

Newsletter IB/DP

VIII Prywatne Akademickie
Liceum Ogólnokształcące

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IB World School 006265, Krakow



Inside

IB DP Courses in a nutshell.

Biology
Polish Language
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Only sky is the limit.

The International Baccalaureate® (IB) aims to do more than other curricula by developing inquiring, knowledgeable and caring young people who are motivated to succeed.

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School year 2014/2015

"Education must concern itself more than ever with the development of skills to interrogate knowledge, to find it for oneself, and to respond to rapidly changing situations."

The Economist Intelligence Unit, 2015

All around the world, the bar for education has been both moved and raised. Consider all that our students will be challenged to do. In competition against citizens at home, overseas, and against increasingly smart computers, our students will compete for jobs. They will decide matters of peace, war, and social justice; they will become the stewards of the earth. How important is it that we find the best ways to prepare them?





*IB DP Year1, Year2 students,
photo by Karolina Klosowska*

Biology

DP Year 1

by Agata Miska-Schramm

Biology is the study of life, making it both a source of endless fascination and challenge.

Biology is the study of life. There are 8.7 million discovered species living on Earth today. That makes biology both an endless source of fascination as well as a considerable challenge. Students in the Biology course of the Diploma Programme are challenged to study cell biology, molecular biology, genetics, evolution, plant and human physiology. Additionally they are asked to choose an optional topic to deepen their knowledge of neurobiology and behavior, biotechnology and bioinformatics, ecology and conservation or human physiology. Besides theory, students are strongly encouraged to use scientific methods in a laboratory setting and field investigations. They are taught how to design and conduct experiments and the ability to present reports of their own results. These foundations aim to prepare students for their individual investigations, the Internal Assessment. Moreover they are obliged to collaborate with students from Group 4 (Biology, Chemistry and Physics) and together prepare a "Group 4 Project" of which the results are publicly presented.

In the year 2014/2015, DP Year 1 students in the IB DP Biology Course had a chance to:

- Get to know how to use laboratory equipment useful in biological research (for example: microscope, spectrophotometer, Ph-meter, protometer)
- Conduct and report a series of experiments (for example: "Breaking down starch using salivary amylase", "Detection of enzymatic activity of yeast invertase", "Influence of light intensity on transpiration rate", "Measurement of pigments in different plants")
- Apply the knowledge from different branches of biology
- Participate in "Group 4 project" entitled "Low temperatures"
- Individually design, conduct and prepare a manuscript for the Internal Assessment



The Scholarship from
the Lions Club for
Anna Kłeczek: A Camp
in Tipton, Iowa, USA.

A road to Iowa . . .

The scholarship camp is organized by the Lions Club International organization, which supports many sites across globe with humanitarian aid on a daily basis. They also organize international exchanges including participants from over 200 countries. Anna Kłeczek, pre-DP student was invited to take part in one of camps in Tipton. The trip to Iowa includes staying with a host family and taking part in the international camp. What is very special about this project is that people of similar age from many different countries, even different continents will get to know each other and explore not only the culture of the United States, but also of their new companions.

Congratulations!

The Polish Language IB DP Course

Kurs: Język polski A1 LITERATURA

Wybór programu IB Diploma nie wyklucza nauki języka polskiego. Kurs literatury, nauczany – jako jedyny – w języku polskim zakłada, że chętnie czytasz książki (w tym: lektury szkolne) i że potrafisz je interpretować. Zestaw lektur, na którym opiera się kurs, jest autorskim wyborem nauczyciela. W praktyce oznacza to, że w każdej szkole w programie IB omawia się na lekcjach inne teksty.

