

Final Research Projects 2009/10 Israel Arts and Science Academy (IASA)

Each spring, 11th grade IASA students have the opportunity to propose a topic for a Final Research Project. Students who choose to meet this challenge conduct in-depth academic research and writing during their 12th grade year, in addition to all of their standard school requirements. IASA, founded by the Israel Center for Excellence through Education, assists each student in finding an academic advisor to guide them in the research process. The completed Final Research Projects are then sent to the Testing Division of the Ministry of Education, and are potentially worth 4 or 5 matriculation ("Bagrut") points.

During the 2009/10 school year, 28 students conducted research for these final projects, in a variety of topics including art and design, biology, math, physics, literature, music, philosophy, civics, psychology, archeology, history and Islamic studies. All of the projects have been submitted to the Ministry of Education.



Though the grading process will not be completed until the fall, we are confident that the scores will be just as impressive as in past years (where many students have received a grade of 100, and the rest range from 89 to 98). In fact, the students' projects are continually so impressive that the Ministry of Education uses IASA as a model school for final research projects for the whole country.

This year, 28 students wrote final papers and 40 paper proposals from 11th graders for 2010/11 have already been received!

Completed Final Research Projects are also entered into a variety of academic competitions in Israel:

Sophia Igdalov won a scholarship and certificate of accomplishment from the Intelligence and Terrorism Information Center and the Inbar Foundation, for her research project on the causes of the first Intifada (1987).

Pavel Padayev won third place in the Young Scientists competition sponsored by the Bloomfield Science Museum and Intel. Pavel's research was in the area of astrophysics, researching the areas in which stars are created. The moving ceremony took place at the President's Residence just before the Passover holiday. In addition to the monetary prize, Pavel will

represent Israel at the European Union competition which will take place in Lisbon this fall.

Amit Lukshinsky and **Michael Berelchis**, as well as **Peleg Samuels** and **Aviv Dotan** also participated and reached the final round of the competition.

Pavel Padayev and **Yonatan Goverman** reached the final round of the Young@Science Competition sponsored by the Weizmann Institute. **Inbar Abarbanel**, **Noa Boyar** and **Oren Lev** also participated in the competition.

The following students will enter research projects related to the area of history into the Zalman Shazar Center's competition, to take place this coming fall: **Dana Kogen**, **Sophia Igdalov**, **Dan Limonchik**, **Meital Blau** and **Ariella Lehmann**.

A ceremony and workshop was held on April 15th, 2010 to acknowledge the students' completion of these in-depth projects. The completed research papers of all 28 students were proudly displayed in the IASA lobby. After a brief orientation in the school auditorium – family members and friends split up into 4



different classrooms, divided by general topic: science, art, humanities, and general studies. In these smaller groups, each student had the opportunity to spend about 10 minutes explaining the research s/he conducted over the course of the year and presenting his/her finding in a PowerPoint presentation.



Special thanks and praise are due to the teachers and advisors who assisted the students throughout the research process. We especially want to thank Channah Sharef, the Coordinator for Final Research Projects at IASA.



List of Final Research Projects, 2009/10

ART and DESIGN

Student Name	Advisor	Topic
Hagit Ben-Eliyahu	Eti Abergel	The Influence of Henri Matisse's Drawings and Sketches on Paper Cutting
Meital Blau	Oren Migdal	The Portrayal of the Image of David in Renaissance and Baroque Sculpture
Dan Limonchik	Oren Migdal	Lorenzo Ghiberti's "Gates of Paradise" and its Influence on Auguste Rodin's "Gates of Hell"
Michal Sharoni	Ambrosia Kahan	The Architectural Motifs of the Reichstag Building
Bar Cohen	Elah Maor	The Use of Icons in the Work of Photographer Adi Nes
Tzila Tenor	Eti Abergel	Tensions between Illusion and Realism in the Drawings of Robert Rauschenberg and Jasper Jones
Noa Shifrin	Eti Abergel	The Use of Decorative Elements in the Drawings of Alphonse Maria Mucha
Hagar Lev-Tov	Eti Abergel	Emil Nolde – Distortion of Reality as a Means to an Artistic Viewpoint
Adva Cutani Lehman	Noa Abend/Haim Ben-Sheetrit	Julie Taymor's Opera "Juan Darién": Portrayal of the Character of the boy, Juan Darién, through Puppets and Masks

HUMANITIES

Noa Haviv, Literature	Yehudit Bassa	Identification of the Reader with the Central Character in the Novels <u>Lolita</u> , by Nabokov and <u>Madame Bovary</u> by Flaubert
Tamar Reicher, Literature	Inbal Yakir	The Ideal of Feminine Equality and its Expression in Israeli Literature of the 1940's and 50's
Yonatan Shabi, Philosophy	Gadi Itai, Oren Migdal	Thomas Aquinas' Concept of "Will"
Anael Blonder, Philosophy	Gadi Itai	The Legitimacy of a Paternalistic View of Suicide
Ido Benbagi, Philosophy	Dr. Yehuda Shnal	David Hume's Views on Individual Identity
Shiran Avigzar, Civics	Yoav Simon, Yael Justus	"Good Samaritan" Laws in Israel
Ariella Lehmann, Archeology	Oranit Levy, Sharon Zuckerman	Archeological Remnants of the First Temple Period and their Relation to the Biblical Views of a Chosen People

BIOLOGY

Yonatan Guberman	Dr. Shira Anezi	The junB Protein and its Connection to the Metastasis of Cancer
Inbar Abarbanel	Yehoshua Rosenberg, Dr. Oren Shriki	Characteristics of Brain Waves of Individuals with Attention Disorders: What Happens in the Brain During Tasks that Require Concentration?
Oren Lev	Itai Benovitch	Comparison of Biological and Socio-Economic Need Mechanisms, based on Game Theory's Hawk-Dove Model
Noa Boyar	Shmuel Itach	Expression of the ADF4 Protein in Various Systems of the Body

GENERAL

Adi Yom-Tov, Music	Dr. Michael Wolpe	Punk Music as an Internal Contradiction
Plia Oryah, Civics	Channah Sharef	Is Use of the Communal <i>Mikveh</i> (Ritual Bath) Open to All?
Sophia Igdalov, Islamic Studies	Dr. Hillel Cohen	Analysis of the Causes of the First Intifada (1987)
Hadar Ztriker, Psychology	Channah Sharef	The Mathematical Basis for Operant Learning in the Game of Basketball
Dana Kogen	Dr. Diego Olstein/ Channah Sharef	Portugal in the Golden Age, 1495-1557

MATHEMATICS

Navot Zilberstein	Nahum Friedman	Numerical Methods for Solving Differential Equations
Daniel Yaakobi	Yonatan Stop	Number Theory Based Cyphers

PHYSICS

Pavel Padayev	Dr. Jon Woo	Determining Type of Galactic Remains based on Data – Both for Galaxies and for Areas of Star Formation
---------------	-------------	--