MANIFEZT
FOUNDATION

Community Development STEM Nonprofit

501(C)(3) NONPROFIT
EIN: 47-5363717

www.manifezt.org
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Miami, Fl 33137

@ManifeztFDN

OUR BOARD

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OUR MISSION

Implement STEM Initiatives that impact Education and Workforce Placement.

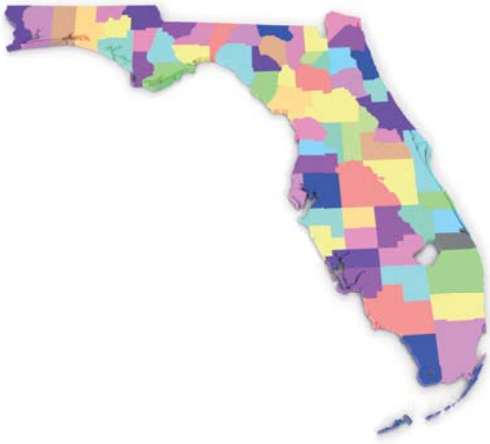
Currently, the majority of locals in South Florida are employed in hospitality careers which are relatively low paying, hence our poor ranking in median income.

STEM careers are the highest paying of any industry – but STEM subjects are the most expensive to teach, with the practical side being the first to go in times of austerity. Here at the Manifezt Foundation, we supplement what kids are learning in school with hands-on, project based workshops designed to engage children, using volunteers from local universities.

Serving

1,100+ Impacted Annually

Areas:
Miami-Dade
Broward



THE NEED

Study after study on educational opportunity tends to reinforce one underlying theme – the education system in America needs significant improvement.

The debate commences when one attempts to solve how and where to improve it.

Florida is

41st

in the nation in total funding per student in public schools.

Florida is

38th

in median income in United States.

in Florida

87%

of students are enrolled in public schools.

Miami is the

#1

most unequal city America.

OUR PLAN

In public schools, unfortunately, due to the lack of funding, there has been a reduction in the hands-on elements of STEM subjects leaving students without the fun side of them. Here at Manifezt, we supplement what they are learning in school with a project-based curriculum designed to capture their interest and show them the various career options available in STEM.

We implement our workshops at community centers, libraries, and schools across South Florida using volunteers from local universities.

Since our ultimate goal is to create a highly skilled, socially conscious STEM workforce here in South Florida to drive local innovation and attract top companies from across the nation, we also provide our volunteers access to local STEM career opportunities through our exclusive job board.

Over time, the data we are collecting and analyzing will be used to influence education policy across the nation by exhibiting the importance of hands-on learning in STEM curriculums.

Youth STEM Program

Educating Tomorrow's Innovators

www.manifezt.org/programs/youth-stem-program/

Initiatives

Science In The City: Space Cadets
STEM Saturday's
Institutional Locations
Hackaton
Annual STEM Competition
Open Awareness Forum

Inspiring Future Innovators
with Coding, Robotics, and Life Sciences

Extensive hands-on stem education program for children 8-18 infused with experiments tailored to spark their interest in STEM, so we can transition into showing them the potential careers in those areas.

Through Manifezt Foundation's Youth STEM Program, our volunteers expose participants to high level Science, Technology, Engineering, and Math projects that will inspire some of tomorrow's greatest innovators.

Coding & Business Development
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Designed to immerse participants in the entire life cycle of starting, operating, and scaling an emerging technology company, this program aims to give students the educational building blocks they need to develop their own websites and mobile applications.

The children are taken on a journey through business planning, UX/UI design, front-end development, back-end development, testing, deployment, marketing, and scaling the peer selected concept. As part of this pipeline, participants will actually build, publish, and monetize a working mobile app for either iOS or Android.

