



DepED MEMORANDUM
No. **158** , s. 2009

APR 14 2009

2009 NATIONAL LEVEL DEPED-INTEL PHILIPPINE
SCIENCE FAIR RESULTS

To: Regional Directors
Schools Division/City Superintendents
Heads, Public and Private Secondary Schools

1. This Department, through the Bureau of Secondary Education, announces the results of the 2009 National Level DepED-Intel Philippine Science Fair held on February 23-26, 2009 at the Subic Bay Exhibit and Convention Center, SBMA, Olongapo City with the theme **“Nurturing the Genius Within”**.

2. The Science Fair brought together student-researchers, teacher-advisers and Regional Coordinators from the 16 regions and the staff and key officials of the Department.

3. The judges for the Science Fair were practitioners in Science and Mathematics and academicians of prestigious organizations and institutions of learning and whose decisions were final and irrevocable. The results of the competitions in the Life Science and Physical Science Divisions in the different clusters and categories including the National and Special Awards are enclosed.

4. Six (6) investigatory projects by nine (9) students were selected to represent the country at the 2009 Intel International Science and Engineering Fair (ISEF) on May 10-15, 2009 at Reno, Nevada, USA.

5. The Department congratulates the winners and acknowledges the support of Intel Technology Philippines, Inc. (ITPI) and all the regions for the successful conduct of the Science Fair.

6. Immediate dissemination of this Memorandum is desired.

JESLI A. LAPUS
Secretary

Encl.: As stated
Reference: DepED Memorandum: No. 47, s. 2009
Allotment: 1—(D.O. 50-97)
To be indicated in the Perpetual Index
under the following subjects:

PROJECTS
STUDENTS

SCIENCE EDUCATION
TEACHERS

Enclosure No. 1 to DepED Memorandum No. 158, s. 2009

2009 DepED-Intel Philippine Science Fair
 Subic Bay Exhibit and Convention Center
 SBMA, Olongapo City

Fair Division Biological/Life Science
 Cluster 1
 Category Individual
 Level National

| Rank | Region | Title of Project Name of Leader/Presenter | School/Address | Project Adviser |
|-----------------------|--------|---|---|---------------------|
| 1 st Place | XII | <i>Physalis angulata</i> (Wild Gooseberry): A Potential Nonmutagenic Therapy for Food-borne Illnesses Nicole Angelique L. Sanchez | Dole Philippines School South Cotabato | Roden C. Yumol |
| 2 nd Place | IV-B | Sugar Cane as Feed Supplement to <i>Dorcus titanus palawanicus</i> Beverly L. Villas | Princess Urduja NHS Palawan | Dennis C. Tabinaga |
| 3 rd Place | III | Potential of Horse Radish (<i>Moringa oleifera</i>) Leaf Extract as Blood Coagulant for Dwarf Rabbits (<i>Oryctolagus cuniculus</i>) John Eleazer J. Martin | San Miguel NHS Bulacan | Farrah O. Macapagal |

Fair Division Biological/Life Science
 Cluster 1
 Category Team
 Level National

| Rank | Region | Title of Project Name of Leader/Presenter | School/Address | Project Adviser |
|-----------------------|--------|--|---|---------------------|
| 1 st Place | IV-B | VAP – Complete Natural Liquid Fertilizer and Deodorizer Von Joven K. Gardiano Alvin Lalongisip Paul Jeffrey C. Ramirez | Managpi National High School Calapan City | Florencia Ramirez |
| 2 nd Place | X | Species Diversity of Epiphytes on Mangrove Trees in Lunao and Pangasinan Forest, Gingoog City Michelle Barbon Mary Cris Corpuz | Gingoog City Comprehensive National High School Gingoog City | Hazel R. Balan |
| 3 rd Place | XII | Simultaneous Scientific Testing for the Development of Safe and Effective Alternative Antibacterial Ointment and Anti-Inflammatory Agent from <i>Lantana camara</i> Crude Plant Extract Bianca Marie C. Santos Nico Byle D. Alfara Steven Cuapoco T. Tan | The Quantum Academy, Inc. General Santos City | Pelmar B. Fernandez |

