

TERRA MINI-GRANT APPLICATION

2015-2016 SCHOOL YEAR

The Technology Education Research & Redesign Alliance (TERRA) is a non-profit organization whose mission is to mobilize the resources, knowledge, and capacity of individuals, foundations, business and industry in shaping and facilitating educational policy, practice, and research for increased achievement in a global environment.

What this funds: TERRA's Mini-Grants are intended to support school-based projects in grades pre-K through 12 that are consistent with TERRA's mission, and have a positive impact on education by using technology. These grants should fund initiatives that utilize technology in a new and innovative way or sustainability initiatives seeking to encourage and support creative, local environmental education and stewardship activities.

Who can apply: Florida public, charter, and private schools and educators are eligible to apply.

Amount awarded: A total of \$50,000 will be made available for a limited number of awards ranging from \$500 to \$3,000. Grant applications may be submitted for the 2015-2016 school year by midnight September 30, 2015. The TERRA Grant Committee will review proposals and make funding recommendations to the TERRA Board of Directors.

What we are looking for: TERRA seeks applications for projects in which students participate in learning experiences that utilize technology in an innovative way or promotes environmental sustainability. **Funding is intended to encourage and support creative activities that build on the unique assets and strengths of individual education communities.** As part of this project, individual receiving awards will be required to share what they learn with the broader community through outreach such as public events, presentations and displays and/or media engagement. Preference will be given to projects with matching funds or in-kind services.

Details:

- **The deadline for the 2015-2016 school year is September 30, 2015. Applications received after this date will not be considered.**
- Financial assistance is limited to \$3,000 per school, per year.
- Grants will be made to schools to fund the project specified in the proposal.
- Grantees will be required to submit an interim report and a final report using an electronic form provided by TERRA.
- The Teacher/Applicant listed is whom we will contact regarding your application.
- Inquiries should be submitted via email to: grants@terraonline.org.

Application Instructions:

- To apply, please submit this completed form by September 30, 2015.
- Fill out the form completely
- Gather appropriate signatures. Applications without signatures will not be considered.
- Submit signed proposal via e-mail to grants@terraonline.org with your school name contained in the filename.
- We will confirm receipt of your application within 2 weeks via email. If you have not heard from us, please contact us at grants@terraonline.org. Awards will be sent within one month of application deadline.

TERRA MINI-GRANT APPLICATION 2015-2016 SCHOOL YEAR

A. SCHOOL AND APPLICANT INFORMATION

Submission Date:	9/17/2015	School Year: 201-2016
School Name:	Scheck Hillel Community School	
Type of School:	<input type="radio"/> Public <input checked="" type="radio"/> Private <input type="radio"/> Charter	
Student Enrollment:	1046	Number of Teachers: 190
Range of Grade Levels at School:	18 month-12 th grade	% Eligible for Free/Reduced Lunch: n/a Students pay for lunch in the tuition fee
School Mailing Address:	19000 NE 25 th Ave	
County:	North Miami Beach	
Principal Name:	Dr. Monica Wagenberg	
Principal's Email Address:	wagenberg@ehillel.org	
Applicant Name:	Nancy Penchev	
Applicant's Phone #(s):	305-9312831	843-409-1496
Applicant's Email Address:	Penchev@ehillel.org	
Applicant's Affiliation to School/Organization	Media teacher and Instructional Technology Coordinator Lower School	
If Applicant is a Teacher, please list:	Teacher's Grade Level(s): ECE- 5 th grade	Teacher's Subject(s) Area: Media and Technology
If Parent/Community Volunteer or Other non-school staff, please list School Contact as a Co-Applicant:	Co-Applicant Name: Nilam Patel	Co-Applicant Affiliation to School/Organization: teacher
If Co-Applicant is a Teacher, please list:	Teacher's Grade Level(s): K-5	Teacher's Subject Area(s): Science lab

B. PROGRAM INFORMATION

Please list the focus area(s) for this TERRA Mini-Grant request.	Student maker lab	Technology tools	Recycling	STEAM (Science, Technology, Engineering, Arts, and Math)
--	-------------------	------------------	-----------	--