Section 1: **Business Strategy**

- Concept & Planning
- Company Structure
- Business Model & Monetization
- Financial Literacy & Accounting

Section 2: **Tech Infrastructure**

- Scale & Cost
- Platforms & Benefits
- Cloud Computing
- Database & Cyber Security

Section 3: **Functionality**

- Creative Direction
- User Experience
- User Interface
- Indentifying Required Assets

Section 4: **Coding & Development**

- Programming Languages
- Development Cycles
- Optimization
- Test Product

Robotics & Engineering

-

This challenging program was created to help those in the poorest communities adjust to the ever changing workforce and preparing them with the necessary technical skills to be directly involved all things automation.

Utilizing the latest robotic STEM kits and injecting unique educational plans with influences from Lockheed Martin and MIT, the Manifezt Robotics and Engineering pipeline is geared to groom the world's next rising stars by teaching them the fundamentals through hands on course work, then aggressively transitioning into advanced robotics.

Section 1: **Theoretical**

- Assessment: Hands-On Bot Build
- Practical Applications
- Conceptual Modeling
  (AutoDesk, Ros Indigo, & RobotC)

Section 2: **Engineering Competencies**

- Project Planning / Strategy
- Sourcing Materials
- Prototyping

Section 3: **Components**

- Power Source
- Actuation & Sensing
- Manipulation
- Interaction & Navigation

Section 4: **Programming**

- Platforms Introductions
  (Linux, RaspberryPi, & Arduino)
- Modules & Sensors
- Data-Logging & Scientific Methods

Life Sciences

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In collaboration with local universities and educational training facilities, this educational pipeline is geared towards exposing participants to Human Biology, Chemistry, Life Sciences and Genetics, through group experiments which include projects such as cadaver dissection, insect organ harvesting, mixing chemical compounds, and experimenting with prosthetic limbs.

Section 1: **Exposure & Capacity Assessment**

- Biology: Dissections
  (Heart, Brain, Eyeballs, Insects)
- Chemistry: Chemical Compound Reactions
- Earth/Space: Habitation & Plant Growth

Section 2: **Human & Animal Biology**

- Understanding Structure of DNA
- Structure of DNA: Barcoding & Elise
- DNA Manipulation using RNAi Mechisms
- Mammal Dissections

Section 3: **Chemistry**

- Polymer Applications
- Chemical Kinetics & Equilibrium
- Properties of Matter
- PH Testing
- Spectroscopy

Section 4: **Physical & Earth/Space Science**

- Creation of Force, Energy, & Motion
- Heat & Thermal Dynamics Concepts
- Introduction to Rocketry & Flight

Science In The City

Space Cadets Initiative

www.manifezt.org/science-in-the-city

Often times, lecture based learning fails to establish a connection between the student and the material which contributes to the dwindling interests in STEM fields. Our new “Science in the City” initiative teaches advanced STEM concepts through fun, hands on experiments designed to ignite the inherent curiosity in every child.

To combat this trend, we developed our forward thinking “Science in the City” program to show the youth how different things they learn in science class will be used throughout a specific career – our first career path being a Space Cadet. Throughout the program, we explore topics ranging from earth & space, technology, robotics & engineering, to life sciences.

Free for all children involved, we utilize project based lessons to ensure the participants are captivated by the possibilities STEM can offer.

1

EARTH & SPACE

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Explanation:
In this part of the curriculum, we teach participants about climate change, gravity and astronomy, and how they differ based on which planet you’re on. Our project based lessons include experiments such as making a comet, the water pendulum, and the greenhouse effect in the bottle.

Through highlighting these differences, we help children expand their mind and understand the vastness of the universe, while explaining some of the phenomena currently being experienced here on earth.

2

TECHNOLOGY

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Explanation:
For this section, our goal is to demonstrate to students how coding is utilized by astronauts on their missions.

The projects we conduct in this section include the Astro-Pi experience which shows the children how space exploration systems work with one another, and explains how to repair it in case of emergencies, the Solar Systems and ISS VR experience so kids can see what life is like in space, and the robotic arm experience to see how samples are collected in hostile environments.