2009 DepED-Intel Philippine Science Fair
 Subic Bay Exhibit and Convention Center
 SBMA, Olongapo City

Fair Division Biological/Life Science
 Cluster 2
 Category Individual
 Level National

| Rank | Region | Title of Project Name of Leader/Presenter | School/Address | Project Adviser |
|-----------------------|--------|---|---|--------------------|
| 1 st Place | VI | <i>In Vitro</i> Cytotoxicity (MTT) Assay Against Human Lung Carcinoma (A549) and Human Colon Carcinoma (HCT 116), Free Radical DPPH) Scavenging Assay and Antibacterial Assay of Milkfish (<i>Chanos chanos</i> Forsskal) Bile: A Physicochemical Defense System Angeli Joyce Yap Dy | Capiz National High School Roxas City | Ronilo Aponte |
| 2 nd Place | V | Capsaicin & Hydrogen Peroxide Solution as an Inhibitor of Cell Growth and Potential Inductor of Apoptosis in Leukemia Cancer Cells Ellen Rose C. Buenaventura | Tabaco National High School Tabaco City | Chozara P. Doroy |
| 3 rd Place | XII | Allelopathic Interference by <i>Duranta repen</i> L. and <i>Mutiglia calabura</i> L.: Potential Impact on Organic Weed Management Diane Marie Antesa | Notre Dame of Marbel University IBED Koronadal City | Tomasio N. Montano |

Fair Division Biological/Life Science
 Cluster 2
 Category Team
 Level National

| Rank | Region | Title of Project Name of Leader/Presenter | School/Address | Project Adviser |
|-----------------------|--------|---|---|-----------------|
| 1 st Place | NCR | Screening for Quorum Sensing Inhibitors from Surface-Associated Bacteria from <i>Halymenia durvillaei</i> Kevin Jer David Orven Jules Dumaaang | Philippine Science High School Quezon City | Kent Kawashima |
| 2 nd Place | VII | Screening Marine Algae Extracts for Mitotic Inhibition Using Sea Urchin, <i>Triplonus graffia</i> L., Embryos Kin Israel R. Notarte Jamie A. Mananquil Karina Louise B. Dela Cruz | Ramon Teves Pastor Memorial-Dumaguete Science High School Dumaguete City | Yvette Gamora |
| 3 rd Place | CAR | <i>Spodoptera litura nucleopolyhedrosis</i> Virus (SLNPV) as a Biological Control Agent on Common Cutworm (<i>Spodoptera litura</i> Fabricius) Oliviera A. Cardona Jasper Roman A. Ulep | Cordillera Regional Science High School Benguet | Ethielyn Taqued |

Enclosure No. 2 to DepED Memorandum No. 158, s. 2009

2009 DepED-Intel Philippine Science Fair
Subic Bay Exhibit and Convention Center
SBMA, Olongapo City

Fair Division Physical Science
Cluster 1
Category Individual
Level National

| Rank | Region | Title of Project Name of Leader/Presenter | School/Address | Project Adviser |
|-----------------------|--------|---|---|---------------------|
| 1 st Place | VII | Biofuel, Feedstuff and Fertilizer from the Fermentation of Rice and Corn Chaff Marefel B. Anora | Cangawa National High School Bohol | Acisclo G. Bautista |
| 2 nd Place | V | Electrophase Converter Evan Paolo L. Armero | Catanduanes National High School Catanduanes | Mary Jean S. Romero |
| 3 rd Place | IV - B | Dead Stony Corals (Anthozoa), as Natural Biosorbent for Manganese and Iron Constituents in Water Samples Collected from Different Deepwells in Balabac Island, Palawan. Marry Jean P. Mendoza | Balabac National High School Palawan | Ronald Brillantes |

Fair Division Physical Science
Cluster 1
Category Team
Level National

| Rank | Region | Title of Project Name of Leader/Presenter | School/Address | Project Adviser |
|-----------------------|--------|---|---|---------------------------|
| 1 st Place | X | Biomonitoring of Mercury in Horse Mussels (<i>Modiolus philippinarum</i> Hanley) in Balangao, Misamis Occidental Christinae Maxine P. Solon April Faith L. Manabat Veron Gem T. Dalumbar | Misamis Occidental National High School Oroquieta City | Solly E. Namocatcat |
| 2 nd Place | I | "Tea" from Weaver Ants (<i>Oecophylla smaragdina</i>) Maricon Christine C. Sison Mary Grace F. Roaring Jerryrmy G. Javier | Manaoag National High School Pangasinan | Manuel Jaime U. Vinuya |
| 3 rd Place | VI | Coconut Oil as an Antifungal Agent Against Leaf Smut Disease Caused by <i>Erythrona oryzae</i> in Rice Charmaine L. Chavez Ella Rose Rodriguez Quennie Ann Sale | Doña Hortencia Salas Benedicto National High School | Bernadette M. Suarez |