C. PROJECT INFORMATION

Project Title:	MAKING It New Again		
Project Start Date:	10/28/15	Project End Date:	6/1/2016
# of Students Participating:	250	Grade Levels of Students Participating:	2 nd -5 th
Mini-Grant Abstract (300 word max): Briefly describe what your proposed project is about. Abstracts of winning proposal will be viewable at www.terraonline.org			
<p>The "MAKING it New Again" project will engage students in recycling and making new products from old materials. This project has many facets. One part is a student led club on Wednesday mornings called "Maker Moments with Shalom Lev" in which Shalom Lev, a 4th grade student, helps others develop an idea, design a product, and create the product using recycled products and crafting supplies. The weekly club is open to grades 2-5. Another part of this project is MAKER Lab during media class time. The month of December will be focused on the MAKER lab. Students will select an engineering/MAKER challenge and create their product. Challenges range from building bridges, to roller coasters, to jewelry, and clothing design. Students will employ the design thinking model and follow the steps of idea, design, proposal, model, presentation. This project will take place in a blended learning format, with both class time and homework. The activities and materials, such as videos, examples, and information, will be housed on the Media class Google Site to enable students to work in multiple modalities and locations. The final area of this project is our Girls Building STEAM and Boys STEAMing it Up clubs. These free afterschool clubs allow students to "play" with Science, Technology, Engineering, Arts, and Math and realize these are fun subjects! The MAKER wall is part of the clubs, and the funds from this project will enable students to do more activities, like building steam boats, marshmallow towers, robot programming, and</p>			

TERRA MINI-GRANT APPLICATION 2015-2016 SCHOOL YEAR

clothing/jewelry design. These funds will impact students and not only build their knowledge, but also their excitement for learning.

Mini-Grant Project Proposal (1500 word max)

Please explain how your proposed project/activity will enhance learning for your students. Include the following:

- 1) How is your project innovative? (25 points)
- 2) How will it fit into your curriculum (include standards)? (10 points)
- 3) How will it encourage long-lasting change in your classroom, school or community? (20 points)
- 4) How will technology be utilized? (20 points)
- 5) What evidence will you collect to show student gain? (10 points)
- 6) How will participants share your project results with the community? (15 points)

Innovation by definition is the process of making something new. This project is centered on that very concept. MAKER is one of the hot button topics in education today because it takes children to a new level of thinking and innovating. The Future of Educational Technology Conference has an entire section of programming dedicated to the MAKER movement, as does the International Society for Technology in Education. The MAKER movement leads students to a deeper thinking on their projects, it forces them to reflect and modify their ideas that do not work, and pushes them in to using higher order thinking skills. I believe "MAKING It New Again" is the very characterization of innovation.

My standards are the ISTE/NETS standards (<http://www.iste.org/standards/ISTE-standards/standards-for-students>). The first strand of these standards is Creativity and Innovation, followed by Communication and Collaboration, as well as Critical Thinking, Problem Solving, and Decision Making. This project fits with each of these strands. While the in class portion lasts about one month, the before school and after school clubs are the entire year. We also have an open door policy, meaning students can come in before or after school any day to work, read, or play. This policy helps extend their school day and make learning something that they are taking the initiative to seek out.

Last year, I experimented with this concept of MAKER with small groups of students during club time after school and also in one class as a reward. I had half a shelf of art supplies and asked parents for any electronics that no longer worked, toys they no longer needed, or legos/blocks. The results were amazing! Students created amazing items repurposed from the recycled items donated by school parents and staff. An old teapot was transformed into a bug observatory. Nonworking remote control cars were taken apart and transformed in to catapults and solar ovens. One group took apart an old laptop and reused the letters to make a game. They took their ideas much further than I anticipated and expected. It was such an intriguing idea for the kids, I had students beg to come to school early so they could continue their work. I even sent a laptop home for the summer with a student who wanted to see the insides and figure out how it worked. A simple idea to try in a small group inspired a larger group and that led to what is now our MAKER wall. It has also changed how my other topics are taught. Before I would give students the project with tight parameters, now I give them the idea and what I am looking for. The students then use their design thinking skills to research, create, and build. My approach to teaching and learning has changed due to the MAKER and design thinking approach. My goal is to share this approach with my lower school staff in hopes that they begin to think and look for ways this can be used in their classrooms as well.

Technology will be utilized in the "MAKE It New Again" program in many ways. The lesson plan and resources for students will be housed online on my Google Site. Students will use our Media class set of iPads to access the videos, directions, challenges, and examples. They will also be given a set of links to use for more information and planning. During the challenge building, part of the responsibilities of the teams will be to document their journey through photographs. They will use an iPad to take pictures as they research, build, test, re-engineer, and modify their creations. After the MAKER unit, they will use their pictures to create an APP-smashed presentation of their challenge, what they thought, how they worked, what they learned, and how they would do it differently next time. Technology will also be used in the project depending on the challenges selected by the students. Challenges to choose from may include adding lights and movement, robotic coding, and using Makey-Makey to create a project. One challenge is to create greeting cards that involve lights, movement, and sound. Another challenge is to program a robot to complete an obstacle course. Makey-Makey allows students to create their own video game, touch sensor game, and many other ideas. Each challenge requires students to research information online and apply their learning to the task at hand.