CELE KURSU (standard level):

1. Rozwinięcie umiejętności samodzielnej, drobiazgowej analizy i interpretacji tekstów literackich reprezentujących różne epoki, style i gatunki.
2. Prezentacja różnych perspektyw kulturowych dostrzegalnych w narracjach i fabułach w omawianych tekstach literackich.
3. Wypracowanie dobrego rozumienia i rozpoznawania różnorodnych konwencji gatunkowych, stylistycznych i estetycznych w różnych tekstach kultury, ze szczególnym uwzględnieniem tekstów literackich.
4. Opanowanie przez uczniów umiejętności wyrażania samodzielnych sądów krytycznych o literaturze.
5. Znajomość kontekstów historycznoliterackich i teoretycznych potrzebnych do interpretacji omawianych tekstów i umiejętność samodzielnego poszukiwania ww. kontekstów.
6. Wypracowanie umiejętności analizy stylu i kompozycji nieznanego wcześniej tekstu literackiego.
7. Umiejętność tworzenia spójnej, logicznej, rozbudowanej i zawierającej sądy krytyczne wypowiedzi na temat jednego lub kilku tekstów literackich – zarówno pisemnej, jak i ustnej.

Na poziomie standardowym w dwuletnim cyklu omawiamy drobiazgowo 11 lektur, a na poziomie rozszerzonym – 13. Ponadto kurs „higher level” jest swego rodzaju rozwinięciem treści omawianych na „standard level” – wymaga on lekkiego pióra, kojarzenia informacji z różnych dziedzin humanistyki oraz samodzielności w poszukiwaniu kontekstów interpretacyjnych.

by Bartek Adler, IB Polish Literature and Language teacher



Students' Reflections on the Food and Literature Project with Norway

Through this project I had an opportunity to spend the whole week with intelligent, well-educated and sociable people. It was also a great chance to improve our language skills and knowledge about each other's cultures.

Furthermore, it was a great chance to learn something more about the country we live in. During the exchange teachers from our schools conducted very interesting and instructive workshops about food literature (cook books) and film. I hope that guests from Norway found it as important as I did. In my opinion, it was an excellent experience.

by Julia Jarzyna, pre-DP student

* * *

The exchange with the Norwegian school was not only taking a break from our daily life but also a great adventure and a possibility to get to know Scandinavian culture. We met 25 exceptional IB students from Gjøvik. The five days were not enough time to learn everything about our new friends, but we didn't waste time and we asked each other about differences between Poland and Norway. We integrated at every possible moment and in every way. We talked about every possible topic. Starting with the price of food, ending on politics and the economic situation in Europe. After being divided into groups we even cooked together! Polish pre-DP student had also a possibility to ask the IB 1 students from Norway about the IB Diploma Program and get to know the realities of the

Norwegian education system.

To sum up, the idea of this kind of exchange in this format and organization gave us a chance to discover the world without travelling to another country. But this

knowledge isn't theoretical, it's not something you can read in books. Thanks to all the 25 people that came to us for one week, lived in our homes, and gave us the real feeling of Norway.

by Dante Cinque, pre-DP student



Global Education

How do we challenge our students to be global citizens?

Sharing Polish culture and traditions while hosting representatives from other countries pushes our students to the roles of ambassadors of their country; as our students travel to foreign lands the represented Poland with an open spirit and honor, developing their foreign language skills, leadership and team-work.

1 IB DP Polish-Norway Student Exchange.

Food in Literature and Culture Project with Gjøvik videregående, Norway.

2 International Summit at Pompano Beach High School, FL, USA.

The study visit at this magnet school confirmed the relevance and importance of traditional and emerging skills.

<http://krakowtopompanobeach.blogspot.com/>

3 Polish-Indo Student Exchange.

Education must concern itself more than ever with the development skills to respond to rapidly changing situations (the 2015 Economist).