2009 DepED-Intel Philippine Science Fair
 Subic Bay Exhibit and Convention Center
 SBMA, Olongapo City

Fair Division Physical Science
 Cluster 2
 Category Individual
 Level National

| Rank | Region | Title of Project Name of Leader/Presenter | School/Address | Project Adviser |
|-----------------------|--------|--|---|----------------------|
| 1 st Place | IV – B | The Number Chart (The Feasibility of Developing an Effective Visual Screening Program for Pre-School Children) Benedict Manuel R. Priela | Holy Infant Academy Calapan City | Nelson P. Endaya |
| 2 nd Place | XI | A Mathematical Model Utilized on the Sex Determination of Philippine Eagles (<i>Pithecophaga jefferyi</i>) Jovani Saso Tomale | Davao City National HS Davao City | Aristoniel Cabonilas |
| 3 rd Place | XIII | Comparative Study of Compressive and Flexural Strengths on Polyester Coconut (PolyCoco) Fiber Reinforced Matrix Composite in Random and Planar Orientation Toby Michael W. Chu | Father Saturnino Urios University HS Department Butuan City | Consuelo C. Datoy |

Fair Division Physical Science
 Cluster 2
 Category Team
 Level National

| Rank | Region | Title of Project Name of Leader/Presenter | School/Address | Project Adviser |
|-----------------------|--------|--|--|----------------------|
| 1 st Place | VI | Urea Enrichment in Marine Waters Lowers the Egg Viability and Inhibits Early Embryonic Development of the Sea Urchin <i>Triplaustris gratilla</i> L. Torbio Ramon A. Hechanova III Jonathan H. Quiogue Janvin Jessel A. Cariscal | Philippine Science High School-Western Visayas Campus Iloilo City | Josette T. Biyo |
| 2 nd Place | XI | Insecticidal Compounds of Pennyworts (<i>Hydrocotyle verticillata</i>) Extract Against Rice Black Bug (<i>Scotinophora coarctata</i>) Joseph Edwards V. Daleon Domingo Vergara III | University of Immaculate Conception Davao City | Cecilyn Biliran |
| 3 rd Place | NCR | Preparation of SnO ₂ Nanomaterial Using Vacuum Evaporation Technique for Photocell Applications Rowell D.G. Castro Jerrel Aron R. Sahagun | Quezon City Science High School Quezon City | Ma. Pilar P. Carmona |

2009 DepED-Intel Philippine Science Fair
 Subic Bay Exhibit and Convention Center
 SBMA, Olongapo City
 National Level
 (SEF Delegates)

TEAM WINNERS

| Project Title | Name of Project Exhibitor/Leader | Project Adviser | Name of School | Region |
|---|---|-----------------------|---|--------|
| Screening for Quorum Sensing Inhibitors from Surface-Associated Bacteria of <i>Halymenia durvilliae</i> | Kevin Jer David Orven Jules Dumaoang | Mr. Kent Kawashima | Philippine Science High School | NCR |
| Screening Marine Algae Extracts for Mitotic Inhibition using Sea Urchin, <i>Triploneustes gratilla</i> Linn., Zygotes | Kin Israel R. Notarte Jarnie A. Mananquil Karina Louise B. De la Cruz | Ms. Yvette G. Garmora | Ramon Teves Pastor Memorial Dumaguete Science High School | VII |

INDIVIDUAL WINNER – LIFE SCIENCES

| Project Title | Name of Project Exhibitor/Leader | Project Adviser | Name of School | Region |
|--|----------------------------------|----------------------|----------------------------|--------|
| <i>In Vitro</i> Cytotoxicity (MTT) Assay Against Human Lung Carcinoma (A549) and Human Colon Carcinoma (HCT116), Free Radical DPPH Scavenging Assay, and Antibacterial Assay of Milkfish (<i>Chanos chanos</i> Forsskal) Bile: A Physicochemical Defense System | Angeli Joyce Yap Dy | Mr. Ronilo V. Aponte | Capiz National High School | VI |

INDIVIDUAL WINNERS – PHYSICAL SCIENCES

| Project Title | Name of Project Exhibitor/Leader | Project Adviser | Name of School | Region |
|---|----------------------------------|--------------------------|---------------------------------|--------|
| Biofuel, Feedstuff and Fertilizer from the Fermentation of Rice and Corn Chaff | Marefel B. Añora | Mr. Aciscio G. Bautista | Cangawa National High School | VII |
| The Number Chart (The Feasibility of Developing an Effective Visual Screening Program for Pre-School Children) | Benedict Manuel R. Prieta | Mr. Nelson P. Endaya | Holy Infant Academy | IV-B |
| A Mathematical Model Utilized on the Sex Determination of Philippine Eagles (<i>Pithecopphaga jefferyi</i>) | Jovani Saso Tomate | Mr. Aristoniel Cabonilas | Davao City National High School | XI |

