



MLCA NEWSLETTER

UPPER SCHOOL

Fall 2022



Upper School Overview

Throughout this trimester, our upperschoolers have been hard at work preparing for math competitions, reading French plays and novels in the original, reveling in Elizabethan tragedies, designing new projects for the Science Fair, making their first steps in spoken Latin, mastering the blank verse of John Milton and the prose of Charles Dickens, time-traveling through Ancient Rome, and so much more. Of course, none of these exciting adventures and experiences would be possible without plenty of behind-the-scenes academic labor: memorizing vocabulary lists, grammar charts, and historical facts; solving dozens and dozens of equations; honing the expository essay genre; and learning to make one's way through the splendid forest of Victorian prose. It is safe to say that our students are some of the hardest-working, deepest-thinking, most intellectually ambitious schoolchildren in the greater Philadelphia area and beyond!

Our upperschoolers are also mature, caring young adults with a penchant for helping and guiding their younger peers. Our oldest students devote their free time to reading to our kindergartners and to coaching our fourth and fifth graders in programming and robotics. The volunteer spirit really shone at our recent Math Festival, when MLCA upperschoolers dedicated their Sunday afternoon to helping younger children appreciate the depth and beauty of math and logic.

We're so proud of our students for an outstanding first trimester, which bodes incredibly well for the winter and spring trimesters to come!



Upperschoolers Tiago Ferreira, Caleb Sigelman, Julius Gormley, Malcolm Weinstein, and Benjamin Vuernick listen to a veteran explain instruments of the helmsman inside the bridge of the USS Intrepid on their NYC field trip.

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Eighth grade students Mara Ankenmann, Antonella Tarr, Lilly Sigelman, and Caleb Sigelman hard at work in history class

Seventh Grade

Subject: Algebra

Teacher: Dr. Fradkin

In seventh-grade math, the year began with a review of some topics from Pre-algebra: integers, fractions, the distributive property, exponents, and square roots. After reviewing how these concepts behave with just numbers, students moved on to tackling them with variables. They simplified and evaluated algebraic expressions and manipulated them back and forth between expanded and factored forms.

After becoming comfortable with single-variable expressions, students went on to explore single-variable linear equations. They solved many varieties of these problems, including ones with zero or infinite solutions. At the end of the unit, students used their linear equation knowledge to solve a number of tricky word problems.

Single-variable expressions and linear equations were followed by multivariable ones. While most of the strategies for dealing with multivariable expressions carried over from single-variable ones, solving linear equations in just two variables required some new concepts.

Students solved simultaneous equations using several different methods and explored which methods they liked best in different situations.

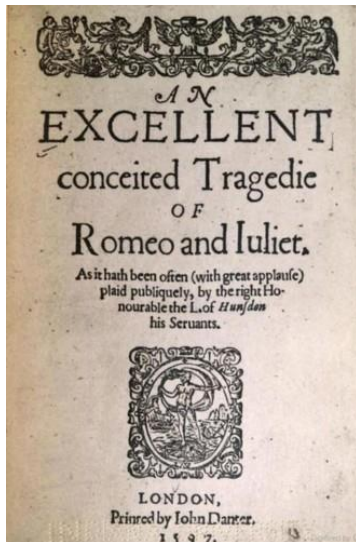
Subject: English Language and Literature

Teacher: Dr. Sigelman

This trimester in sixth and seventh-grade English, we focused on grammar, literature, and writing. Students have also received regular vocabulary-building and poetry memorization assignments.

For grammar, we have been working our way through a thorough review of parts of speech with special attention to the six English tenses and the progressive aspect. After reviewing the difference between a clause and a phrase, we studied prepositions and prepositional phrases.

The first literary text we read this fall was Shakespeare's *Romeo and Juliet*. Among other things, we focused on the organization of time within the play (did you know that time flows differently for different characters in Shakespeare's play?); on detecting and interpreting the multiple instances of wordplay (we observed that the protagonists engage in wordplay even in some of the most somber scenes); on



The cover page for the 1597 edition of Shakespeare's *Romeo and Juliet*.

characterization (what makes Juliet heroic? How is her character different from Romeo's?); and on the Renaissance concepts of honor and proper social etiquette for men and women. As a special Halloween-themed activity we also read Edgar Allan Poe's famous short story, "The Murders in the Rue Morgue" (known as the trailblazer of the mystery genre). At the beginning of November, we finished reading *Romeo and Juliet* and have begun our next work: Charles Dickens' *A Tale of Two Cities*.

Throughout, I have prioritized a deep, comprehensive reading of all the texts we encountered. I have therefore minimized reading in homework assignments; instead, we read almost the entirety of *Romeo and Juliet* and all of "The Murders in the Rue Morgue" in class together, alternating between students and teacher reading out loud and listening to Audible recordings of our texts. We listened together to the first three chapters of *A Tale of Two Cities*. Because the novel genre is inherently lengthier than the dramatic one, students will be expected to read chapters of Dickens' novel at home on their own, but we should still be able to continue to read extensive passages in class together.

Every week, students submit and receive feedback on a writing assignment. We began the year with informal assignments ("journal entries"). I then introduced more formal assignments (short, 190-word essays). Recently, we progressed to the formal 5-paragraph expository essay (250 words minimum). I have drawn essay topics from the literature we have been studying, e.g., discuss in what way time flows differently for Juliet's nurse as compared to the two young lovers; why do you think Shakespeare creates this contrast?; discuss what Eldorado symbolizes in Poe's poem; discuss the characters of Romeo's chief three friends and how they affect Romeo. Some of the skills we have been focusing on in writing are the articulation of a debatable claim; the use of topic sentences; proper selection and use of quotes; and development of supporting examples. I have also gradually been removing the "scaffolding" which I provided students at the beginning of the trimester. In the beginning, I would often dictate to the class the entire introductory paragraph; during the winter trimester, we will be progressing to students learning how to articulate their own debatable claims.

To work on vocabulary building, students are responsible for committing to memory a list of 15-20 Latin and Greek stems they can expect to see frequently in English (e.g., anthro; pseudo; demo; and so forth) every week.

Lastly, for poetic recitations, students memorized several passages from *Romeo and Juliet* as well as Edgar Allan Poe's poem "Eldorado." As we move away from Shakespeare's poetic text and into Dickens' prose during the winter trimester, I will be assigning more free-standing poems for students to memorize and recite.

