

LAKEWOOD CATHOLIC ACADEMY

INTERNATIONAL BACCALAUREATE NEWSLETTER



As we bid farewell to the 2016-2017 school year, we celebrate our very first class of International Baccalaureate graduates. We are grateful to this group of open-minded students who walked and learned with us as we implemented this new framework. Even in their final days at LCA, our graduates were engaged in challenging, active, meaningful work. We are so proud of them and we look forward to watching today's Saints grow into tomorrow's global leaders.

Experiencing French Culture

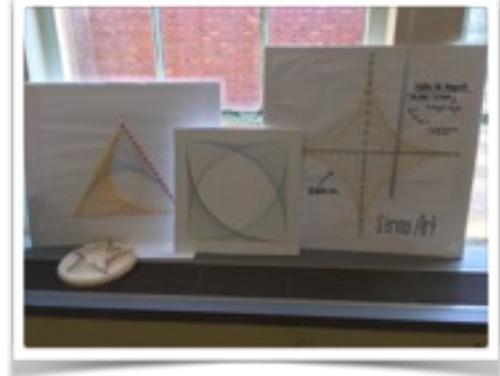
LCA's Language Acquisition students have learned that in addition to learning the language of another country, learning about their history and sampling their food are also important elements in understanding their culture. At the end of the school year, eighth grade French students traveled to Ohio City where they enjoyed a traditional French lunch at Le Petit Triangle and then walked to the Breen Center at Saint Ignatius High School to see *La Guerre des Boutons*, a film about the French Resistance Movement during World War II.



The Utility, Beauty, and Joy of Mathematics

Mastering new and abstract content in mathematics is often a struggle. Algebra students spent the year in what often felt like a “productive struggle” to learn and apply high-level mathematics. But math is also a useful and joyful way to communicate findings. The culminating algebra project allowed students to explore and share the beauty and importance of mathematics.

Several students chose to explore the integration of art, animation, music, and mathematics. After learning about how Pixar applies math to depict details such as grass and hair, some students created beautiful string art designs using the Midpoint Formula. Others used an online graphing system to design pictures or animated scenes. The intricate designs



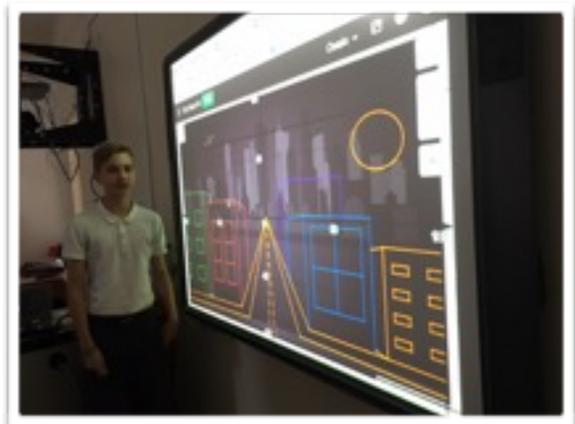
were the result of a long list of programmed algebraic equations. One student shared several examples of math’s contribution to the music we enjoy.

An alternative project called upon students to explore statistical relationships in our world. Students gathered bivariate data and graphed and analyzed relationships. Findings included the recommendation that Carlos Santana and Francisco Lindor remain adjacent in the Indians’ batting line up. Another student found a quadratic relationship between the age of a driver and driving fatalities. Yet

another provided evidence that wet road conditions significantly increase the time it takes to stop a vehicle.

A final group of students chose to grapple with the ultimate question: Is God a mathematician? They explored and debated whether mathematics is invented or discovered by humans. The lively and deep debate included references to patterns evident in nature, the relativity of time, and our tendency to seek structure.

One statement of inquiry guided our project: “There are many ways to personalize, represent, and communicate important discoveries and beliefs.” Our hope for our first class of IB graduates is that they find joy in exploring, discovering, and sharing mathematics in high school and beyond!



Math as Art

Eighth Grade Pre-Algebra students grew as IB students as they looked at patterns and saw the many ways that the world is interconnected. They identified quantitative relationships, such as ratios and similar figures, as ways to model these relationships. The students worked hard to apply their mathematical knowledge to an artistic representation of similar figures.



The Art of Persuasion

To conclude the 8th grade Animal Farm IB unit, students created a research-supported persuasive speech. They explored the question: Can you use propaganda techniques to persuade an audience for moral, ethical purposes? Students first chose a significant ethical/moral issue about which they were passionate; some students advocated for more access to cleaner water, to increase educational opportunities for women in third world countries, and to outlaw puppy mills. After choosing and researching the topic, students then used various forms of propaganda (bandwagon appeal, repetition, and fear) to further assist in persuading their audience. All speeches were presented and the peer audience had the opportunity to address questions/concerns/comments in an “open forum” setting. While the word ‘propaganda’ may have a negative connotation, students found that it can be used for positive purposes if used appropriately.