3

ROBOTICS & ENGINEERING

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Explanation:
In addition to its applications in space, as automation takes on a bigger and bigger role in the workforce it will be absolutely essential for the youth in underprivileged communities to become familiar with the technology as it is replacing many blue-collar jobs they likely could have pursued.

We captivate their interest by having them build drones/rovers, and their own water rockets.

4

LIFE SCIENCES

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Explanation:
This segment of our curriculum is dedicated to understanding the effects space exploration has on the human body.

Through this venture, we are able to teach children about the different systems in our bodies, while giving them an up close and personal look at various organs during dissections.

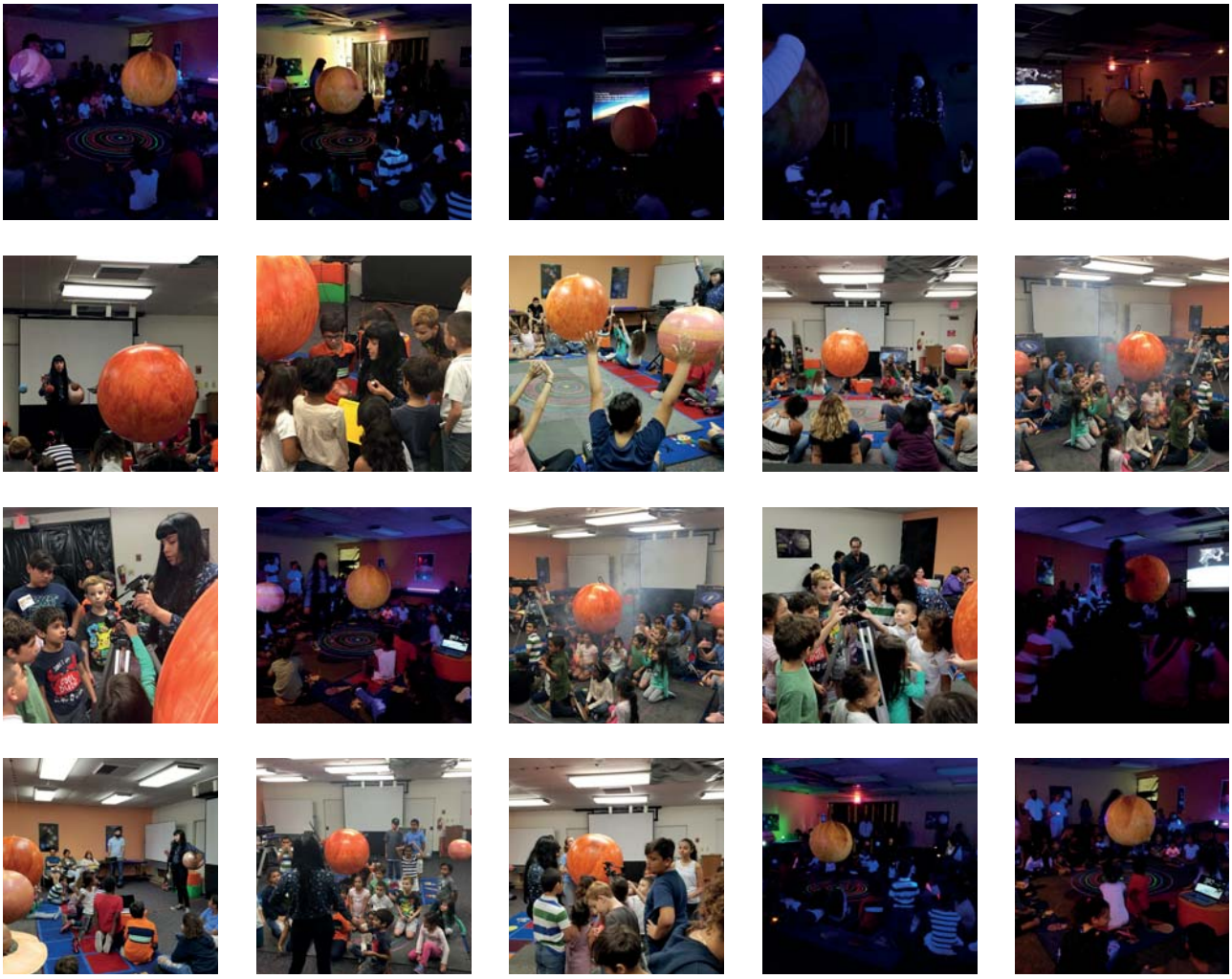
WATER ROCKETS

SOUTHWEST REGIONAL LIBRARY

View Online: www.manifezt.org/impact

SCAVENGER HUNT IN SPACE

MIAMI LAKES LIBRARY



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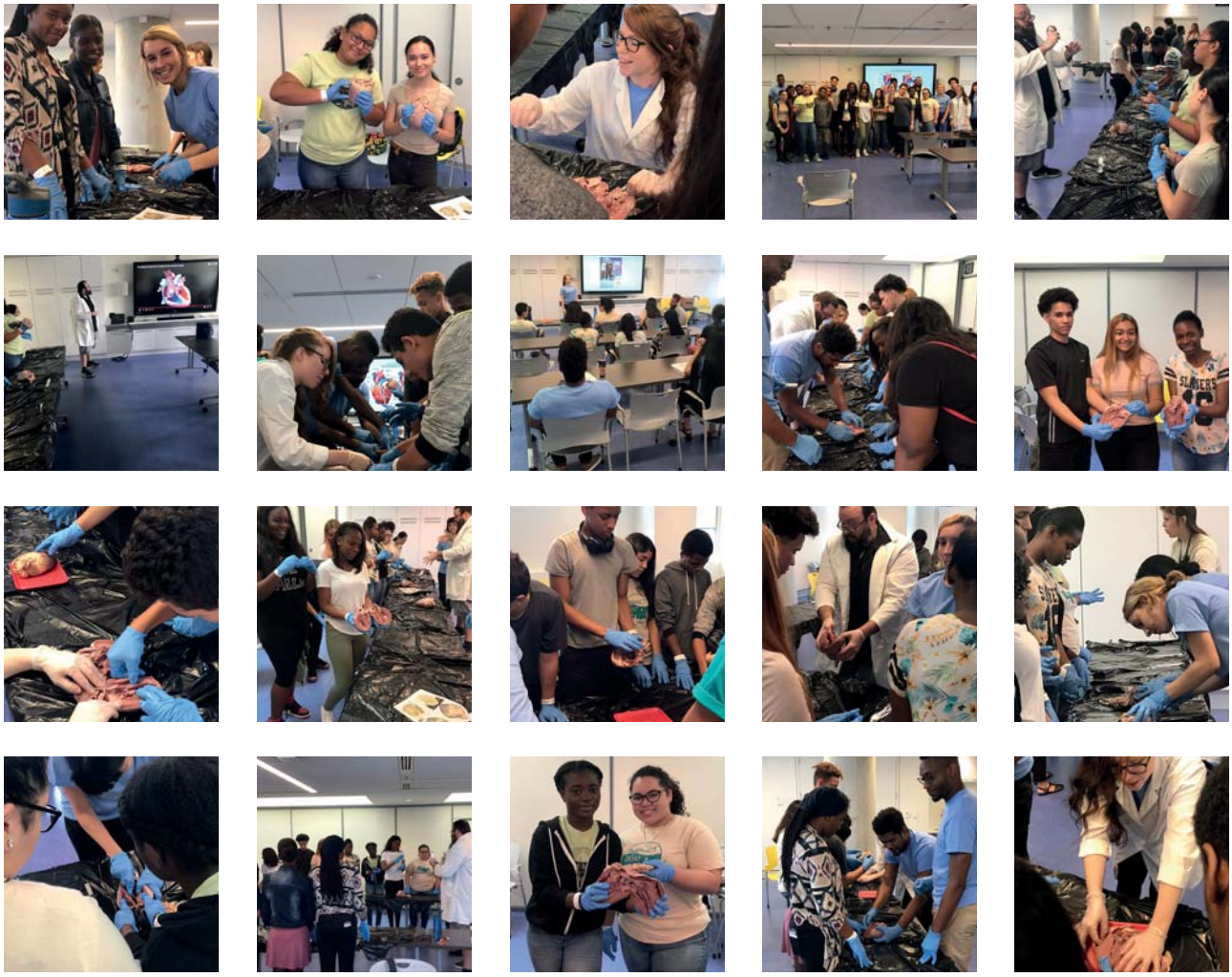
HEART DISSECTION