Subject: History

Teacher: Mr. Gormley

We began this year's look into American history with some historical context supplied by the work of Paul Johnson. His sprawling work allowed us to quickly cover the age of exploration and the early stages of settlement in the New World. We read about the mysterious Roanoke colony as well as Jamestown. Soon we moved to Plymouth and what was then New Amsterdam (later New York). Johnson's work is also useful for a discussion of the causes of the war and some background on the character of some of the key figures of our history, especially Washington and Franklin. As we approached an account of the Boston Massacre and Tea Party, we switched to a well-written account of the war by James Stokesbury. From Stokesbury's work, we read the history of the entire war, from Lexington and Concord to the surrender of the British at Yorktown.

We'll be moving on to reenact the Constitutional Convention. Students will each play the part of one major and one minor figure, learning a bit about both delegates, but more importantly what the arguments were for the structure that became our written Constitution. We'll be reading directly from James Madison's notes before moving on to *The Federalist Papers* and *The Anti-Federalist Papers*.



Scene at the Signing of the Constitution of the United States by Howard Chandler Christy (1939)

Subject: French
Teacher: M. Portier

This trimester, the class worked on advancing their knowledge and acquisition of the language of Molière. They have assimilated to the complexity of relative pronouns while discovering more complex structures in writing. They also worked on object pronouns and matching past tenses. In reading the novel *Cyrano de Bergerac* together, I have learned that the students are quite moved by the amusing and tragic personality of the main character Cyrano. I was impressed to see their warmth and empathy for him, whose enthusiasm for moral sacrifices leads to an expected final catastrophe. The students demonstrated their ability to speak through two difficult subjects: the usefulness of an army for a nation and how laws are passed in France. I look forward to challenging them in developing their oratory skills next semester.

Subject: Biology
Teacher: Dr. Nagelberg

This trimester in seventh-grade biology we explored classification, stratigraphy, paleontology, microscopy, and cell biology with particular attention to the development of these fields in the seventeenth and eighteenth centuries. Through all this, we have focused on key questions: What is the range of living things that exist on earth? How can we classify them and distinguish between them? What do we know about the history of life on earth, and how do we know what we know? How have the scientists whose legacies we inherit asked and answered these questions?

As we have explored these questions we have sorted salamanders, built to-scale posters of geologic time, written essays on the evidence supporting an extraterrestrial cause of the K/T boundary found in rock formations throughout the world, observed plant cells as well as our own cheek cells under a microscope, and built our own models of cells by creating a three-dimensional model and then slicing it to create images similar to cross-sections of cells generated using a confocal microscope.

In the second trimester, we will advance in time as we further explore the development of cell biology, evolutionary biology, and genetics.



Seventh grader Helene Gormley poses while making a Gyo-taku fish print during a biology lesson on chordates.

Subject: Latin
Teacher: Mr. Cialini

If there were a theme for this trimester, it would have been the Latin pronoun. The demonstrative, personal, relative, and interrogative pronouns were covered at length, and the 7th grade memorized over one hundred pronoun forms.

Pronouns can be slightly more difficult to contend with than adjectives. For example, while the latter must agree with the noun it modifies in case, number, and gender, the former need only agree in gender and number; its case, however, is determined by how it is used in its own clause. Without this trifold agreement, finding a pronoun's antecedent demands that students not only know the forms of the pronouns but also that they become adept at recognizing the independent and subordinate clauses within a sentence—which is done less easily than in English.

With only three students in the class, each class period we push the tables together and sit as in a seminar to slowly work through the sentences. Grammar can be a bit dry, however. So, in the interest of engaging my students, our hour together has been divided into four parts: a 5-minute memory challenge, 25 minutes of grammar in the *Jenney's* textbook, 15 minutes of reading prose in *Lingua Latina*, and finally 15 minutes of listening to prose as I read from *The Cambridge Latin Course*. The hope is that by treating Latin as a language that was once very much alive, instead of a language that is now dead, we may give Latin the breathing room it needs for students to relate to it and to those who spoke it.

Eighth Grade

Subject: Geometry

Teacher: Mrs. Ter-Saakov

This fall, eighth-grade Advanced Track students started with the key topic of congruent triangles. Students explored the topic by building various triangles from cardboard angles and plastic sticks, then proceeded to formalize the rules.

The knowledge of parallel lines and congruent triangles was applied to study quadrilaterals and inequalities. Students are about to start the fundamental topic of similar polygons.

Geometry is traditionally used to introduce students to the axiomatic approach in mathematics. Keeping track of the logical structure of the proof continues to be one of the main skills we focus on. Students are getting better and will continue to improve over the second trimester.

Art of Problem Solving track students are finishing up the Introduction to Number Theory course, working on a variety of topics from modular arithmetic to RSA encryption.

Subject: Algebra II

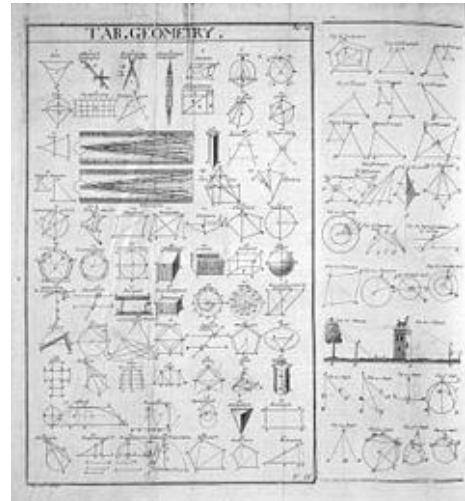
Teacher: Mrs. Ter-Saakov

In the Algebra II class, the year started with solving equations in one variable and then proceeding to inequalities. Absolute value was revisited, both in equations and inequalities. Graphing linear functions and solving systems of linear equations came next. We hope to get through operations with polynomials and simplifying rational expressions before the winter break.

Subject: English Language and Literature

Teacher: Dr. Sigelman

This trimester in eighth through tenth grade English, we focused on grammar, literature, and writing. Students have also received regular vocabulary-building and poetry memorization assignments.



Part of the "Tab Geometry." (Table of Geometry) from the 1728 *Cyclopaedia*

For grammar, we have been working our way through a thorough review of parts of speech with special attention to the six English tenses and the progressive aspect. After reviewing the difference between a clause and a phrase, we studied prepositions and prepositional phrases; coordinating conjunctions; subordinating conjunctions; and subordinate clauses. We have also been learning and practicing the proper punctuation that accompanies these types of clauses and phrases.

