Establishing a Technology Center and Greenhouse For The Gil Special Education School in Tel Aviv, Israel

Hands-On Developmental Learning Opportunities for Students With Autism Utilizing Technology And Nature-Based Curriculum

A PROJECT OF THE TEL AVIV-YAFO FOUNDATION

Meeting the evolving needs of the City of Tel Aviv with the establishment of social service, cultural, educational, and environmental projects.
BACKGROUND INFORMATION:
The number of children with Autism Spectrum Disorders has rapidly risen over the past decade worldwide. Autism, a complex neurobiological disability that belongs to the Pervasive Development Disorders (PDD) category, is usually characterized by difficulty communicating ideas and feelings, understanding language, relating to others and living according to societal norms. The goal of the Tel Aviv-Yafo Municipality Special Education System is to create opportunities where each and every child can actualize his/her own potential. The Gil Special Education School was established in 1995 as a regional educational facility for students with autism who live in Tel Aviv-Yafo and the surrounding Dan metropolis area, over 30 Israeli cities send their students to this top notch facility. The Gil Special Education School educates and serves students between the ages of 10 and 21. Over the last 5 years, the student population has doubled in size. The school is open 11 months per year, six days a week, with extended hours to ease the burden on families. Students reside at home with parents or foster families; and are bused to school daily. The children attending Tel Aviv’s Gil Special Education School come from all segments of Israel’s society, including native born Israelis (Sabras), new immigrants, foreign workers and refugees, Jews, Arabs, Christians, wealthy and poor, religious and secular.

The school’s curriculum is based on a holistic philosophy that provides the core academic, social, and life skills needed by students develop into productive citizens in their communities. Individualized education and social skills building plans are designed to meet the unique needs of each student and are implemented through lesson that build independence skills, self awareness, vocational know-how, and appropriate social interaction capabilities.

Profile of Gil School Pupils (3 levels)

* **High Functioning**- pupils display a high level of functional independence and multi-dimensional communication skills. Student can have a meaningful connection with his / her social surroundings.

* **Mid Level**- pupils display a mediocre level of functional independence and multi- dimensional communication skills.

* **Low Functioning**- pupils display a low level of functional independence and multi- dimensional communication skills. They require concrete and sensory motor stimuli in order to connect to their surrounding environment.
AUTISM AND TECHNOLOGY

The Gil Special Education Schools in Tel Aviv-Yafo is comprised of an exceptional community of learners, teachers, and specialists working together to create an environment where “Success for Every Student” is possible.

Research has demonstrated time and again that students with special needs, when given the appropriate tools, can achieve!

The goal of the technology initiative at the Gil School is to utilize alternative learning tools (computers and iPads with PCS communication programs and apps) to support students in acquiring communication skills that will help them function more independently in society. Each student learns differently, and with just a few taps, a program can be customized with materials that fit each individual student’s level and learning style.

Computers can help teachers connect with non-verbal students, those who before had only communicated with sign language, symbol cards and outdated word-bank computers. Technology offers special needs students and their teachers' communication programs, e-books, social and life skill demonstrations, interactive textbooks, art and music activities, progression trackers, schedule calendars, picture galleries and much more. Technology offers a powerful learning tool for students with special needs. Vocal screen readers, closed-captioned support, and other innovative accessibility features, assist students with cognitive, physical, and developmental disabilities.

The teaching staff of the Gil school will receive professional training in the use of computer based communication applications and programs prior to use with students.

THE TECHNOLOGY INITIATIVE AT THE GIL SPECIAL EDUCATION SCHOOL

ESTABLISHED GOALS FOR THE TECHNOLOGY INITIATIVE:

1. Utilizing computers as an alternate communication tool for students with language and communication limitations.

2. Employing computers as a tool for teaching social and life skills needed by the special education student to function appropriately in society.

3. Use of computers as a social networking tool that will connect students to other students (helps build the students’ social network and while developing communication skills).

4. Provide technological tools to special needs students who are about to graduate and support them through transitional stages, including preparing them for the world of work and social interaction in the community.
THE PLAN:

The school’s current computer lab, 60 square meters in size, is located on the second of three floors. The condition of the space makes it unusable for the daily learning needs of the students. The tiles on the floor are uneven and peeling, the walls are covered with old dusty rugs, and electrical outlets are exposed causing a safety hazard to students and staff. Additionally, there are only 4 computer stations to be shared by 12 students and teachers for each session. The current computers are falling apart and are equipped with outdated programs.