Phillip and Patricia Frost Museum of Science



View Online: www.manifezt.org/impact

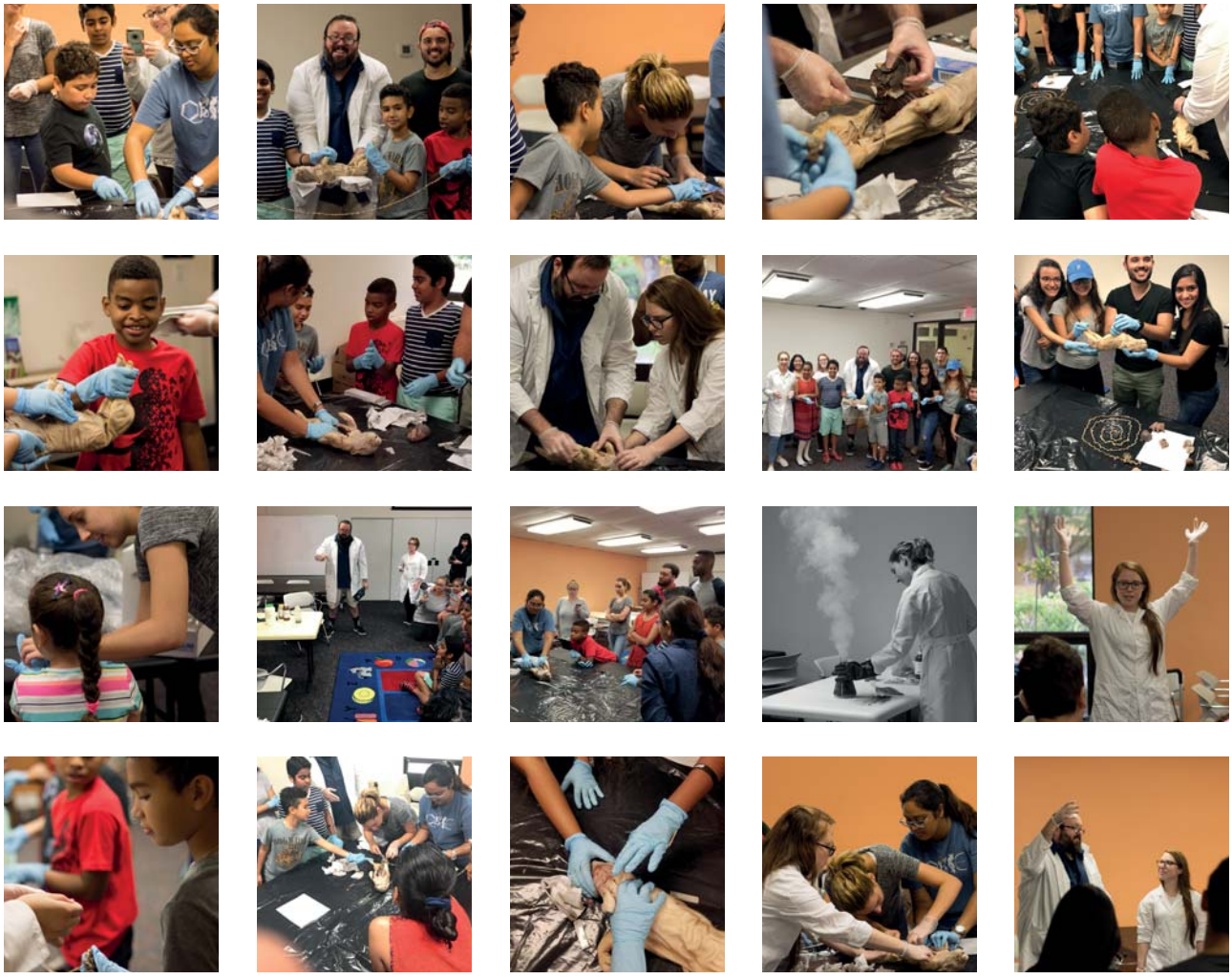
GREENHOUSE EFFECT

Miami Lakes Library

View Online: www.manifezt.org/impact

PIG DISSECTION & CHEM REACT.

Miami Lakes Library



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STEM ROBOTICS COHORT 6 MONTHS

Linda Lentin K-8 Center (Miami-Dade County Public School)

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YOUTH HACKATHON PRODUCT PITCHES

Miami Country Day School

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CODING & LIFE SCIENCES

Little Haiti Optimist Club

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CODING & BUSINESS DEV.

Joe Celestin Community Center










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FAMILY HEALTHCARE W/ MAYOR

City of North Miami Community Center




















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STEM CAREERS WORKSHOP

ARCHBISHOP CURLEY NOTRE DAME HIGH SCHOOL




















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STEM SATURDAY'S HEART DISSECTION

SHALOM COMMUNITY CENTER W/ CITY MAYOR

View Online: www.manifezt.org/impact

PARTNERSHIPS
PHILANTHROPIC & INITIATIVES

IN ORDER FOR OUR PROGRAMS TO REMAIN FREE FOR ALL PARTICIPANTS, OUR CORPORATE PARTNERS PLAY A VITAL ROLE IN OUR LONG-TERM SUCCESS.

RECOGNIZING THE NEED FOR IMPROVED STEM EDUCATION IN SOUTH FLORIDA, OUR PARTNERS WOULD SUPPORT US IN VARYING WAYS BY CONTRIBUTING TO THE SOCIALLY CONSCIOUS TECH ECOSYSTEM WE ARE CURRENTLY BUILDING.

Here at Manifezt, we have developed a strategic system that allows us to keep overhead costs relatively low so we can invest directly into the equipment needed to create the innovators and STEM workforce of tomorrow.

Rather than rent, build, or buy places across Miami to serve different communities, we utilize churches, libraries, community centers and schools to run our workshops.