In our study of literature, my goal is to increase the amount of serious reading in which our students are immersed on an everyday basis. Additionally, I want to see students strengthen their reading skills on two levels. On the one hand, I want them to get comfortable reading extensive swaths of serious literary text. On the other, I want them to learn how to do a deep dive into the poetry, imagery, time organization, characterization, and themes of a literary text. With this in mind, we have been reading two works simultaneously in parallel. From the beginning of the year, students have been reading *The Pickwick Papers*—the funny, poignant, entertaining novel that brought Charles Dickens his worldwide fame (students have the option to sign up for the Art of Reading Club which meets twice a week with assistant teacher Maggie Morris and provides interested students with the opportunity to read *The Pickwick Papers* two hours/week in school together in a fun and relaxed atmosphere; students who did not enroll in the Art of Reading are reading *Pickwick Papers* on their own at home). At the same time, in class we have been conducting a slow, deep read of two Renaissance (Elizabethan) plays, both dealing with the existential questions of good, evil, and the use and abuse of power allotted to gifted mortals: Christopher Marlowe’s *Doctor Faustus* and Shakespeare’s *Richard III*.



Lilly Sigelman, Mara Ankenmann, Ari Shpilman, and Malcolm Weinstein act out a scene from *Richard III*. Malcolm plays the dead body of the king.

In addition to this, every week students submit and receive feedback on a writing assignment. We began the year with informal assignments (“journal entries”). I then introduced more formal assignments (short, 190-word essays). Recently, we progressed to the formal 5-paragraph expository essay (250 words minimum). I have drawn essay topics from the literature we have been studying, e.g., “Compare Faustus’ use of magic with our modern use of technology”; “Discuss how time is organized in Marlowe’s *Doctor Faustus* and how this organization of time correlates with the play’s themes”; “Discuss in what way Mr. Jingle is the archnemesis of Mr.

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Every week, students are also responsible for committing to memory a list of 15-20 Latin and Greek stems that they can expect to see frequently in English (e.g., anthro; pseudo; demo; and so forth).

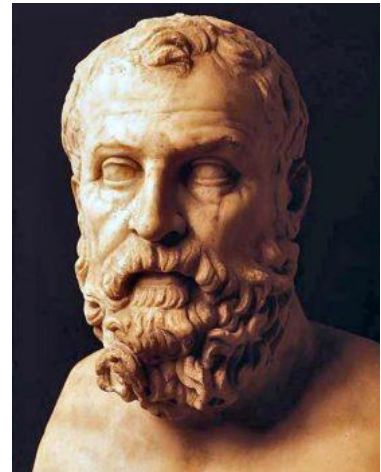
For poetry this trimester, students memorized two poetic passages from Marlowe: Faustus’ “Invocation of Helen” and Faustus’ monologue before death. I look forward to hearing them recite these, and more, at the upcoming Upper School Café Night!

Subject: History

Teacher: Mr. Gormley

This trimester we began reading *Herodotus’ Histories* in some depth. Although it is a history of the Greeks, he spends quite a bit of time on the Persians, or, as he calls them, “barbarians.” We learned of the origins of Croesus, whose conquest by Cyrus the Great is the basis for his entire work.

After creating the laws of Athens, Solon, the famous law-giver, traveled abroad for ten years and found himself in Lydia engaged in a discussion regarding what the most fortunate life is with Croesus, the Lydian King. Solon seemed to suggest that we must judge by the end in all matters. Fortunes rise and fortunes fall. There is no good way to tell which life is fortunate on balance until the end. Although this answer did not satisfy Croesus, he soon learned the hard way when he was conquered by Cyrus. Cyrus in turn, as well as nearly every other person who appears in the *Histories*, is held up to the reader as a candidate for the one who lived the most fortunate life.



Bust of Solon from the National Archaeological Museum of Naples

We also read of Xerxes, who launched the famous expedition into Greece during the Second Persian War. At the head of over a million soldiers (according to Herodotus), Xerxes found himself weeping over the brief and inconsequential nature of human affairs. He noted that not one of his many soldiers would be alive in 100

years. No matter the size of the expedition, it would all be gone. Was his life fortunate? Were theirs?

After defeating the Persians, the Greeks finally began fighting amongst themselves in what would later be called the Peloponnesian Wars. For that, we turned to the account of Thucydides. After beginning with his version of the causes of



Mr. Gormley instructs the eighth-grade class.

the war, we turned to his description of the Plague at Athens. From there, we've moved through a number of the major battles and we will finish with Xenophon's account of the resolution since Thucydides' chronicle ends before the war is complete. We will briefly cover Plutarch's Life of Alexander, before moving on to the Romans for the remainder of the year.

Subject: French

Teacher: M. Portier

The students did an exceptional job this trimester in reading the complete short comedy *Le Médecin Volant* by Molière. Not only were they able to quickly assimilate the unusual new vocabulary along with the grammatical structures, but they were also able to enjoy the play. The study of the play has also been an opportunity to explore the deep influence of seventeenth-century Italian theater on French theater at that time. The students genuinely enjoyed the corrosive humor of the commedia dell'arte and the space left for improvisation.

This trimester served as an opportunity to work on object and relative pronouns as well as the subjunctive present and past. The encounter of the subjunctive opens the gate to many questions about the utility of a mood that is not often used anymore in English. I hope that I was able to convince them about the great resources introduced by the subjunctive.

Next trimester, students will be working on a fictional diary of Maupassant, *Le Horla*. The students made considerable progress in improving their fluency in writing this semester.

Subject: Chemistry
Teacher: Dr. Nagelberg

This trimester in eighth-grade chemistry we explored gas laws, atomic structure, and the periodic table. We started our exploration of chemistry with gas laws for several reasons. First, experimental data underlying gas laws is highly accessible, allowing us to conduct our own experiments. This also allowed us to review experimental techniques, practice using mathematical models to describe quantitative relationships and make predictions, and to revisit concepts such as direct and inverse variation. Second, the key laws commonly studied date back to the seventeenth century, giving us a sense of historical grounding before engaging with more recently developed concepts. Third, gas laws are fun to manipulate, and we enjoyed manipulating marshmallows and balloons and creating virtual explosions.

