TORRANCE EDUCATION FOUNDATION

APPLICATION

TEF STEM Initiative Grant

Applicant(s): Nancy Ton Job Title: Teacher

School Site: Madrona M.S Principal: Jeff Neilsen

Contact Information:

Day Phone # (310) 533-4562 x8773 Evening Phone # (562) 682-3000

Email: Ton.nancy@tusd.org

Program/Event (Please select 1 per application)

○ Engineering ** After-School Club	○ First Lego League/ Robotics	○ Family STEM Night	○ Hour of Code
			☒ OTHER
○ Math Counts	○ Science Olympiad	○ CyberPatriots	○ Stellar Xplorers

** Applicants may submit separate applications for multiple programs/events.*

*** Applicants for Engineering After-School Club, please include program title & curriculum/description*

Did this school receive a TEF STEM Initiative Grant for this program/event last year? ☐ YES ☒ NO

Number of years program/event has been in place at your schools:

X 0 years (new) _____ 1 year _____ 2 or more years

Targeted Grade Level(s) _____ Estimated number of participating students: _____

Estimated schedule of events and planning (ex: tentative dates for future information meeting, club meeting times, **competitions or event dates**, etc.)

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wants to celebrate and support grant winners!

*Grant winners are **required to notify** TEF (Admin@TorranceEducationFoundation.org) of future events, competitions, and ceremonies related to the approved program/event. Please give at least two weeks notice.*

Nancy Ton
Applicant Signature Date 9/25/18

Principal Signature Date 9/26/18

**** Completed grant applications should be scanned and emailed to Admin@TorranceEducationFoundation.org by 3:00pm, September 28th.***

Stemtastic!

Purpose of Event: The purpose of Stemtastic is to introduce and inspire elementary students to explore engineering and STEM. During the event, students utilize the engineering design process to complete the assigned challenge.

Event Details: Ideally, I would like to host 2 different events for each of the elementary school that will be feeding into Madrona, Fern and Hickory. For Fern's event, my 8th grade students and I would walk to the school. For Hickory, we would need transportation. We can either request for a district bus or take public transportation. I would also need 2 sub release days, one for each of the event.

Event Cost:

Item Description	Item Cost	Total
Sub Release for day of event X2	$150	$300
Transportation to Hickory	District Transportation: $300 Public Transportation: $1.00 per student	District: $300 Public: $30
Medals for winners	24 (8 for 1st, 2nd, and 3rd place winners from each school) @ $4.10	$120 (including tax and shipping)
Supplies for challenges	$100 per school	$200

GRAND TOTAL: $950.00

Challenge: Students form teams of 4 to compete in the event. For each event, groups use the engineering design process to brainstorm, design, build, and test their ideas.

Spaghetti Tower

Description of Challenge	Number of students per group	List of Materials needed per group	Scoring	Time
In this challenge, teams are tasked with		20 sticks of spaghetti	Tallest tower: 15 points	Building: 30 minutes

building the tallest tower that can successful support the weight of a standard size marshmallow on the top for at least 5 seconds.	4	1 marshmallow 1 meter of tape	Second: 10 points Third: 9 points Fourth: 8 points Fifth: 7 points Sixth: 6 points Seventh: 5 points Eighth: 4 points Ninth: 3 points Tenth: 2 point	Testing: 10 minutes

Aluminum Boats

Description of Challenge	Number of students per group	List of Materials needed per group	Scoring	Time
In this challenge, teams are tasked with a boat that can hold as much weight as possible.	4	1 piece of 4x4 inch aluminum foil	Most weight: 15 points Second: 10 points Third: 9 points Fourth: 8 points Fifth: 7 points Sixth: 6 points Seventh: 5 points Eighth: 4 points Ninth: 3 points Tenth: 2 point	Building: 30 minutes Testing: 30 minutes

Marshmallow Catapult

Description of Challenge	Number of students	List of Materials needed per group	Scoring	Time

	per group			
Distance: In this challenge, teams must brainstorm, design, build, and test a catapult. The team that launches the object furthest will win the most points. Accuracy: In this challenge, teams must brainstorm, design, build, and test a catapult. Each team will get 10 marshmallows to launch inside a container.	4	10 popsicle sticks 6 rubber bands 1 plastic spoon 1 binder clip 1 plastic cup	Furthest: 15 points Second: 10 points Third: 9 points Fourth: 8 points Fifth: 7 points Sixth: 6 points Seventh: 5 points Eighth: 4 points Ninth: 3 points Tenth: 2 point Accuracy: 10: 15 9: 10 8: 9 7: 8 6: 7 5: 6 4: 5 3: 4 2: 3 1: 2	Building: 45 minutes Testing distance: 15 minutes Testing accuracy: 30 minutes