



IB INTELLECT



IB SELF-STUDY PROGRESSES

John Adams High School is in the middle of a self-study of the IB Program. This past fall, all IB teachers worked together to produce several important parts of an extensive document that has to be submitted every five years to the International Baccalaureate Organization in Cardiff, Wales. The last self-study in 2011 resulted in several needed improvements to the program, including the development of a school wide IB Assessment Policy and IB Language Policy. These policies are available online for everyone to read on the IB website at <https://www.edline.net/pages/AdamsHS>

This mandated study is now entering the last phase, which involves the evaluation of curricula and stakeholder feedback. One of the most interesting aspects of the self-study is the feedback that is being gathered through a detailed survey developed by members of the IB Steering Committee and facilitated by Dr. Kelly Jordan at Holy Cross College. With his help, Dr. Jordan has enabled the questionnaire to be posted online by using SurveyMonkey that allows for customizable surveys and data analysis. We thank Dr. Jordan for his work and Holy Cross College for facilitating the survey for the benefit of Adams High School.



In the middle of December, a pilot survey was sent to parents and students of the 2012 IB graduating class. IB teachers were also asked to participate. Responses were received from a total of 22 people, which allowed the Committee to improve the survey, which in its final form will be sent separately to IB graduates, parents, as well as teachers. The final version of the survey will be sent to over 500 possible parents and students whose e-mail contact information is available from 2011 onward. Other venues will include social media contacts made through Facebook. Current seniors will complete the survey at the beginning of June, following the completion of the IB tests. Only then will we know how current students will evaluate their IB learning experience at Adams High School. We look forward to the results which will be analyzed later this spring. The deadline for submitting the self-study to the IBO is June 1, 2016.

SOPHOMORE MAGNET STUDENTS TO LEARN ABOUT IB OPTIONS

For the first time, all sophomore Magnet students and parents are invited to attend an important informational meeting on Thursday, February 18, starting at 6:00 pm in the Adams High School Auditorium. This meeting will help visitors learn what the IB Program is all about, and what the Magnet students can look forward to in their junior year. A total of 238 students have



diligently prepared themselves during these first two years of high school in order to fully enter the IB program.

The evening promises to be very beneficial to all. Dr. Mika will share information about the IB Diploma and IB Certificate options, along with important new course changes for next year. Several SL (Standard Level) courses in the sciences will be changed from a one-year course

to the internationally practiced two-year course. This will enable students and teachers to cover all the required course content in order to perform very well in the final exams that will take place at the end of the senior year. We will also be joined by school social worker Mr. Mark Geissler, who will talk about time management, how to manage student activities, and how to avoid the pit-falls that can happen in high school. Finally, Guidance Director Mrs. Tammy Berebitsky will be present to speak about the need for careful planning for the upcoming course selections that will take place in the school library February 22-26.



UPDATES ON HOOSIER IB SCHOOLS

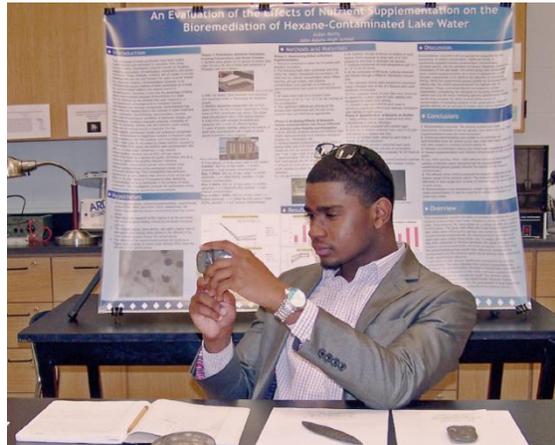
The newly elected executive board of the Hoosier Association of IB World Schools met on January 20 in Indianapolis to discuss plans for the future that will help all IB schools in the state.

The newly elected President Leslie Fatum (Kokomo HS) is joined by a group of willing volunteers that represent Diploma (DP) - Middle Years (MYP) – and Primary Years Program (PYP) schools in the state. Several new initiatives will be undertaken by the executive, including the development of a state-wide IB newsletter that will help build a stronger sense of community across the state. The HIBS website will be updated and developed further, and a directory of all IB teachers in the PYP, MYP, and DP tracks will be shared with schools so that colleagues across the state can communicate with each other as needs and questions arise in all programs.

As the new vice-president of HIBS, Dr. Mika looks forward to serving the needs of teachers and increasing state-wide interaction amongst IB teachers across the state as the association tries to get more schools and teachers involved in activities such as Teacher Round-Tables and student led IB Conferences. For now, Kokomo HS looks to be the site for a teacher conference in late spring 2016.