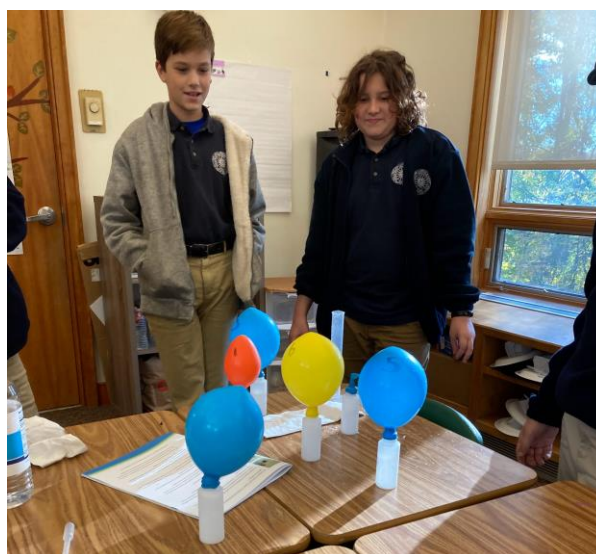
Our next topic was atomic structure. Here we focused on the history of the development of our understanding of protons, neutrons, and electrons, and what experimental data can tell us about their respective locations within the atom. From here we are expanding in multiple directions as we explore how subatomic particles help us understand radioactivity, energy, light, and the periodic table.

In the next trimester, we will continue to develop our understanding of the periodic table and its predictive power.

Subject: Latin
Teacher: Mr. Cialini

Picking up from where we left off last year, the eighth grade expanded their understanding of infinitives, which, though verbs, can also function as subject and object nouns. Infinitives are active or passive and they have three tenses: present, perfect, and future, each of which is built upon a different principal part of the verb.

This led us to indirect statements. In Latin, indirect statements have a main verb of saying, thinking, knowing, perceiving, or the like; their subject is in the accusative case, not the nominative, and the verb is in the infinitive. What's more, the time of the infinitive is relative to the time of the main verb. Hence, a present infinitive indicates an action that occurs at the same time as the main verb; a perfect infinitive indicates



Eighth graders Julius Gormley and Ari Shpilman keep an eye on their baking soda and vinegar reactions during a chemistry lesson on mole ratios.

an action that occurs before the time of the main verb, and a future infinitive indicates an action that occurs after the time of the main verb. This takes some getting used to as one must juggle the relationship between two tenses, but mastering this time relativity is necessary before encountering participles.

As verbal adjectives, participles are everywhere in Latin. They come in three forms: the present active, perfect passive, and future active. They are used principally in two ways: they can show the quality or attribute of a noun—acting as just an adjective, or they can show the circumstances under which the main verb occurs. The latter is an excellent example of the economy of Latin; i.e., Latin can say much with a few words. For instance, the three-word sentence, "*Equum inventum reduxit*" is ten words in English: "When he had found his horse, he led it back." Thus a participle and the noun it modifies—just two words—can be translated as a clause in Latin when the participle describes the circumstances of the main verb.

There was a mutual recognition among us in early November that, as important as participles are in Latin, grammar without its necessary companion "story" is like learning to cook without eating the delicious meal you've prepared. So, we began to read and listen to the language in small bits.

Ninth & Tenth Grade

Subject: Precalculus

Teacher: Mrs. Ter-Saakov

The year started with the review of transformations of graphs, mostly in application to graphs of trigonometric functions. Students then worked on proving and applying trigonometric identities. The Laws of Sine and Cosine were applied to more advanced problems in Geometry. Now students are working on parametrization and trigonometric coordinate systems.

Subject: English Language and Literature

Teacher: Dr. Sigelman

This trimester in eighth through tenth-grade English, we focused on grammar, literature, and writing. Students have also received regular vocabulary-building and poetry memorization assignments.

For grammar, we have been working our way through a thorough review of parts of speech with special attention to the six English tenses and the progressive aspect. After reviewing the difference between a clause and a phrase, we studied prepositions and prepositional phrases; coordinating conjunctions; subordinating conjunctions; and subordinate clauses. We have also been learning and practicing the proper punctuation that accompanies these types of clauses and phrases.



Eugene Delacroix's *Faust and Mephistopheles* (1827)

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Subject: History

Teacher: Mr. Gormley

This year we began with a review of the Wars of the Roses in order to have some background and context for the Tudor dynasty in England. We proceeded almost immediately to cover the reign of Henry VIII, his many wives, and the break with Roman Catholicism. Along the way, we also learned of Luther's break from the Church. Henry split from the church although he was not an enthusiast of Luther, despite the fact that it would have been politically convenient if he was. Using David Hume's *History of England*, we continued on through Edward VI's brief reign, Lady Jane Gray's disputed rule of nine days, and his sister Mary's effort to return the nation to Catholicism. Of course, along the way, we learned of various occurrences among the French and the Scots. We just completed the rule of Elizabeth, during which time so many major events occurred, including the fate of Mary Queen of Scots and Philip II's "Invincible Armada."

During our discussions of Elizabeth, a question emerged regarding what constitutes a good leader. Are there times when one must sacrifice the moral/ethical good for a chance at a political good if one must choose? Is choosing the political good over the

moral actually a loss, even if one “wins” politically? Are the moral and political goods necessarily opposed? Elizabeth certainly seemed to have been willing at times to sacrifice the moral good for a political win. Was her choice correct?

More recently, we read Friedrich Schiller’s account of the Thirty Years’ War. In particular, we focused on the Swedish invasion led by Gustavus Adolphus and his ultimate clash with the infamous Wallenstein who could be seen as a proto-Napoleon of the Holy Roman Empire, later Germany.

Subject: French
Teacher: M. Portier

This trimester, the ninth graders had occasion to read one of the most famous rewritings of the novel by Daniel Defoe that they studied last year in English, *Robinson Crusoe*. While studying the cultural differences that underlie both novels, the students have a way to deepen their understanding of French culture through the understanding of one of the fundamental myths of modernity. This class seems to have a special interest in the philosophical question of “the noble savage” and its influence on Western civilization. They had opportunities to learn about the writer, Michel Tournier, through audio or written documents. They also practiced their oral skills through various activities related to contemporary topics. In grammar, they worked on double object pronouns and other advanced grammar topics. This trimester has given us the opportunity to emphasize the importance of precise written translation in both languages. I look forward to challenging them in developing their written skills.

