DIVISION MEMORANDUM
NO. 233 series 2016

RISE 2016: HANDS-ON SCIENCE FOR RURAL PHILIPPINES

To: Public Secondary School Heads
Private Secondary School Heads

1. Attached are copies of the Regional Advisory Number 044, s. 2016 from Atty. Alberto T. Escobarte, CESO IV, Regional Director and the letter of invitation from Fr. Michael I. Pineda SJ, Principal of Ateneo de Davao University-Junior High School, inviting all Science junior high school teachers from both public and private institutions for the RISE 2016: Hands-on Science for Rural Philippines on May 15-17, 2016 at Ateneo de Davao University-Matina Campus, Matina, Davao City.

2. A registration fee of One Thousand Pesos (Php 1,000.00) shall be paid by each participant and will be collected on the first day of the camp, May 15, 2016 (1-2 PM) at the registration area.

3. The participation to the above activity is voluntary and such no DepED funds be utilized for this purpose.

4. For inquiries, reservation and registration, please contact Ms. Eleanor P. Corcino @ 0923-156-7010 and landline number 299-2404 (look for Ces Martinez).

5. The details of the said activity are contained in the enclosures.

6. For information and dissemination.

DEE D. SILVA, DPA, CESO VI
Schools Division Superintendent

For and in the absence of

EMMANUEL P. HUGO
Chief Education Supervisor
School Governance & Operations Division
Officer-In-Charge
REGIONAL ADVISORY NO. 044, s. 2016

To: Schools Division Superintendents

Subject: RISE 2016: Hands-On Science for Rural Philippines

Date: April 28, 2016

1. Herewith is a letter from Fr. Michael I. Pineda, SJ, Principal of Ateneo de Davao University-Junior High School, inviting all junior high school teachers from both public and private institution in Region XI for the RISE 2016: Hands-on Science for Rural Philippines on May 15-17, 2016 at Ateneo de Davao University-Matina Campus, Matina, Davao City.

2. A registration fee of One Thousand Pesos (Php 1,000.00) shall be paid by each participant to cover the cost of morning and the afternoon snacks for two days, lunch for two days, workshop kit, and a certificate.

3. This Office interposes no objection to the above activity provided that participation is voluntary and in the exigency of the service, DepEd activities and programs during summer are given priority and no DepEd funds be utilized for this purpose.

4. Details of the said activity are contained in the enclosures.

5. Immediate and wide dissemination of this Advisory is desired.

ATTY. ALBERTO T. ESCOBARTE, CESO IV
Regional Director
Dear Sir:

The Ateneo de Davao University Junior High School is pleased to host the RISE 2016: Hands-on Science for Rural Philippines in its Matina Campus on May 15-17, 2016. A team of scientists/instructors from the University of Toronto and the University of the Philippines Diliman led by Dr. Mayrose Salvador of the University of Toronto, who is the Pueblo Science Executive Director and DOST Balik Scientist will facilitate the workshop. The camp is prepared especially for high school science teachers.

"Participants of our camp will learn how to use the kits that Pueblo Science members have developed during the two day science camp. They will also learn how to put together the science kits using locally available materials. Experiments in Chemistry, Physics and Biology will be introduced as well as possible science fair projects and science magic tricks." (Pueblo Science)

In this connection, we would like to invite DepEd Region XI-Junior high school teachers to this rare opportunity to be working with the Pueblo Science Instructors/Scientists who are all genuinely excited about Science.

A registration fee of P1,000.00 from each participant will cover the cost of the morning and the afternoon snacks for two days, lunch for two days, workshop kit, and a certificate. The workshop will run from 1:30-5:00 pm on May 15 and 8 am to 5 pm on May 16-17.

The workshop guarantees you experiments/activities that are intellectually stimulating, doable, and fun-filled.

If interested, please take note of the following Registration Procedures:
1. You may fill-out the online registration form at http://bit.ly/PuebloScience2016RegistrationForm to ensure that you will receive future announcements and to help us estimate participant numbers. Limited slots are available on a first-come first-served basis.
2. Registration payment will be collected on the first day of the camp, May 15, 2016 at the registration area.

For inquiries, reservation, and registration, please contact Ms. Eleanor P. Corcino of the following numbers: 0923-156-7010.

Landline: (082) 299 2404 local 4340 (look for Ces Martinez)

We are all excited to see you at Pueblo Science Teacher's Camp 2016!