<http://www.krakowtonewdelhi.blogspot.in/>

Course objectives: The aim of the course is to give students the possibility of reaching a high degree of language competence while exploring the cultures where the language is spoken. The course consists of the core, which is a required area of study, and five options, out of which the teacher chooses two. The core topics include: Communication and media, Global issues and Social relationships. Students who currently attend DP1 class are to cover the following aspects of these topics: Communication and media (Global communication, Advertising); Global issues (Environmental issues; Racism, discrimination and prejudice); Social relationships (Linguistic dominance, Education). Out of the five options suggested by the Syllabus: Cultural diversity, Customs and traditions, Health, Leisure and Science and technology, I have chosen Cultural diversity (the chosen aspects here are Subcultures and Cultural identity) and Customs and traditions (the chosen aspects here are Fashion, and Social and religious events). Both aspects of the Core topics and the Options are discussed in depth with the use of various authentic materials: press articles from Anglophone countries, TV and radio broadcasts, films, etc. Students also read two works of literature, chosen by the teacher, one in the first year of the course, the other in the second year. I have chosen for my students Aldous Huxley's *Brave New World* and Muriel Spark's *The Prime of Miss Jean Brodie*.

Activity in the school year 2014/2015:

So far we have covered the following aspects out of those mentioned above: Linguistic dominance, Education, Advertising, Global communication, Racism, discrimination and prejudice.

We have also read and discussed Huxley's *Brave New World*.

The English B HL Course Sample Work

One of the topics we dealt with in detail while discussing global communication was violence in media and how it affects the personality of adults and mental development of children. My students were asked to write a complaint letter to the manager of a TV station which broadcasts violent cartoons. Below you can see one of the letters that my students wrote:

by Magdalena Marmuszevska-Bernasik, IB DP English Teacher

18th April 2015

Mr. Kevin Brown
Chief Executive Officer
LTVS, Local TV Station

Dear Mr Brown,

I am writing this letter to you in order to share with you my concern about the level of violence you are allowing on your television station by broadcasting programs with high rates of aggression during daytime, giving the children watching LTVS an easy access to them.

I have recently noticed that my younger brother's behavior has changed. Since he has started watching some of the shows on LTVS, he has become more aggressive towards his peers, as well as towards our mother, and even myself. I am worried that it may be caused by all the violence he is watching.

There have been psychological studies concerning that matter, and although the results were inconclusive there is, without a doubt, a correlation between these two aspects. Responsible for that are neurotransmitters known as mirror neurons. Their way of working is simple and functions as explained: An observer sees certain action, and if not given appropriate interpretation, they simply copy it. I will allow myself to suggest a solution to this problem, which I hope will satisfy both of us. My idea is to move the transmission of the most violent programs for later hours such as 9 p.m. or later. That way the minors with concerned parents will not have such easy access to the programs. This slight change should not affect the ratings, and you will not have to worry about causing unconscious harm to the younger viewers of your TV station, as I am convinced that their health is the most important concern to you.

Hence, thanks to this minor modification, I believe that the problem might be solved for good, thus we will all benefit from it.

I am looking forward to hearing from you.

Kind regards,
Angelina Dzido

Course objectives: Geography uses its position to examine relevant concepts and ideas from a wide variety of disciplines. The objectives of the geography syllabus at SL and HL levels are to enable students to: develop an understanding of the interrelationships between people, places and the environment, develop a concern for human welfare and the quality of landscapes, the need for planning and sustainable management to appreciate the relevance of geography in analysing contemporary issues and challenges, and develop a global perspective of diversity and change. *IB Geography Syllabus, First Examination 2011.*

IB DP Geography Course



IB DP Year 1 Geography students

To show students of the IB DP Geography Course alternative approaches and ideas to memorize school materials easier, I used a game-based activity created by Rachel Atkins and Andrew Dimberline to help this year's IB DP students Justyna Kacińska (SL), Marta Topór (SL) and Alexander Pikulski (HL) to learn about population change. The international students from the Jagiellonian University who visited our classes weekly were also involved in the class game implementation process. The game is best played after a basic introduction to migration, within the unit on population studies from the Core Topic: *Population in Transition*. It enables students to not only look at population totals but also at population changes, such as ethnic diversity and dependency ratios, which may occur within a population. The basic formula for the activity is:

Population change = Birth rate - Death rate +/- Change in migration.