Subject: AP Biology
Teacher: Dr. Nagelberg

This trimester in AP biology we explored a wide range of topics, completing three out of the eight units that make up the course. The course is structured in such a way as to increase in scale over the course of the year, beginning with the atoms and molecules that make up



AP Biology students Ronan Myers, Raica Tarr, and Nicky Zafiriou check to make sure their gel electrophoresis samples are moving in the right direction during a lesson from the Genes in Space competition on techniques used in molecular biology.

living things and ending with interactions between communities of living things and their environments. This trimester we studied key molecules that make up living things, how those molecules interact to form functioning membrane-bound sacs of molecules called cells, and how those molecules transfer energy within cells. Along the way, we have explored transpiration in plants, used osmosis to shrink and expand a chicken egg, explored enzymes using toothpicks and potatoes, and hydrogen peroxide, dissected a sheep kidney, and performed gel electrophoresis.

At the end of this trimester, we began our study of cell communication, which we will follow in the next trimester with mitosis and meiosis, Mendelian Genetics, Modern Genetics, and Evolution by Natural Selection.



Dr. Nagelberg helps ninth grader Nicky Zafiriou out with a biology exercise.

Subject: Latin

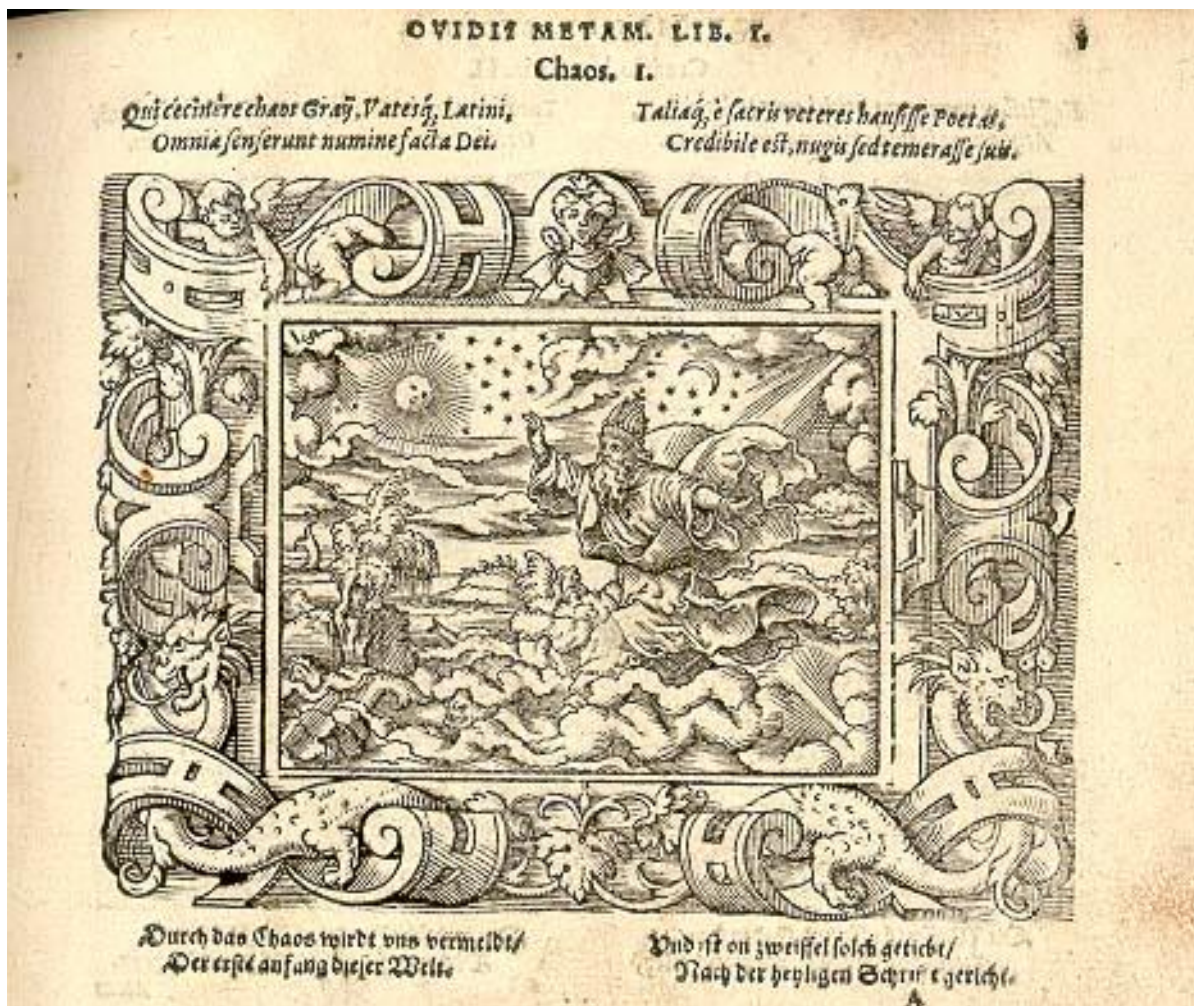
Teacher: Mr. Cialini

Si tū haec verba intellegere potes, Latinam Linguam legere potes. Our text this year, *Learn To Read Latin*, demands much from students. As a grammar and reader in one, it intentionally avoids the common problem among Latin curricula: requiring students to have a thorough working understanding of most aspects of grammar before reading the literature itself.

In LTRL students read short sentences by classical authors in Chapter Two. This brings the language to life immediately and it has given us tangible interactions with the thoughts of the ancients. Here's one from Seneca the Younger's *De Beneficiis*: "*Non dat deus beneficia.*" "The god doesn't grant favors." Another from Ovid's *Metamorphosis*: "*...rursus inire fretum, rursus dare vela iubemur.*" "Again we are

ordered to go into the sea, again we are ordered to set sail." Or the one from Plautus between drinking buddies which roused the most laughter: "*ego tū sum, tū es ego: unanīmi sumus.*" "I am you, you are I: we are of one mind."

Starting a new book has meant starting from the beginning of Latin; although the students have six or seven years of experience in the language, a new start has not proven to be without benefit. It was quite refreshing to begin anew. Each chapter of the LTRL is designed to be completed at a leisurely pace (three to four weeks), and the accompanying workbook offers twenty to thirty pages of drills and exercises per chapter with sentences that are interesting in their own right. With three intent students, we've had plenty of room to aim for depth over speed, our goal being not so much high volumes of content, but to translate and understand the classical authors themselves on their own terms—a goal which I'm proud to say the students have been achieving.