Sincerely yours,

[Signature]

Analyne P. Encio
Chairperson
Pueblo Science Teachers’ Camp 2016

[Signature]

Fr. Michael I. Pineda, SJ
Principal
Ateneo - Junior High School
RISE 2016: HANDS-ON SCIENCE FOR RURAL PHILIPPINES
PRESENTED BY ATENEO de DAVAO JUNIOR HIGH SCHOOL AND Pueblo Science

MAY 15-17, 2016
(MAY 15: 1-2PM REGISTRATION)

TRAINORS:
MAYROSE SALVADOR, PHD
MARTIN LABRECQUE, PHD
JAMES LI, B. ENG, PHD
STANLEY WONG, PHD
EMINA VELETANLIC, MSC
SHERMAINE LI, MSC CANDIDATE
CARL INOCENTES, MSC CANDIDATE
JADE NAZARENO, MSC CANDIDATE
DANA LIGHTA BABELLA, MSC CANDIDATE

"PARTICIPANTS OF OUR CAMP WILL LEARN HOW TO USE THE KITS THAT PUEBLO SCIENCE MEMBERS HAVE DEVELOPED DURING THE SCIENCE CAMP. THEY WILL ALSO LEARN HOW TO PUT TOGETHER THE SCIENCE KITS USING LOCALLY AVAILABLE MATERIALS. EXPERIMENTS IN CHEMISTRY, PHYSICS AND BIOLOGY WILL BE INTRODUCED AS WELL AS POSSIBLE SCIENCE FAIR PROJECTS AND SCIENCE MAGIC TRICKS."
(PUEBLO SCIENCE)

100 PARTICIPANTS ONLY! FOR EARLY REGISTRATION, CONTACT ELLEN CORCINO (0923-156-7010)
April 11, 2015

ATTY. ALBERTO T. ESCOBAR TE, CESO IV
Regional Director
Department of Education Regional Office XI
F. Torres Street, Davao City

Dear Sir,

I would like to request the Department of Education – Davao City’s endorsement to the upcoming Pueblo Science teachers camp entitled “RISE 2016: Hands-On Science for Rural Philippines” on May 15-17, 2016. Pueblo Science aims to engage children in science through its programs. Our scientists develop science kits catered to the Philippine K to 12 curricula to foster fun and hands-on learning for students. Our volunteer instructors, who have advanced degrees in science from the University of Toronto and the University of the Philippines - Diliman, and have years of teaching experience, then bring these kits to Philippine communities in the form of workshops. During the three-day workshop, the teachers are trained on how to use the kits for effective learning as well as how to assemble them using locally available materials. 2016 will be the 6th year of this project in the Philippines. Locations we have visited in the past include Masbate, Batanes, Bataan, Palawan, Cebu, Davao, Laguna, Rizal and Ilocos Norte, Bukidnon. Some details of our past workshops can be found here: http://puebloscience.org/events/teachers-camp/.

The workshop supports the Department of Education’s goal of strengthening science and math education in the Philippines. Also, it is a rare opportunity for the teachers of Davao to learn from international scientists who are genuinely passionate about science. Further details of the upcoming workshop are contained in the proposal below.

If you require any other information, please email me at mayrose@puebloscience.org. Thank you very much.

Best regards,

Mayrose Salvador, PhD
Executive Director - Pueblo Science
Tel. 1-416-836-2976 | 1-647-722-4168
mayrose@puebloscience.org
http://puebloscience.org
Teachers Training at Ateneo de Davao University – Highschool
Date: May 15-17

PUEBLO SCIENCE
Pueblo Science is a Toronto-based charitable organization focused on advancing science education in low-resource communities around the world. The Pueblo Science team develops fun-filled, hands-on science kits that allow children to connect abstract principles to the world they know. By sparking an interest in science at an early age, the goal is to jump-start fundamental changes in social attitudes about science, to generate higher scientific literacy rates, and to encourage youth to pursue science, engineering, and technology-related careers. We believe that all children should have access to tools that help them develop the skills necessary to be a part of the next generation of problem solvers and innovators.

Pueblo Science is composed of volunteer scientist, engineers and educators who are passionate about sharing their enthusiasm for science to the next generation.

RISE TRAINING CAMP

Objectives
1. To hold a workshop for grade 7 to 12 school teachers in Davao and surrounding area with emphasis on using locally available, low-cost materials to exemplify science principles;
2. To promote self-reliance among teachers;
3. To empower educators and help them achieve their full potential in the teaching profession;
4. To promote student enthusiasm and proficiency in the sciences through hands-on experimentation; and
5. To provide teachers with opportunity to network with international scientists and other teachers in Davao and surrounding area.

Participants
120-140 teachers will attend the camp. Each participating teacher must be currently teaching grade 7 to 12 science (chemistry, physics, biology) and Math. Preference will be given to science teachers from the barrios. Participants must commit to using the hands-on activities in their classrooms. Pueblo Science will communicate (e-mail, facebook, skype, text messages or mail) with the participants after the
training to ask for student feedback as well as provide additional materials that they can use in their classrooms.

What will teachers do in the RISE Training Camp?