IB STUDENT INVESTIGATES NATIVE AMERICAN TECHNOLOGY

An interest in archeology took Grade 12 IB Certificate student Trevion McFarland outside the class and to the field in order to work on a major research project entitled “*Comparative Study of Native American Stone Artifact Evolution and Mineral Selection in North America from 10,000 B.C. to 1200 A.D.*”. This research was funded by the American Association for the Advancement of Science (AAAS). Trevion explains his work with the following abstract of the paper that he completed:



Trevion McFarland studies Native American technology

“Projectile points and stone artifacts have always been a main field of study in the anthropology/archeology of Native Americans. The lithic technologies left by Native American groups can hold an astounding amount of information on their lifestyles and cultures. Knowing the reasons why Native Americans chose certain stone materials for their implements give insight to their knowledge of geology and technology.”

Sheer strengths of various common materials in the Midwest were determined and compared with their hardness and scratch resistance values. Both tests were compared to determine which one was the major factor that contributed to the selection of minerals by Native Americans for the development of their stone tools. Also texture properties and locality were considered as to whether they were contributing factors to Midwest Native American mineral selection. Information was also researched as to whether the artifacts were more similar to each other in earlier times than in later eras.

The results of the investigation revealed rock strength to have some significance in the selection of minerals by Native Americans, however, rock hardness and scratch resistance proved to be a stronger factor. Other texture properties proved to be the strongest of the three factors. Stone artifacts in the Midwest also proved to be similar due to personal interactions and trade routes in past times. Some information revealed that projectile points from more recent times became more similar in properties as time progressed.”

NEW IB COURSES TO BE OFFERED NEXT FALL

Four new courses were approved by the SBCSC recently. Next year, rising magnet sophomore students will be able to enroll in **IB Sports, Exercise and Health Science SL**; **IB German Ab Initio SL**; **Biology SL**; and **Physics HL**.

Also, beginning in fall 2016 the following SL (Standard Level) courses will be taught over a two-year period rather than the one-year period which has been the practice to date. Teachers are excited about the opportunity to complete more science labs and course content throughout the course, which will help students earn better grades at the end of the senior year. The courses affected are **Environmental Systems & Societies SL**, **Physics SL**, **Biology SL**, and **Chemistry SL**.

IB VISUAL ARTS STEPS UP TO HELP OTHERS

Kudos to IB Visual Art teachers Judi Kubacki and Dawn Worsham, for stepping in and agreeing to help fellow teachers in need. Northridge High School has been impacted by a sudden emergency leave of their only IB trained art teacher. This led to a state-wide request by Tracy Wogoman (IB Coordinator at Northridge), to seek help from visual art teachers across the state in order to provide some assistance before someone could be trained by IB to teach the classes.

Without delay, Mrs. Kubacki and company came to the rescue and have agreed to provide a one-day basic training to an IB substitute teacher, along with assistance by phone as needed. This is a great example of collaboration and cooperation beyond our own school! Thank you for showing how to care for others, and as noted in Ms. Wogoman's response - "Thank you so very much for the kind offer!"

ENGLISH TEACHER VISITS SPAIN

The weekend of January 16-17 took Gr.9-10 English Magnet teacher Mrs. Elizabeth Drake on a quick visit to Europe. Here's her summary of her travel experience: "Last weekend I received training in preparation to lead a group of students to Costa Rica over spring



break. My whirlwind training trip to Madrid and Toledo, Spain was wonderfully instructive. Our tour guide is an archaeologist who has spent the last twenty years leading groups around Europe while also working on his Ph.D. He picked out some of the best stops in Madrid and Toledo where I was able to visit

the royal palace, the Prado and Reina Sofia museums, dine on traditional hams, cheeses, and paellas, observe traditional sword making, watch real flamenco dancers, and visit the Synagogue of Saint Mary the White, a synagogue that was constructed by Muslims for Jewish worship in 1180 C.E. and that was later converted to a Catholic church. Think of the history! It was a fabulous opportunity that has left me eager to lead trips of JAHS students."

UPCOMING EVENTS & DEADLINES

Feb.17	National Honor Society Induction – 5:30 pm in Auditorium
Feb.18	Magnet Sophomore Information Night – 6-7 pm in Auditorium
Feb.29	Math SL Internal Assessments DUE
Mar.14-18	Spanish SL & French SL Internal Assessments (oral interviews at IUSB during IUSB Spring Break)
Mar. 15	Deadline for Extended Essay/TOK/Language A & Language B and Ab Initio written assignment submissions
Mar.22-31	English Internal Assessments (oral interviews at IUSB)
April 1	Deadline for submitting Internal Assessments to teachers
April 4-8	Spring Break
April 10	Final deadline for Internal Assessments to be received by IBO
April 15	Deadline for IB Intellect articles for next issue
April 20	Internal Oral Assessment submissions due at IBO & IB Visual Arts Submission Deadline



Ashley Strzelecki (on right) with friend at the Democratic National Debate

LIFE AFTER ADAMS

The IB Intellect welcomes updates from our IB graduates. This month we share the success of Ashley Strzelecki (IB Diploma 2014).