Resources: Students need to be arranged in groups of five or six; A packet of jelly babies, or two tubes of chocolate beans (e.g. Smarties), or a similar amount of other coloured sweets per group, and a selection of 'population chance cards'. **Setting up the game:** each group is given their packet(s) of sweets and was instructed that each student within the group represents one country (they can be numbered 1-6, but it works best if they have named countries). Their sweets represent the people within that country, and the colours of the sweets represent different groups of people within the country e.g. ethnic minorities, people aged over 65. Students were encouraged to devise other scenarios (these can be linked to real case studies from preceding lessons on Core, topics: *Population in transition*). They wrote their scenarios on the blank population chance cards and added them to their group's pile.

Post-game discussion and follow-up: This game provides an excellent framework on which to base a discussion on population change. Students began by asking: • What happened to your population structure? • Which scenarios changed the birth rate? • Which scenarios changed the death rate? • Which scenarios changed the migration rate? • Which were the push factors of migration? • Which were the pull factors?

Conclusion The 'population jelly babies' game presented a good introduction to population change. Whatever their ability, students were able to grasp the significance of different scenarios and the impact that those scenarios have had on the population structure of both their own country and other countries represented in their group. We frequently reflected on what was learned during the game in later case studies in order to reinforce the links between events within a country and the effect on its population. In many cases, as a result of the game, lower achievers demonstrated a firmer understanding of concepts such as dependency ratios and types of migration.

by Anna Krzemińska-Kaczyńska, IB DP Geography teacher

IB DP Course: Physics SL

Course Objectives

In physics, students conduct laboratory and field investigations using the scientific method, and make informed decisions using critical thinking and scientific problem solving. IB Physics topics include physics and physical measurements and uncertainties; mechanics (motion and force); thermal physics; simple harmonic motion; waves, electricity and magnetism; circular motion and gravitation; atomic, nuclear and particle physics; and energy production. Students may consider two option topics: imaging and astrophysics. An integral part of the IB Physics curriculum are practical investigations, where each student will design, execute, evaluate and write up experimental measurement labs over the course of the year. The purpose of labs is to prepare students for the internal assessment which enables students to demonstrate the application of their skills and knowledge, and to pursue their personal interests, without the time limitations. An inherent part of course is also the Group 4 project, which is a collaborative activity where students from different group 4 subjects work together on a scientific or technological topic.

Activity/Subject Fieldwork Report (school year 2014/2015)

- **Infrared digital thermography.**

Infrared thermography is a method, which detects infrared energy emitted by objects with a temperature above absolute zero, converts it to temperature, and displays an image of temperature distribution. With the use of professional thermo-camera, students investigated the temperature distribution for the objects invisible to the naked eye. They also acquired thermograms of the human body and analyzed them. A sample of an infrared image is shown in Fig.1.

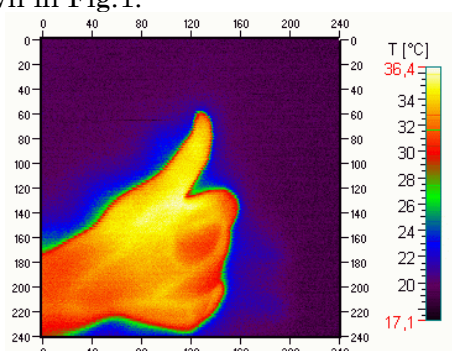


Fig.1 Infrared image of a human hand.

The aim of these studies was to understand the nature of electromagnetic spectrum, study the Stefan-Boltzmann radiation law, study the temperature measurement and the idea of signal conversion.

- **The speed of sound in air.**

In this lab the theory of standing waves was examined. Using a recorder, which is essentially an open pipe, the standing waves were created. The sound produced by the flute was recorded and analyzed by a spectrum analyzer and frequencies of played notes were identified. For example, the spectrum of c note is shown in Fig.2. Based on simple measurements and applying the wave equation the speed of sound in air was calculated.