Rather than hiring a full-time staff of teachers, we coordinate volunteers through relationships with local universities, that also serve as role models to the kids involved – giving them relatable examples to learn from and look up to.

The lion's share of the capital raised through individual donations and corporate sponsorship is invested directly into the required equipment and materials to run our workshops.

Laptops, RaspberryPis, organs and robotics equipment are just a few of the elements that are essential to teach our curriculum. Thanks to our flexibility, the money we raise has a wider impact than donating to one specific institution because whenever possible we re-use equipment and spread it across communities.

PARTNERSHIP TYPES

PHILANTHROPIC

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Our philanthropic partners recognize the importance of our mission and the fact that unfortunately, STEM education is the most expensive type due to the equipment needed to teach.

Request Details: kaven@manifezt.org

INITIATIVE

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In order to keep costs as low as possible, we implement our curriculum at various community centers, churches, libraries and schools across the city. We partner with local institutions, for our locations, and utilize partnerships with local universities to recruit volunteers (that we then train) to teach our kids.

Request Details: kaven@manifezt.org

Organization

Manifezt Foundation

Implementing STEM initiatives to impact education and workforce placement.

Designation: 501 (C)(3) Nonprofit
EIN: 47-5363717
FL Doc #: N1500001-0614
Website: www.manifezt.org
Media/Press Inquiries: media@manifezt.org

Donations via website: Manifezt.org/Donate
Checks payable to: Manifezt Foundation

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