced to a range of essential concepts in preparation for taking Algebra during their 8th grade year. The 8th grade mathematics course focuses on irrational numbers, functions, expressions, algebraic concepts and the Pythagorean Theorem. Concepts presented in Algebra I are progressions of the concepts that were started in grades 6 and 7. The curriculum covers linear and exponential relationships, quadratic equations, rational exponents and statistics.

In an effort to further improve math instruction, the department has begun a pilot of a relatively new series, *Eureka Math*. Eureka is a standards-based program that follows a sequential progression aligned with the standards. Many of the *Eureka* activities focus on increasing math fluency through problem solving and peer discussion. Additionally, the program focuses on building a firm conceptual understanding of key mathematical tenets. For example, in a recent 6th grade math class, while working on a *Eureka* lesson, the students explored the relationship between addition and subtraction. In cooperative pairs, students used algebra tiles to build tape diagrams which allowed them to examine the effects of adding a number and immediately subtracting the same quantity. At the end of the lesson, students were able to establish mathematical identities that explain the results of their exploration.

During the 2015-2016 school year, the 7th and 8th grade math teachers began using *TenMarks*, a web-based instructional program that provides individualized assessment and data-rich reports for teachers. Currently, Lakeside math students who do not demonstrate mastery of a specific math

concept or skill (typically score below a 70 on a given assessment) are required to complete a mini lesson through *TenMarks* and then complete an “amplifier lesson”. *TenMarks* also provides teachers with detailed reports that help to identify individual areas for growth.

Social Studies

The social studies curriculum at Lakeside focuses on important concepts such as geography, history, culture, and citizenship. In the 6th grade, students learn about American history from the Age of Exploration through the end of the Reconstruction Era. In the 7th grade, students continue their study of American history from the Age of Progressivism up to present day America. The eighth grade course is the first half of World History, beginning with the earliest known civilizations through the European Renaissance. During all three years, students in social studies work on developing certain essential skills. The development of research skills, an ability to think, read and write critically are woven into each course. The staff has placed a heavy emphasis on incorporating reading and writing practices into daily instruction and works closely with the students to enhance their ability to write research simulation tasks. For example, students are taught to analyze three historical documents while using textual evidence to support an independent claim.

The professional development of the social studies staff has been an important component of the successful integration of these skills within the curriculum. All members of the department have been trained to provide detailed feedback to students during the writing process. The research simulation writing mode is an important piece of the PARCC assessment. Increased articulation between the social studies and English departments has resulted in student growth in both subject areas.

Science

Lakeside recognizes that scientific concepts permeate every aspect of modern life. Over the past year, the staff has worked to revise the curriculum to include real life, investigative-rich activities based on the Next Generation Science Standards. The course of study, which includes Life (grade 6), Earth (grade 7) and Physical Science (grade 8), allows students the opportunity to participate in hands on lab activities that require exploration, observation and deduction. Lab activities are based on engineering concepts and include aspects of STEM. At the conclusion of the lab process, students share their findings in group discussions and report their results back to the class. While conducting these lab activities, the science teachers use equipment from the CPO instructional lab which was made available through a DuPont grant.

Similar to the social studies department, science teachers now play a critical role in enhancing students’ reading and writing skills. Members of the department also receive professional development training to assist students in their preparation of the PARCC assessment. Throughout the year, teachers incorporate informational text articles into their daily instruction to further develop students’ comprehension and analytical reading skills. Teachers also assign a research simulation task and guide students through each phase of the writing process.

Related Arts

The Lakeside School related arts program includes a diverse collection of classes that promote student self-expression and the understanding of cultural ideas. The class rotation includes digital music, computer literacy, general music, art, technology, and Minds on Math. In digital music, students use the Mac computer lab and multiple software programs to compose original musical pieces. In the general music class, students learn to play the guitar and are exposed to note reading, chord recognition, and proper strumming techniques. In computer class, students utilize multiple Google applications to complete 21st century learning projects. The students recently designed a web page to express the core values of the United Nations. Students in the Minds on Math class participate in project-based activities that reinforce the content being learned in the core academic math classes. In art, the students are exposed to a number of hands-on activities that focus on concepts such as shape and color. Some examples of projects include the famous people portrait, the 2D and 3D character design and plaster trophy model.

Several new STEM activities have been implemented into the technology curriculum. This year, many of the students have had the opportunity to utilize a 3D printer obtained through a Pompton Lakes Educational Foundation grant. The students used Computer Aided Design (CAD) Software to design various customized objects such as a keychain, phone case, coffee mug, stamp, cookie cutter, and various other products. The product design process requires the use of mathematical concepts such as dimensioning, geometry and scale. Students also practice the design concepts of manufacturing, prototyping, and engineering tolerances. All students who participate in this activity will print and keep their keychains for personal use.