(Continued on next page)

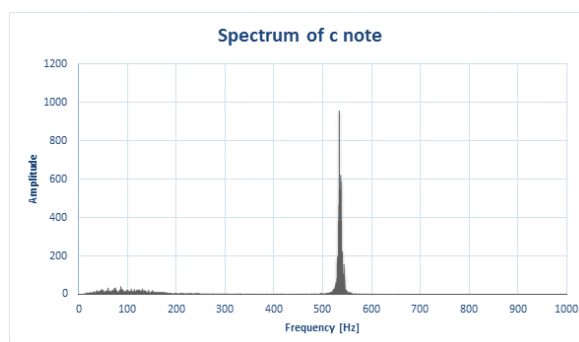


Fig. 2 Spectrum of C notes.

This experiment allowed asked students to demonstrate their understanding of the properties and nature of standing waves, understand the idea of fundamental frequency and spectrum Fourier analysis, as well as link the music with experimental physics.

- **Group 4 project.**

Common topic: Low temperature

Research question: How will the properties of winter and summer tires change in low temperature?

Method: A relevant usage of car tires plays an important role in driving safety. The temperature significantly affects the parameters of rubber. According to our plan, students are going to test summer and winter car tires and explore their mechanical properties under different temperatures, especially in the low range. The purpose of such an experiment would be to check if drivers can really feel safe with their tires on the road and what should be a proper temperature for the use of winter or summer tires. With the use of some simple physical methods, they are going to measure the elasticity of the rubber as a function of temperature.

by Tomasz Rok, IB DP Physics Teacher

IB DP Course: Mathematics SL, Mathematics HL

Course Objectives:

Objectives include an introduction to basic concepts of modern mathematics, common applications of mathematics in science and everyday life, historical and global perspectives of key problems, use of graphic display calculators as the alternative to algebraic solutions, leading students through their first exploration resulting in a paper of academic quality.

Activity:

DP Year 1 SL: Sequences and series. Binomial expansion. Functions: linear, quadratic, exponential, logarithmic, rational. Trigonometry and circular functions. Probability basics. Descriptive statistics. Choice of topics for IA exploration paper, completing its first draft.

DP Year 1 HL: Further analysis of each SL topic. Various proofs, mathematical induction. Complex numbers. Polynomial functions and their zeros. Options topic number 10: number theory and graph theory.

DP Year 2 SL: Vectors. Limits, derivatives, integrals. Probability basics. Probability distribution. Choice of topics for IA exploration paper, completing its first and then final version. Exam revision and preparation.

DP Year 2 HL: Further analysis of each SL topic. Options topic number 8: sets, relations and groups. Exam revision and preparation.

by Alicja Rozpędzka, IB DP Maths Teacher



Indo-Polish Student Exchange.

The Indo Polish Exchange 2015-16 between Delhi Public School, Sector 45, Gurgaon, and VIII Prywatne Akademickie Liceum Ogólnokształcące, IB World School 006265 (VIIPALO), in Kraków, Poland spearheaded by visionary Principals Ms. Aditi Misra and Professor Jerzy Waligóra provided an opportunity for their students to bridge the gap between geographical regions and break cultural barriers. Ms Aditi Misra has rightly said, "As the world is getting smaller, it is necessary to reach out to others across boundaries and celebrate differences which serve to bring people closer". The first step of the Exchange was a visit to India in March, 2015 by Ms. Anna Krzemińska-Kaczyńska and her team from the Polish partner school. During the second leg from 22nd May 2015 to 5th June 2015, seven Indian students of class XI with Ms. Mamta Kanti Kumar visited Krakow, Poland. The visit was a fruitful mix of learning, an insight of the history and culture of Poland, and lots of fun. The host school arranged visits to: Kazimierz Jewish District; Wavel Castle; Wieliczka salt mines-a UNSECO heritage site; Dragons Parade by the Vistula river; visit to Nowa Huta town where numerous questions on the rise and fall of communism were answered by the guides and a tour of the Auschwitz Birkenau museum where the students could observe and visualize the horrific details of the life of the prisoners in the concentration camps created by the Nazi, during World War II. 'The Enterprising Minds Workshop' gave the students a peek into the prerequisite of business development in an international arena. The lessons on Philosophy and meeting international students was an unforgettable learning experience. The "International Day", a stage show for the international groups from the Netherlands, India and Germany, who were being hosted by VIII PALO at the same time, showcased a cultural performance of these groups. Medley of folk dances and sharing of experiences in Polish by our students was appreciated by the international audience. A