I'm currently a sophomore at Drake University in Des Moines, Iowa. I'm studying psychology and neuroscience with the hopes of attending graduate school and becoming a clinical or counseling psychologist. At Drake, I'm involved in a social sorority, a neuroscience honor society; a psychology honors society, psychology research, Student Senate, and Welcome Weekend. I'm currently applying to study abroad in Florence and Rome, Italy in the fall of 2016 and I'm very excited for that entire experience. I've also been able to get involved in upcoming Iowa Caucuses and presidential election and I even had the opportunity to attend the Democratic National Debate in November, which was held on Drake's campus. The IB program at Adams definitely gave me an advantage at college. I came in with a year's worth of credit, allowing me to bypass many generic core classes and dive into what interests me more. I feel like it also allowed me to have a much easier transition into college.

(Source: Communication from Ashley Strzelecki to Dr. Mika, January 12, 2016).



FIVE IB STUDENTS RECEIVE MAJOR SCIENCE AWARD

Following a fifty-year pattern of success, five JAHS juniors recently learned that their research proposals had been fully funded by the American Association for the Advancement of Science. This national organization funds professional scientists' work and provides support for a limited number of high school investigations. Most of the students' investigations continue last year's progress in the Adams Science Research program. Students in photo below are discussed in order from left to right.

Robert Howard – *“Utilizing Ducted Turbines to Collect Greater Amounts of Energy from the Wind”* - Wind turbines are great as they are, but in terms of large-scale electricity generation, they're still a rather new technology and need much improvement. I am testing the effects of placing various ducts in front of a turbine, which should funnel the wind and increase its velocity, causing the blades to spin faster and the turbine to generate more power. My data showed this to be true, as long as the blades of the turbine weren't blocked by an insufficiently large hole in the duct for the wind to pass through.



Mark Anella – *“Retrofitting a Solar Cell to Increase its Conversion Efficiency”* - Solar Cells provide cheap, renewable, and safe energy. Currently, solar technology is not widely used because it demonstrates low efficiency. Most solar cells which are in use today are silicon-based cells; however, this study investigates the use of TiO₂ nanoparticles as the absorbing material in DSSCs in hopes to increase their efficiency.

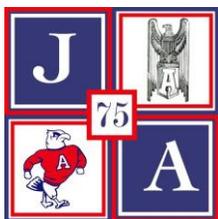
Alyssa Ignaco – *“Evaluating the Effects of Modifying Building Design and Arrangement on Pollutant Dispersion in Urban Areas”* - The design of high-rise buildings and their arrangement along the streets of urban areas are significant aspects to consider when studying pedestrian safety in regards to the wind environment and pollution distribution in a city. My data on the effects of building arrangement on wind flow showed that the combination of cylindrical buildings, a curvilinear street, and an alternating height pattern of buildings had a reduced velocity of wind in a street canyon when compared to other building arrangements tested.

Jack Lloyd – *“The Role of Chlorella Vulgaris in Removing Concentrations of Nitrogen and Phosphorus”* - Increasing quantities of nitrates and phosphates are proving detrimental to natural waters, causing eutrophication, the death of organisms in aquatic ecosystems, economic losses, and numerous health problems. I am researching the ability of the algae *Chlorella vulgaris* to remove elevated concentrations of nitrate and phosphate from lake water. My data indicate that *C. vulgaris* was able to significantly decrease the concentrations of the two pollutants.

Christopher Staszewski – *“Building a Computer Program to Predict Ash Fallout Distance from a Point Source Based on Environmental Factors”* - This research is important for future predictions and models for ash fallout because it can help lead to making a reliable and convenient program to predict how a potentially harmful substance will act. This is significant to me because it helps to blend computer programming and environmental science, and helps me to build my time management and problem solving skills as well.

STAY CONNECTED WITH THE IB INTELLECT

Stories from students and teachers are encouraged. Please submit materials to Dr. Mika. The deadline for the next issue will be Friday, April 15, 2016. If you would like to be added to the e-mail list for Adams IB Magnet families, please send your e-mail address to Dr. Mika at mroinila@sbcsc.k12.in.us.



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