Page 1 of the 1569 German version of Ovid's *Metamorphosis*, illustrated by Virgil Solis

Electives

Subject: Debate

Teacher: Mr. Gormley

We've taken a different approach this year in debate class as opposed to last. Last year it became apparent that students were lacking some foundation on which to operate vis-a-vis their opinions. It's one thing to have an opinion, yet another to support it, and yet another to support it reasonably well.

In an effort to supply at least some of that deficiency, I've invited faculty to come by to discuss some question that interests them that they also find genuinely perplexing. Where there is confusion, there are generally at least two sides, the confusion resulting from not knowing which of the two options is better. After hearing the difficulty involved and in some cases the reasons why a particular guest chose this or that position, students chose some aspect of the topic about which to debate.

For example, Mr. Chilbert chose to discuss his view of the modern outlook of relativism. Mrs. Rice introduced a question regarding the extent of our obligation to our fellow human beings, and Ms. Woo outlined a couple of issues on ethics in medicine.

So far, the results are promising. Students seem to take the issues with earnestness. The debates have been better executed and supported (although we've had fewer of them). In short, the new approach seems to be an improvement.

Subject: Fitness

Teacher: Mr. Soto



Fitness students participate in a core strength exercise on the blacktop.

Track and Fitness Adventure meets on Wednesdays during the 2022-2023 school year. This fall, the class has been enjoying facing some personal fitness and balance challenges as well as playing games to benefit their cardiovascular endurance while having fun.

Throughout this trimester, the Track and Fitness Adventures weekly routine is to encourage each student to stay active while developing their fitness

levels. Each person is encouraged to perform the exercises, play in games, and actively participate to the best of their ability.

Several challenges and activities the group participated in focused on the specific skills of balance, core strength, teamwork, stamina, and endurance. These included challenges of balancing their weight on an exercise ball for as long as they can, partner rope pull while keeping their balance on an object, and many tag-style games such as executioner tag, capture the ball, capture the flag, and manhunt.

As the year progresses, more fitness tests, track events, games, and challenges will be introduced. The fitness challenges will be similar to the former Presidential Fitness Test and other national fitness tests in that all students can see their own personal progressions and how they compare to the national standards for their age.

Subject: Art of Reading Teacher: Ms. Morris

Art of Reading, an elective created by Dr. Sigelman, takes place every Monday and Friday afternoon in the Faculty Lounge. Our elective period is designed to act as an academic support: a space where students have structured time to make progress on their assigned reading of Charles Dickens' *The Pickwick Papers*. We started every class with snacks and a brief catch-



up to get us primed for our assigned segment of the novel. During our hour together we read aloud Round Robin style. This has allowed students to practice pronunciation as well as hone their skills of identifying differing dialogue, punctuation, and tone. Students are encouraged to stop the read-aloud at any point in order to ask questions or discuss what we are reading.

I truly love spending my Monday and Friday afternoons with your children. I can't wait to continue to explore the world of Dickens and beyond with them as we progress through the school year!

Subject: Poetry
Teacher: Mrs. Martindale

Students in the Upper School Poetry Elective have been working on a longer project inspired by the *Canterbury Tales*. They read excerpts from Chaucer's Prologue and then created their own narrative in which the characters tell stories to each other. The poems are written in couplets, so we have had fun using rhyming dictionaries and thinking about what makes an engaging rhyme. After completing the poems, the students critiqued each other's work, paying special attention to rhythm, diction, storyline, grammar, and rhyme.

Subject: Science Fair and Olympiad
Teacher: Dr. Nagelberg

This trimester, students have focused on choosing and developing science fair projects and on beginning their preparations for their chosen science olympiad topics. Science fair projects allow students to practice truly being scientists. In other science classes, I choose simple questions designed to help students practice specific skills, or to illustrate or explore a particular topic or idea. In the science elective, students choose their own directions. They encounter unique obstacles and make their own discoveries. The first obstacle for many students was the discovery that it is not easy to choose a research topic!

In recent weeks, as students have gained a sense of vision and direction, the science room has bustled with a sense of purpose and activity. Students have been busy sketching ideas, writing proposals, and sounding ideas off their peers. As we move into the second trimester, students will work to complete their research by the end of January, and then prepare to present their work at the Delaware County Science Fair in March.

While the science fair focuses on conducting and communicating scientific research, the science olympiad allows students to gain detailed knowledge or practical skills in a specific scientific discipline—for example, constructing and testing a wi-fi antenna, roller coaster, or trebuchet. My hope is that students participating in this portion of the elective will enjoy the opportunity to explore a particular topic in-depth, and to have expert-level knowledge of their chosen topic.

In addition to completing either a science fair project or science olympiad project, one student will also be focusing on entering a science art contest that will require using an in-depth understanding of a science research topic to inform a work of art.

Subject: DELF B1
Teacher: M. Portier

The students of the French DELF B1 Elective Class worked on different materials to improve their listening and speaking skills. The students have made great efforts on

all four parts of the DELF exam: listening, reading, writing, and speaking. They are becoming more comfortable with the vocabulary specific to conversation. I have no doubt that they will master these exercises in the near future. Even though the listening part of the exam remains the most challenging for the students, they have made significant progress and I am confident that more practice will help them develop the skills they need.

Subject: DELF B2
Teacher: M. Portier

The students are taking on a considerable challenge in preparing for the DELF B2 exam this year. The structure of the exam is similar to the B1, but the expectations are much greater, especially regarding speaking and writing. For their oral examination, the students are expected to prepare, in just 30 minutes, an 8-minute speech about a topical issue such as the ambivalence of the use of technology in our time. The writing is now expected to be more than 250 words in length and to follow a particular essay structure. I am proud to say that our students, despite a febrile start, are now ready to face these new challenges.

Subject: Hebrew
Teacher: Morah Dina

Sixth to eighth-grade students have been following an innovative curriculum originating in Israel: Bishvil Haivrit. We are currently in book #1, however, we are progressing rapidly. In class, students are reading texts which describe everyday life in Israel. They are engaged in conversations and listen to dialogues to test their comprehension level. Conversations and discussions in class are conducted mainly in Hebrew, while vocabulary skills are built and observed.

In preparation for our Winter Celebration, the students learned two poems written by a well-known Israeli poet: Rachel. The students read about the poet's life and wrote a short essay about her in Hebrew. They learned the key vocabulary in the poems and memorized them.