The Bashi Architectural Firm has designed the plans to establish a new advanced technology learning center fit for the unique educational needs of special needs students. The new center will have both individual and group workstations. Computers will be fitted with the latest communication software available to help increase social, life skill, and vocational readiness. In addition to the new technology, the physical structure of the site will be renovated to provide a safe learning environment for the students. Floor tiles will be replaced, the old dusty rugs removed from the walls and replaced with a fresh layer of paint, electrical wirings will be updated as will the wireless communication system. New age appropriate furnishings will be installed, including workstation desks, chairs, dividers to close off individual learning stations, and additional storage. The new advanced lab will permit each student and teacher the opportunity to work on a computer during lesson times. The skills learned at the new technology center will help increase communication abilities as well as prepare pre-vocational students for the world of work.

THE COST:

Total Cost: $180,000
Municipal Matching Funds: -$90,000
Requested Donation: $90,000
Technology Center Will Be Named Per The Donor’s Request
Nature is a powerful learning tool for students with special needs. Although there is no cure for autism, purposeful interventions show great promise in helping students with autism reach their fullest potential. Gardening and horticultural therapy activities have been shown to offer exciting academic, socialization, and life skill opportunities for students with autism. The school's staff is interested in adding an ecological greenhouse to the grounds of the school in order to promote an environmental education program for its students. (This garden, will help broaden each child’s scientific know-how through direct contact and hands-on experience with the earth.)

**SOCIAL BENEFITS OF SCHOOL GREENHOUSES:**

Environment-based education emphasizes specific critical thinking skills central to science instruction, develops problem solving skills, and builds responsibility. Additionally, studying what happens in nature helps students better understand the world around them.

Students with autism flourish in programs that combine green space with appropriately designed agricultural activities. The space calms them. Working in the greenhouse also provides opportunities for students to hone gross and fine motor skills. Teens in the program will have an opportunity to explore land, water, and plants through developmentally appropriate science-based lessons. Plating and caring for a garden helps students with autism learn the benefits of hard work and the importance of a commitment to a project. In addition, gardening provides many opportunities for positive social interaction and teamwork.

**VALUES OBTAINED BY GREENHOUSE LESSONS:**

1. A connection between the student and his/her environment.
2. Cooperation and team work
3. Increased awareness of the need to preserve and improve the environment.
4. Enhanced awareness of nutrition and healthy life style.
5. An understanding of the nature cycle

**THE PLAN:**

**Curriculum Enhancement** – The new eco-greenhouse will provide the staff of the Gil School with the unique opportunity to offer valuable interdisciplinary instruction. Lessons in the greenhouse will be tailored to enhance the classroom’s curriculum and find the best way to communicate with each participating student.

**Pre-vocational Programs** – The goal of the Gil School is to work with older students aged 17 to 21 on job and life skills for post graduation. The older students will visit the garden a couple of times a week to learn about plants and practice teamwork activities. The program’s goal is to help build confidence, pride, and a sense of responsibility. Yard and gardening work skills provide lower functioning students with autism a variety of vocational opportunities after graduation.

The Hamamit Greenhouse Company has been selected to construct the Greenhouse learning environment for the Gil Special needs School. The school has a plot of land, 180 square meters in size, located next to the school entrance upon which the greenhouse will be erected. There is currently a pond and outdoor benches in the area that will be incorporated into the outdoor learning environment. The greenhouse will be 48 square meters (6 X 8 feet) in size and will be fully equipped
with planting tables, spray irrigation systems, work stations, incubators for temperature control, heating tables, fertilization system, thermal screen, system temperature and humidity control, fans, and more to allow optimum conditions for meaningful, experiential learning, and open a channel of employment options for graduating students. **Requested Donation $30,000**

“My vision is to provide every child in Tel Aviv-Yafo with the best education possible.

Part of getting the best education possible is being able to learn in an environment that is designed for developmental growth and is equipped with the latest resources available”

Mayor Ron Huldai

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**Total Donation Requested: $120,000**

*The New Technology Center And Greenhouse Will Be Named Per The Donor’s Request*

**YOUR OPPORTUNITY TO MAKE A DIFFERENCE!**
The Tel Aviv-Yafo Foundation, chaired by Mayor Ron Huldai, partners with donors from around the world to meet the evolving needs of the City of Tel Aviv-Yafo. The Tel Aviv-Yafo Foundation has generated momentum to the city and proudly serves as a beacon of progress, elevating the city’s quality of life through education, the arts, sports, social services, and the environment. Responsive and purposeful, the Foundation provides for the needy and creates opportunities for a better future for all the residents of Tel Aviv-Yafo. The Foundation was founded in 1977 and has established more than 520 projects to date, raising over $500 million worldwide.

By matching contributions dollar-for-dollar and by allowing donors to designate their funds, the Foundation ensures accountability, promotes collaboration between donor and recipient, and strengthens the bond between the Diaspora and Israel.

To learn more about the Tel Aviv-Yafo Foundation please visit: www.telavivfoundation.org