two day tour of the newly constructed Warsaw, and the meticulously reconstructed Old Town by a Warsawian guide. A visit to the museum showcasing the Warsaw uprising, was a treat for the history lovers. The students saw a

musical at Teatr Buffo, the oldest theatre in this city of old world charm and high rise buildings. The view of the city from the 30th floor of the Palace of Cultures at night was a beautiful sight

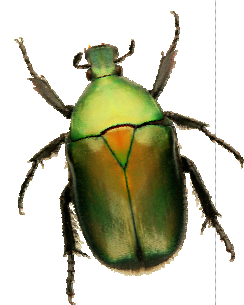
to behold.

The trip to Zakopane, on the Tatra Mountains a hill station surrounded by pristine green Alpine meadows and snow capped mountains was adventurous. The students went on long hikes, visited caves with a trained mountain guide, and also went up in a cable car to the Kasprowy Wierch mountain peak. The highlight of

the trip was the Thermal Spa in Szaflary close to Zakopane. The trip ended with traditional rafting on the Dunajec river which forms a border between Poland and Slovakia. The fifteen eventful days spent with the host families, trying out Polish cuisine, cooking Indian dishes, debating and discussing on matters of youth and international matters led to firm bonds of friendship not only amongst the students but also the families. The exchange acted as an incentive to create a diverse learning environment for the student. The students learnt to be responsible and resourceful and at the same time developed an enhanced interest in global issues.

by Mamta Kanti Kumar, India

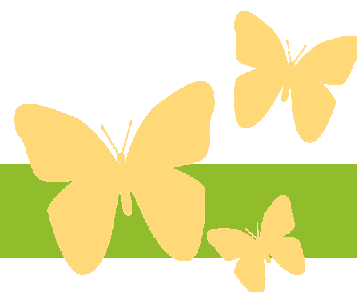
Community service at Academos Primary School in Kraków



Student and Teacher Speaking Workshops by Allyson Daly

The “Rhetoric: A Good Person Speaking Well” project, funded by IREX and the U. S. State Department, was created to encourage students to speak well as they represent themselves, but also to speak as global citizens: ethically, educated, and well-intentioned. Students have participated in debate workshops as well as mock interviews designed to prepare them for public speaking in small and large groups. We also wished to address teachers’ concerns in their classrooms, setting training on the use of feedback as a method to leverage teacher’s expertise and empower students to polish their assessments and performances.

Thank you for welcoming this project into your school, for being candid with your concerns and opening your classrooms to a fellow educator whom you have never met. As Preston and I visited the cultural treasures of Krakow and the surrounding areas, discussions that began in your classrooms continued long after your classes ended. Allyson Daly



Karmelicka 45
Kraków
www.ibkrakow.pl

My name is Preston Daly. I come from Raleigh, NC where I study biology at North Carolina State University. I came to Poland thinking I would help my mom record the workshops she was providing for students as well as see how another school operates as I weigh whether teaching will be a part of my profession. Throughout the two weeks I realized I ended up being a model for public speaking. We showed students articulate speaking through interviews and debates in which I grew as a speaker as well throughout the process. I learned a lot from the trip such as successful teaching styles that I may use later on as a possible career choice. We were given homework by Mr Łukasz Zych while attending his history class, who actually asked us to look up the contents of the NASA time capsule. I am very grateful for the hospitality that the teachers, students, and administrative staff have given us during this very interesting study visit.

Preston Daly