The Israeli poet Rachel

Subject: Judaic Studies
Teacher: Rabbi Sinensky

During the first part of the year, students have studied more than half of the Book of Exodus with an eye toward preparing for the National Bible Contest.

Each class comprises four key elements: textual study/progress; analysis of classical commentators; grammar; and a brief review of compelling stories from other sections

of the Bible to round out student knowledge. This four-pronged approach enables students to continue making significant progress in our key anchor text, while simultaneously developing skills and a broad knowledge base that are essential to progressing in their overall knowledge and skills as Bible students.

Despite the late hour when class meets, students are highly engaged and taking great strides in their studies.

Subject: Math Competition

Teachers: Dr. Fradkin and Mrs. Ter-Saakov

During the first trimester, the main focus of the Math Competition Prep elective has been on preparing for the American Mathematics Competition 10 (AMC 10) competition. This exam is taken all across the county by advanced math students in grades ten and below. It is the first step in a series of math competitions that ultimately lead to the International Math Olympiad. The competition itself took place in mid-November.

Class time was mainly devoted to working on problems by topics, the major ones being algebra, number theory, counting and probability, and geometry. For homework each week, the students had to complete an AMC 10 exam from a previous year. Because many of our students are in grades seven and eight, while the competition is aimed at advanced ninth and tenth graders, we did not expect the students to solve all of the problems. That being said, everyone was able to find some problems that they could tackle.

The next events on the horizon for the middle school students are the AMC 8 and MathCounts competitions, which will take place in January and February respectively. The next trimester for them will be devoted to preparing for these two major middle school competitions.

Our high school students will be preparing for the Lehigh University High School Math Contest. This contest can be a stepping stone to the national American Regions Mathematics League (ARML) competition. Lehigh's Professor Davis coaches one of the top (2nd and 3rd place nationally) teams in the country.

Subject: Christian Studies

Teacher: Ms. Erika Woo

This semester in Christian Studies class, we learned how to read Bible passages in context. Placing the Bible stories into the larger context of world history, we connected the dots in one big timeline. We also discussed how to read the Bible with the context of who wrote the book and what the society and culture were like when they were writing. We then read through many of Jesus' parables and used inductive Bible study methods to answer two key questions: What is the Kingdom of Heaven? and What does this parable tell us about who God is? Each parable showed us another glimpse

of both the Kingdom of Heaven and God's attributes. We ended the semester by rewriting a parable as it might look in a modern context; for example, what would the parable of the prodigal son look like if the family lived today? Each student took a creative approach to rewriting their chosen parable to demonstrate an understanding of how the small story points towards larger truths.

Subject: Studio Art
Teacher: Mr. Murdoch

The first semester of the year is designed to make important foundational skills and concepts of art clear in the pursuit of accurately drawing what one sees. It is also meant to lay the groundwork for more complicated skills and subjects we will be exploring in the remaining trimesters.

So far we have explored the art and practice of drawing. We have explored shape, proportion, underlying pattern, value, parts of shadow, silhouette, and positive and negative shapes. We have also been exploring how to work in layers and when to apply techniques in the picture-making process. Students have drawn a variety of subjects from photo references, class set-ups, or old master references including still-life drawings, animals, seashells, and landscapes.

Students have used multiple materials, including pencil, pen, and ink. In addition, I try to show relevant examples from old masterworks and my own professional work that follow in the Western European tradition of picture-making.

I am pleased to report that the concepts have become successfully ingrained in the class. The students have done some very developed drawings and displayed the ability to achieve further success as we continue in the remaining trimesters. The class as a whole can draw what they see successfully!



Raica Tarr, Pen and Ink Drawing on Paper of Lion copied from "Materials and Documents of Architecture"

A new exercise this year was a pen and ink exercise where students drew first in pencil. They then did an ink drawing over the pencil and erased any remaining pencil lines so it looks like a clean, professional ink drawing. Lastly, each month one student is designated a class helper and gets to pick one of the references that the class will draw in the coming lessons. This class has set the standard for what the upcoming classes will aspire to. They received projects that were progressively more difficult and did a wonderful job on them.

Subject: Lunch Seminar

Teacher: Mr. Cialini

Every Wednesday during lunch, Upper School students have the option of participating in a seminar with me. Although they have very limited time for themselves throughout the week, many regularly have joined our discussions. We began with what is arguably the central narrative of Western philosophy, Plato's "Allegory of the Cave" from Book VII of the Republic. In it Plato argues that we are born as prisoners of our own passions and ignorance, believing that the world we observe before us is the truest representation of reality, when in fact what we see are merely the shadows of what truly is. Our end, however, is the Good, and it is only by toil, pain, and something like divine providence that we are pulled out of the cave and led to the Good. Once we see it we are obliged to return to the cave to help reveal the Good to others. For Plato, this is the end of education: not to put sight into blind souls, but to turn ourselves and others toward the light of the Good, and to live a life always striving for the Good, lest we forget ourselves and again put on our old chains.

Our second text was a short essay from the late British philosopher Roger Scruton entitled "The Tyranny of Pop Music." For Scruton, the shallow repetitiveness of pop music is poisoning the souls, particularly of the young. Very much defending a Platonic position himself, he argues that the ubiquity of inferior art in public spaces corrupts the soul as cigarette smoke does the body—and yet the former is not illegal. Moreover, because of the advent of the iPod, the iPhone, and the like, our experience of music is now quite alienating. How many can we daily count walking about with white specks in their ears? The antidote, according to Scruton, is to give the young real interactions with beautiful music, first by teaching them how to listen and rightly discriminate between what is good or bad music; and second, by teaching them to play music themselves. The world of music is charged with beauty if only we have the ears and the patience to hear it.