Enclosure No. 4 to DepED Memorandum No. 158, s. 2009

**2009 DepED-Intel Philippine Science Fair
Subic Bay Exhibit and Convention Center
SBMA, Olongapo City
SPECIAL AWARDS**

| Award Organization | Title of Project | Region | School | Student-Researcher/s | Adviser |
|--|--|---------------|---|--|-----------------------|
| American Meteorological Society | Preliminary Analysis of Water Quality Parameters and Population Density of Chironomus as Pollution Bioindicator | I | Alaminos National High School | Elvie C. Ngayawon Paolo F. Alcantara Shairaine Nieves C. Catabay | Adolfo B. Medrano |
| ASM Materials Education Foundation | Preparation of SnO ₂ Nanomaterial Using Vacuum Evaporation Technique for Photocell Application | NCR | Quezon City Science High School | Rowell D.G. Castro Jereel Aron R. Sahagun | Ma. Pilar P. Carmora |
| Association for Women Geoscientists | Species Diversity of Sea Grasses in the Intertidal Zone of Marine Sanctuary Mobod, Oroquieta City | X | Misamis Occidental National High School | Glyndel Bless O. Pelenio | Solly E. Narmocatcat |
| Intel Excellence in Computer Science | A Mathematical Model Utilized on the Sex Determination of Philippine Eagles (<i>Pithecopphaga jefferyi</i>) | XI | Davao City National High School | Jovani Saso Tomale | Aristoniel Cabonillas |
| MU Alpha Theta | Easier Way of Finding Derivatives (JetX Method): A Mathematical Investigation | VII | Ramon Teves Pastor Memorial Dumaguete Science High School | Alyssa Eloise L. Vintola | Joan B. Dolino |
| Ricoh Americas Corporation | Hybridity Analysis of F1 Progenies from IR64 x Dinorado Cross | IV-A | Cavite National Science High School | Jerice R. Monge Nerissa Joyce D. Bea | Belinda C. Loyola |
| Society for In Vitro Biology | Capsaicin and Hydrogen Peroxide Solution as an Inhibitor of Cell Growth and Potential Inductor of Apoptosis in Leukemia Cancer Cells | V | Tabaco National High School | Ellen Rose C. Buenaventura | Chozara P. Duroy |
| Yale Science and Engineering Association | Investigating the Efficiency of Prototype Thermal Pump and Dryer | CAR | Lepanto National High School | Nonchie V. Mangapot Sunny Rae B. Mana-a Meryll N. Perez | Glitrude L. Palod |

2009 DepED-Intel Philippine Science Fair
Subic Bay Exhibit and Convention Center
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SPECIAL AWARDS

| Award Organization | Title of Project | Region | School | Student-Researcher/s | Adviser |
|---|---|--------|--|--|----------------------|
| BALUD Project/BIDA | Bioconversion of Different Wastewater Effluents into Biogas and Volatile Fatty Acids | XII | Dole Philippines School | Faustina Jade C. Davis | Roden C. Yumol |
| ABS-CBN Foundation | OPLAN Clean-up: Effect of Lemon (<i>Citrus microcarpa</i>) extract to the Cadmium (Cd) and Lead (Pb) Phytoextraction Feat of Taro (<i>Colocasia esculenta</i> L., Schott) on Contaminated Soil | CARAGA | Agusan del Sur Science High School | Carlito A. Ranoco, Jr. | Vivian C. Peligro |
| COMSTE | Urea Enrichment in Marine Waters Lowers the Egg Viability and Inhibits Early Embryonic Development of the Sea Urchin (<i>Triplneustes gratilla</i> L.) | VI | Philippine Science High School Western Visayas Campus | Toribio Ramon A. Hechanova III Jonathan H. Quiogue Jarvin Jessel A. Cariscal | Josette T. Biyo |
| SEIPI | Electrophase Converter | V | Catanduanes National High School | Evan Paolo L. Armero | Mary Jean S. Romero |
| STI Education Education Services Group | Improved Waste Vegetable Oil Reactor | VI | Sta. Barbara NHS | Keith S. Subong | Eufemia Y. Sonza |
| Meralco | Solar Parabolic Trough as Water Heater From Discarded Materials | VI | Capiz NHS | Christian A. Gregorio | Kristine Baes |
| Mama Sita | Annatto (<i>Bixa orellana</i>) Extract as Biological Stain | IV-A | Gov. F. Leviste Mem. NHS, Batangas | Krisniel Florence S. Solis Cheska Anne D. Cabanding Janine M. Reyes | Rowena D. Cabanding |
| Samahang Pisika ng Pilipinas (Samahang Pisika ng Pilipinas Prize for the Best Project in Physics) | Preparation of SnO ₂ Nanomaterial Using Vacuum Evaporation Technique for Photozell Applications | NCR | Quezon City Science High School | Rowell D.G. Castro Jereel Aron R. Sahagun | Ma. Pilar P. Carmona |