Additionally, 8th graders are exposed to Robotics. These students build and program new Lego EV3 robots. During this activity, teams build a custom robot within specific programming constraints. While completing the programming, each group learns specific design and programming elements. The culmination of this activity is the Sumop Bot Tournament. While participating in the tournament, teams compete in a double elimination competition focused on pushing over an opposing team's robot. The winner of the competition is given a custom 3D printed trophy. All practical arts projects including the 3D products and EV3 robots will be on display on March 15, 2017 during Lakeside's Practical Arts Night.

Technology's Role at Lakeside

During the 2015-2016 year, Lakeside School implemented a 1:1 computer initiative. Students in the 8th grade were issued a Chromebook laptop for both class and home use. The initiative provides students with web access, the ability to create and share documents utilizing Google Drive and Google Classroom. The program has also assisted teachers in implementing a number of 21st Century learning practices. In every 8th grade class this year, students are using technology as a tool to enhance their learning experiences.

In the 6th and 7th grade, students are also immersed in many forms of technology. Each grade level has a computer cart that is shared amongst the team. This enables teachers to incorporate computer based lessons into unit plans. Every student has a Google Drive account and uses the application to share documents with both students and teachers. Many of the 6th and 7th grade teachers utilize Google Classroom to post and collect assignments. Daily lesson activities incorporate the use of classroom smart boards, LCD projectors and document cameras. In the coming years, the goal is for Lakeside School to provide devices to all of its students in grades 6 through 8.

III. MEETING THE NEEDS OF EVERY STUDENT

To help students reach their full academic potential, multiple measures are in place to monitor student achievement rates. Each month, the school calendar includes a student improvement meeting and/or an Intervention and Referral Services (I&RS) meeting. Student improvement meetings are conducted with the individual grade level teams. Students who are experiencing difficulties with their academics are initially identified by the classroom teacher through observation and formative and summative assessments. Daily team time is used to identify strategies to help these learners who are facing academic difficulties.

Academic progress of every student is regularly reviewed. Those students who are determined to be at risk are provided with a program of intervention by the grade level team. Some of these interventions include parental contact, team meetings with the parent, assignment of a peer tutor, assignment to the after school homework or math tutoring center, basic skills remediation, a student meeting with the guidance counselor, extra help with individual teachers, use of the math lab, use of the writing lab, the modification of assignments and I &RS referral. The team takes responsibility to ensure that parents, teachers and students are aware of the plan. Teams are encouraged to review the plans weekly and make adjustments as appropriate.

While no system is without its challenges, Lakeside has historically had an extremely low rate of failure. Student's grades at the end of each marking period show less than a 5% rate of D's or F's. For example, the percentage of grades of D or F for the first marking period of 2016-2017 was 3.9%. The current system of intervention has a reliable identification process and is multi-layered to provide appropriate supports. The staff is committed to helping students who are facing difficulties and puts forth the extra time and effort to ensure that all students show growth in their studies.

Last year, Lakeside piloted a summer enrichment program with the goal of decreasing summer learning loss while supporting growth in math and language arts. The program provided students with individualized instruction on concepts that were difficult to grasp during the previous school year. Students were exposed to concepts that they will encounter in the upcoming school year. The summer enrichment calendar included 17 class sessions during the month of July.

IV. LOOKING AHEAD

The Lakeside staff completed a thorough needs assessment process during the 2014-2015 school year. The findings of the report have driven new initiatives and inspired positive change. For the remainder of this year, the Lakeside staff will continue to reflect on the current building schedule and explore possible variations that were recommended in the needs assessment report. A school scheduling committee will investigate the impact of the proposals and set a goal to present possible schedule adjustments for the 2018-2019 school year. Examples of recommendations include looking at ways to increase instructional time or extended blocks of instructional time while still offering a rich and diverse curriculum.

With regard to the Lakeside facility, the staff is proud of the improvements that have been made over the past few years. Sound baffles have been installed in the all-purpose room, new gymnasium wall pads have been mounted, student lockers have been painted red, new locks were installed on every classroom door, a new digital sign was installed, a grant was received from Lowe's to plant a garden near the Lakeside Avenue exit doors and numerous examples of student work have been displayed around the school. The Lakeside staff will continue to make improvements to the building in the upcoming years. The staff is investigating options to improve the appearance and insulation of the windows on the first and second floor and would like to redesign the physical layout of the media center.

V. CONCLUSION

The academic program at Lakeside school provides students with a wide variety of learning experiences and a well-rounded curriculum that prepares them for the next phase of their educational career. The foundation of success at Lakeside begins with the students. They work hard, respect each other, follow the school's rules and give 100% effort. Their success can be attributed to many factors. The teaching staff goes above and beyond to positively support their academic growth. As highlighted in this report, the implemented curriculum is comprehensive and student centered. On a daily basis, students participate in technology driven inquiry based lessons. This increases motivation and the desire to learn the content. The administration works side by side with the teaching staff with an intense focus on improving classroom instruction. This is done through ongoing collaboration, daily classroom walk-throughs and the study of assessment data. The Lakeside staff looks forward to making continued improvements to all programs while positively enhancing the student learning experience.