Finally, we ended the trimester with sections from Aristotle's Nicomachean Ethics on friendship. Aristotle divides friendship into three kinds: ones of utility, ones of pleasure, and ones of the Good—the lattermost being the highest form of friendship. The first two can be understood as how we interact with friendly acquaintances, coworkers, classmates, or that person who is always fun to have around. But it is only when two people mutually recognize virtue in one another and are together oriented toward a transcendent third that true friendship arises. Aristotle suggests, then, that the

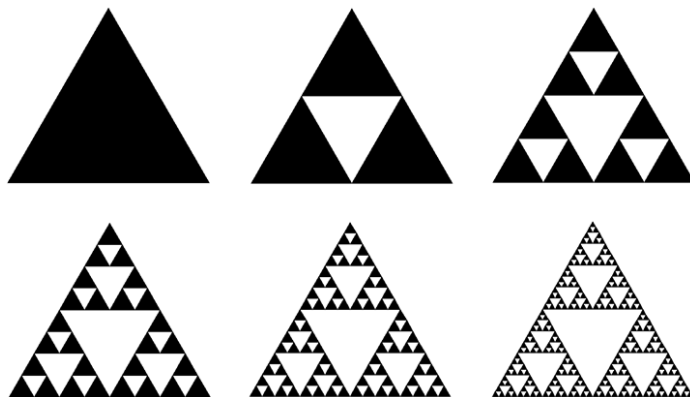
perennial human desire and need for friendship can be met in its most pleasurable form by first ascending to a life of virtue. All three of our readings posit that the Good, True, and Beautiful cannot be clearly perceived at first glance; we are at pains to see it. But once we humble ourselves to see it, we recognize that it is superior to what we saw before. This awakens us to the depth and mystery of the cosmos, and even our daily lives, which we could not previously see. And the question, from Plato to Scruton, is whether we are willing to live in accordance with the Good which sheds more and more light on that mystery.

Subject: Seventh Grade Programming
Teacher: Mrs. Fesenko

The main goal of this trimester was to study the basic algorithmic structures. We used various programming languages with multiple platforms to solve algorithmic problems. The central focus of the classes was to find the best way of solving the algorithmic problem and get into the programming mindset. We briefly touched on language syntax as well. For the majority of the trimester, we worked with the JavaScript language on the codehs.com platform, where we completed many tasks using functions to learn code reusing.

Subject: Eighth Grade Programming
Teacher: Mrs. Fesenko

In this trimester, we primarily worked with the Python programming language. We spent several lessons repeating the basics of Python. It was clear that the students already knew a lot, so we immediately started learning the recursion. We studied algorithms for constructing the Koch curve, the Koch snowflake, the Sierpinski triangle, and the Pythagorean tree. We tried to parse the work of recursion algorithms step-by-step on paper. We learned various fractal forms and tried to create our own.



The Sierpinski triangle evolution

After that, we switched to robot programming in the C-based programming language. We learned new variable types and algorithms and started writing code that takes real-world physics into account. In general, we solved many interesting and complex problems.

Closer to the end of the trimester, we returned to Python. We repeated the recursion and started learning the topic of sorting data

in arrays where we tried various sorting algorithms.

Faculty Spotlight

In addition to our amazing and accomplished students, we have remarkable staff leading the way in their respective fields. Please help MLCA congratulate these staff accomplishments!

Dina Eliezer (Hebrew): Morah Dina is peer-reviewed and published! She was recently notified that her article, "The Rabbinic Library of the Izmir: A New Encounter and Initial Attempt of Preservation" and it was accepted into the collective volume of *The Jewish Pearl of the Aegean: Izmir (Language, Literature, History, Art, and Culture)*. The book will be published in early 2023. Congratulations on this wonderful accomplishment, Morah Dina.



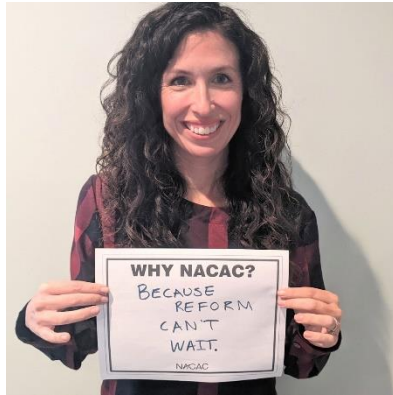
Morah Dina doing on site research!

Jessica Todd Harper (Art History): Mrs. Harper is a Smithsonian-featured photographer! This Fall has been a beautiful and busy time for our resident art history teacher, as her most recent book, *Here*, was published, and she has been featured in world-renowned galleries. Her images are currently on display at the

National Portrait Gallery of the Smithsonian, Rick Wester Fine Art, NYC, and The Centre Claude Cahun, France. Her compelling photos capture the beauty and art of family in the everyday. Congratulations on this monumental achievement.



Self Portrait with Catherine and Dolls, 2018



Ms. O pictured at NACAC

Marie Occhiogrosso (Admissions and College Counseling): One of 50 featured college counselors nationally! Each year, the National Association of College Admissions Counselors (NACAC) features 50 leaders in the field, drawing from high school counselors, community activists, and higher-ed admissions leaders. In November, Ms. Occhiogrosso was honored to be featured for her work with high schoolers navigating higher education and championing transparency in admissions practices. Additionally, she was selected for the spring Ethical Leadership in College Counseling cadre, where she will work with the state to advocate for students in our PA higher education system. Congratulations, Ms.

Occhiogrosso.

Tatiana Ter-Saakov (Math): Mrs. Ter-Saakov has been classified as a National Distinguished Math Teacher! This fall, MLCA was thrilled to learn that our own Mrs. Ter-Saakov had been nominated and named a winner of the Edyth May Sliffe Award for Distinguished Mathematics Teaching. This award is given annually to about 20 teachers nationwide for outstanding work in motivating students in mathematics and by participating in one or more of the American Mathematics Competitions (AMC) competitions.



Mrs. Ter-Saakov instructing fourth grade

Tatiana will receive a stipend as well as an all-expense paid trip to the MAA MathFest 2023, held in Tampa, FL in August, which is one of the largest national math / math education conferences in the US. Congratulations to an exemplary educator on being acknowledged for her contributions!

Rabbi Tzvi Sinensky (Director of Judaic Studies and Upper School Principal): Rabbi Sinensky had a busy trimester outside of MLCA. In addition to being published in *First Things*, *Tradition Magazine*, and *The Lehrhaus*, Rabbi Sinensky was named as a fellow in the Inaugural International Cohort of Sacks Scholars. The cohort is comprised of outstanding educators, academics, and

community leaders who were selected for their respective gifts in analysis. The cohort will study, discuss, and utilize the teachings of Rabbi Lord Jonathan Sacks, the former Chief Rabbi of Great Britain. The fellowship consists of an all-expenses-paid, four-day retreat in Jerusalem this summer, with subsequent sessions to further unpack and examine Rabbi Sacks' work and ultimately create a project that promotes Rabbi Sacks' legacy. Congratulations to Rabbi Sinensky on this prestigious appointment.



Rabbi Sinensky sits in discussion with Rabbi Lord Jonathan Sacks