



Hi-Teach



RHAW (GG1640670) Int'l Water Day Update (March 2018)

Compiled by Hi-Teach on March 22nd 2018

A fruitful school 2017-18 school year ended on the 2018 international water day with a graduation event celebrated in the Grand Water Research institute in the Technion Haifa, the host city of the **Rotary Hands Across Water** program. The intensive school year rich with collaborative Water & Sanitation inspired STEAM learning followed the Noteworthy Project recognition awarded by TRF during the Atlanta centennial.

New schools continued to join the program while most of the old schools continue, almost doubling the original plan of 10 new and 10 old schools. Four (4) new coaches were recruited and trained throughout the year providing a solid professional team.

The new school year started on the fast lane with Watec 2017, the international water conference & exhibition. We invited 133 exceling RHAW students and teachers were invited to visit the exhibition following a teacher's training held early in the school year which enabled us to prepare for the show.

The teachers training meeting. First of a series of such meeting was hosted by SES (Scientific Education Systems), maker of the Neulog educational data loggers which we provide to the participating schools along with proper training and support, including guidance for cross cultural collaboration.

Ten (10) local 2490 Rotary clubs are now involved in the program, eight of them made financial contribution to the program, and are very involved in the daily activities of the program. The club of Zichron-Yaacov sets an excellent example adding and supporting five (!) local junior high schools that joined the program following last year's successful pilot with one of these school. The club was actively involved in the outdoor tours conducted by all schools in water facilities, sewage treatment plants, agricultural farms with advanced modern irrigation, the local Taninim river which was is used as a water source for local agriculture and the ancient city of Cesarea, They also visited and researched fishing agriculture farm, and studied advanced methods of leakage prevention. The schools run research projects based on those experiences, which they presented with other schools at the graduation event.

Watec was a very successful event with 133 students, from 10 schools visiting, they came from all sectors and traveled together in buses arranged by the program from across the country. They were escorted by proud teachers, parents and Rotarians. Students of all sectors, religions and genders were welcomed by Hi-Teach and the organizing committee and were challenged with current practical global water and sanitation challenges. They then scouted the exhibition floor in search for technologies, which they later proposed to integrate and apply to address the water and sanitation challenges presented earlier in the day. The students presented their solution ideas in English posters in the afternoon to the astonishment of Rotarians, industry partners, government representatives and their teachers and parents. A unique and exciting joint STEAM (*) learning experience and adventure (STEAM stands for Science, Technology, Engineering, Art, and Math education).

In parallel to the RHAW visit, a Watec side conference on "Alleviation of global water & sanitation challenges through education and awareness" was organized by the Rotary 2490



Hi-Teach



District Water & Sanitation Committee chaired by PDG Avner Fuchs. Lecturers included Nobel Laureate Prof. Dan Shechtman, past water commissioner Prof. Uri Shamir, ministry of economy Mr. Oded Distal (Head of Israel NEWtech the clean-tech promotional authority), Dr. Zvika Tsuk, a world leading water archaeologist, and Prof. Richard Laster an environmental regulation expert that leads a ground-breaking, collaborative Israeli - Palestinian efforts to treat waste water in the east Jerusalem Kidron valley, and Eli Ronen past head of the sewage authority who led the waste water reclamation project in Israel. The day conference captured the imagination of the Rotarians, Ambassadors and overseas visitors. It reflected the urgent need for collaborative education to promote awareness of the growing challenge. Awareness which is required to support large-scale address of the challenge like higher water tariff or continued waste water treatment and reclamation, leakage prevention or effective dripper irrigation or sea water desalination complemented by effective national and international water management systems. The significance of education in the face of the growing challenge and growing knowledge and quickly changing world was discussed. The potential of education was demonstrated by the young RHAW student's presentation next door.