The evidence to show student gain will come from three sources. First, students will take a pre-unit assessment to determine their feelings about their ability to conduct research and complete MAKER challenges. At the end of the unit, they will again do the self-efficacy survey to determine if their belief in themselves and their abilities has changed. Their final presentation on their MAKER challenge will also give feedback on the learning. Students involved in the clubs will also be interviewed to find out how they liked the activities, if they have changed in their approach to learning (adding more design thinking), and if they would do this activity again. At the end of the unit and clubs, parent surveys will be sent out to determine the effectiveness of the program through parents' eyes. The final source of assessment will be through the teachers. Teachers will also be asked to complete a survey giving feedback on the unit and if students have applied design thinking to their classroom experience. This data will help determine if the clubs and this particular unit of study will continue in following years. The design thinking aspect results will also be shared with teachers and administrators to hopefully impact classroom instruction. An additional follow up will be a club meeting called Deconstruction, where students take apart an item and label the parts to show how the item works. Depending on how this

TERRA MINI-GRANT APPLICATION 2015-2016 SCHOOL YEAR

unit goes in club time, it may be added to the curriculum for the next year. Students will compete in Project Deconstruction with the Thinglink group.

At the end of the unit, students will create their APP-smashed presentation that takes viewers from start to finish of the challenge with reflections by the students involved. Projects will be displayed in a MAKER museum with a QR code that will link to and show the presentation of each group. Families will also be invited to peruse the museum creations. Each grade level will join together to view that grade level's presentations and projects. The presentation links will also be shared with the parents, so they can watch at a later time.

MAKING It New Again is a project that involves deep thinking, problem solving, and communication. It will help students see that throwing away their old toys or electronics is not the best thing to do. Instead they should try to utilize those items in new ways. Students will gain knowledge through research, as well as hands on activity. This approach to learning can be connected to their classroom projects and help them even more with their learning.

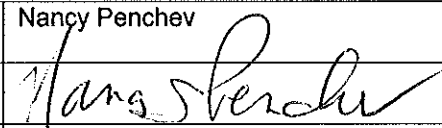
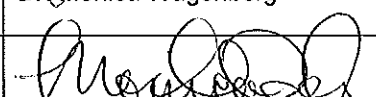
D. BUDGET: Describe all costs associated with your project activity. *(Attach additional pages if necessary)*

Service/Item Description	Cost
Arts and Craft supplies (pipe cleaners, craft sticks, glue, straws, etc)	\$200
APPs needed for creation and research	\$100
Sphero robotics	\$300
Total Cost of Project	\$1800
Amount requested from TERRA:	\$1800
If matching/additional funds have been identified to help pay for your project, please list →	Source:
	Amount: \$
If any goods or services have been donated for this project, please list →	Source: parents and teachers
	Goods/Services: extra toys/electronics to recycle and remake

E. COMMITMENT

By submitting this application and signing below, you agree to the following:

- TERRA is not liable for any injuries or losses that may occur as a result of participation in the proposed project.
- The applicant is responsible for submitting an interim report and a final report using an electronic form provided by TERRA. Schools that do not submit an interim report and a final report will not be eligible for future funding opportunities.
- Equipment purchased using mini-grant funds will become the property of the school receiving funds.

Applicant's Name:	Nancy Penchev		
Applicant's Signature:		Date:	9/15/15
School Administrator/Principal's Name:	Dr. Monica Wagenberg		
School Administrator/Principal's Signature:		Date:	9/15/15

**TERRA MINI-GRANT APPLICATION
2015-2016 SCHOOL YEAR**

Budget information continued:

Service/Item Description	Cost
Makey, Makey technology kit	\$300
Storage containers for in progress projects	\$200
K'Nex kits for building	\$200
Tools (hammers, screw drivers, pliers, nails, screws, etc.)	\$100
Jewelry making supplies (wires, beads, clasps, etc)	\$100
Clothing design supplies (shirts, iron-on, paint, fabric, sewing machine, thread, ETC)	\$200