In a Pueblo Science training camp, each pair of teachers performs the activities for each kit being taught and learns how to maximize the effectiveness of each kit in the classroom. This fun and experimental approach is key to ensure that the students take interest in science and realize how important basic science is in our daily life. Most Pueblo Science kits are constructed out of easily available materials so that the teachers can replicate them without too much expense and make them available to their students. In the training camp, the teachers will rotate among a number of Pueblo Science instructors while exploring a variety of science kits that they get to keep and bring back to their school.

Who are the Trainors?

The following are the dedicated and talented volunteer trainers for the 2016 RISE Training Program in Cagayan de Oro from the University of the Toronto and the University of the Philippines. They have a combined 70 years of teaching experience, educating teachers and students in elementary, secondary and university level. A short bio of the trainors can be found in Appendix A.

Mayrose Salvador, PhD
Martin Labrecque, PhD
James Li, B. Eng, PhD
Stanley Wong, PhD
Emina Veletanlic, MSc
Shermaine Li, MSc Candidate
Carl Inocentes, MSc Candidate
Jade Nazareno, MSc Candidate
Dana Lighta Babella, MSc Candidate

SCHEDULE
Day 1—May 15

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
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<tbody>
<tr>
<td>13h00—15h00</td>
<td>Registration</td>
</tr>
<tr>
<td>15h00—16h00</td>
<td>Short welcome program (words of welcome from the host, introduction of the volunteers from Pueblo Science, introduction of participants, etc.)</td>
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<tr>
<td>16h00—17:00</td>
<td>Science Magic Show (Science tricks will be demonstrated and explained thoroughly by the volunteer instructors)</td>
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### Day 2 - May 16

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>8h00-9h00</td>
<td>Engineering challenge</td>
</tr>
<tr>
<td>9h00-10h30</td>
<td>Station 1</td>
</tr>
<tr>
<td>10h30-10h45</td>
<td>Break</td>
</tr>
<tr>
<td>10h45-12h15</td>
<td>Station 2</td>
</tr>
<tr>
<td>12h15-13h00</td>
<td>Lunch break</td>
</tr>
<tr>
<td>13h00-14h30</td>
<td>Station 3</td>
</tr>
<tr>
<td>14h30-14h45</td>
<td>Break</td>
</tr>
<tr>
<td>14h45-16h15</td>
<td>Station 4</td>
</tr>
</tbody>
</table>

### Day 3 - May 17

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>9h00-10h30</td>
<td>Station 5</td>
</tr>
<tr>
<td>10h30-10h45</td>
<td>Break</td>
</tr>
<tr>
<td>10h45-12h15</td>
<td>Station 6</td>
</tr>
<tr>
<td>12h15-13h00</td>
<td>Lunch break</td>
</tr>
<tr>
<td>13h00-14h00</td>
<td>Science Fair Projects (Brainstorming Good Science Fair Projects)</td>
</tr>
<tr>
<td>14h00-15h00</td>
<td>Science Race (The groups of teachers will race to solve various science problems that were covered in the 6 stations and the magic tricks)</td>
</tr>
<tr>
<td>15h00-16h00</td>
<td>Closing program, Evaluation</td>
</tr>
</tbody>
</table>

### EXAMPLE OF KITS DEVELOPED BY PUEBLO SCIENCE

**Simple Motor.** The kit consists of magnetic wires, safety pins, a magnet, a battery, and a battery holder. It is used to teach concepts such as motors, electricity, magnetism, and electromagnetic laws.

**Wind Mill Generator.** The kit uses a motor, an LED, a thin metal rod, and a plastic windmill. The LED lights up with a simple blow on the windmill. This kit was carefully designed for ease of assembly and is used to explain how to
harness wind energy to generate electricity.

Fluid Power. The kit uses cardboards, tape, syringes and flexible plastic tubes. When fully assembled, the mechanical arm can be used to transport small objects. This kit nicely illustrates concepts such as compressibility, hydraulics and pneumatics. It also encourages children to develop their mechanical engineering skills.

The following is a tentative list of experiments. It will change depending on material availability in the K-12 curriculum published by the Department of Education.

1. Hydraulic Robots
2. Introduction to Electronics
3. Electrophoresis
4. Biomolecules and nutrition
5. Light and Vision
6. Short and Fun Experiments to Explore Properties of Light and Sound
7. Fun Math Activities: Probabilities and relevant puzzles and fermi problems
8. The Chemistry of Ice cream making: stabilizers, emulsifiers and crystallization

REGISTRATION FEE
A registration fee of PhP 1,000.00 to defray expenses for meals and snacks will be required from each participant unless the partner institution/organization finds a sponsor for the event. Pueblo Science must approve the amount for the registration fee. The hosting institution must issue receipts for the fees and maintain books following school policies.