Recruitment of schools was established through Hi-Teach school visits, running the first introductory lessons and local school teacher's training sessions. The advanced learning was very intensive around the country with tens of school visits, research project and cross cultural collaborative projects. We worked our way towards the graduation on March 19th which allowed us to examine over 30 research project which were very impressive. The academic team of the Technion GWRI helped us review the research work and was very pleased with the level and depth of the work. The fill (First lego League) competition focused this year on water, and we were approached by many schools asking for support and guidance in their research projects. We supported four such groups all of which were very successful.

The many water related research projects included Grey Water Reuse, by means of two level filtration system based on recycled dialysis filters (technology which was originally by Infiltration for provisioning of drinking water and modified by the A-Tur east Jerusalem girls middle school student. Another example of advanced cross cultural collaborative research was held by Taybee El-Madge junior high school with Regavim elementary located at Eminem. They researched together a concept of remote irrigation and growth sensing using Infrared temperature sensors carried by airborne drones from above, and crawling sensing Lego snakes. Other projects included automatic acoustic water cap filler, and a few research projects addressed water pumping related challenges. The Kiryat gat school has developed a long-term interest in the potential impact of irrigation with reclaimed sewage water. Orit Cohen the school teachers has become one of the many program "Coaching Teacher" and was awarded accordingly last year.

In addition to the actual conduct of school work, site visits, research projects and collaborations, we translated several key chapters to English and used it to train a twinning school program established between three high schools in Naharia and three high schools in Bergen county New Jersey, with the collaboration centered around water.

We continue the translation to content to Arabic and it was used by the three new Arab schools that joined the program in Jerusalem. Academic progress made by most of the schools that joined us last year was impressive and gratifying, especially as some of those are accompanied with cross cultural collaboration projects.



Hi-Teach



In addition to 10 teachers training sessions run around the country four on a nationwide and regional scale and six local school teacher trainings, we also run two international teachers training for science teachers and STEAM education policy makers from around the world. These seminars were arranged by the ministries of Education and of foreign affairs, and RHAW was invited to conduct WATER based STEAM courses. The response of the international experts to the program was very good and exiting and it provided an opportunity to further expand the twining program. We were also approached by education experts from Hong Kong, China who expressed interest in water education and we hosted a visitor from china who came to explore potential collaboration.

The e learning system was backed up which required a costly intervention. Backing up the data was needed to allow for the system upgrade which is planed next to allow expansion and service improvements.

Over 30 school groups celebrated water science and technology at the graduation event in the Technion GWRI. The projects were reviewed by Rotarians, the ministry of education, a representative of the national water authority and six Technion professor who were all very impressed with the work. Retired Admiral Ami Ayalon, past chairman of Netafim (the company that invented dripper irrigation) visited the students project stands and greeted them on their achievement and inspiration to spearhead global water solutions.

The entire RHAW team including Hi-Teach, the Haifa Rotary Club and the participating Rotary clubs of Zichron-Yaacov, Gedera, Kiryat-Gat, Karmiel, Tel-Aviv, Jaffa, Holon, as well as the Caesarea, Hedera, Jerusalem, Carmel, Neshar, Herzelia thankfully Recognize the support and contribution of the Coral Spring/Parkland, club, and wish to convey our condolences to the community which morns over the terrible disaster at the Stoneman Douglas high school.

We appreciate of the contributions of the CS/PL and Washington, Alexandria, Bethesda-Chevy Chase, New York, Weston, Miami, Lexington Sunrise, NE Sunrise Philadelphia, Willowdale, Perrine-Cutler Ridge / Palmetto bay, and their districts 6990, 7070, 7610 & 2490 and the TRF. And are proud of the achievements we reached together addressing the water and sanitation challenges by all sectors of society in our region.

[Link to a video clip of the 2018 RHAW graduation event at the Technion GWRI.](#)

Drafted for the Haifa RC By

Dr. Amnon Shefi

Hi-Teach

+972 54 4929093



Hi-Teach



Hydroponic experts with students



PDG Fuchs with students



Adm. Ayalon and PP Kfiri with students



Ministry of Education R.Laster



Prof Shamir talks science with students



Dr. Shefi awarding Bermad



Cross Cultural examination



Adm. Ayalon. Prof Furman & Agnon