Texas Education Agency

EMPOWERMENT H S

T-STEM Renewal Application

2019-2020

Contents

Background

District Affiliation

SOUTHWEST SCHOOL

CD #: 101838
Region: 04
Mailing Address (Line 1): 3333 BERING DR STE 200
Mailing Address (Line 2):
City, State, Zip: HOUSTON, TX 77057

School Affiliation

EMPOWERMENT H S

CDC #: 101-838-001
Region:
Mailing Address (Line 1): 6400 WESTPARK DR STE 200
Mailing Address (Line 2):
City, State, Zip: HOUSTON, TX 77057

Academy Information

T-STEM Academy Name:
EMPOWERMENT H S

Are you currently in the 2018-2019 planning year or are a 2018-2019 planning grantee?

No

What grade level range will your academy serve in the 2019-2020 school year?
9-12

Grade Level	Number of Students	School / CDC # Where Students are Enrolled
9	120	EMPOWERMENT H S (101838001)
10	100	EMPOWERMENT H S (101838001)
11	90	EMPOWERMENT H S (101838001)
12	80	EMPOWERMENT H S (101838001)

Contacts

Business Partner

Affiliation: Microsoft Philanthropies TEAL
Job Title: Houston Regional Manager
Full Name: Mrs. Tonya Davis
Email: tonya@tealssk12.org
Phone Number: 281-881-2610

Superintendent

Job Title: Superintendent
Full Name: Ms. Janelle James
Email: jjames@swschools.org
Phone Number: 713-784-6345

Applicant

Job Title: Principal
Full Name: Ms. Bianca Clark
Email: bclark@swschools.org
Phone Number: 713-954-9528

IHE Liaison

Affiliation: Houston Community College
Job Title: Dual Credit Coordinator
Full Name: Ms. Athena Walker
Email: athena.walker@hccs.edu
Phone Number: 713-718-8618

Narratives

Model Implementation

Which T-STEM model does the district intend to implement at this time? Within these models, there are variations. For this purpose campus is defined as a CDC number not a physical location.

Stand Alone Academy - All students on the campus are enrolled in the T-STEM academy

Endorsements

Identify the current endorsements that are offered:

- Science, Technology, Engineering, and Mathematics (STEM)
- Business and Industry
- Arts and Humanities
- Multi-disciplinary Studies

Certificates

Does this academy offer Associate Degrees to students?

No

TSIA

Does this academy administer the TSIA exam?

Yes

What ID number do students use when taking the TSIA exam?

Local District Assigned ID

Key Elements for Success

Provide a link to the job description, roles of design team, leadership team, and advisory board.

https://hs.swschools.org/T-STEM

Provide a link to the final, signed, and executed MOU.

https://hs.swschools.org/T-STEM

Provide a link to the academy's master schedules.

https://hs.swschools.org/T-STEM

Provide a link to the academy's written admission policy and enrollment application.

https://hs.swschools.org/T-STEM

Provide a link to the academy's written recruitment plan including a timeline of recruitment and enrollment events, and recruitment materials for distribution at feeder schools and other appropriate locations in the community

https://hs.swschools.org/T-STEM

Provide a link to the academy's internship and externship opportunities.

https://hs.swschools.org/T-STEM

Free-Response

Describe how the Academy will recruit, support, and retain highly qualified teachers.

In order to recruit highly qualified teachers we advertise for program-specific positions through our district website as well as attend multiple job fairs throughout the year. We are building university partnerships with the University of Houston and Prairie View A&M University to recruit new graduates in the field of Math, Science, Engineering and Computer Science.

In order to build capacity in our teachers, they attend PLTW training during the summer months for the PLTW courses they will teach the upcoming year. OUr district provides opportunities for teachers to attend the SEEC Conference hosted by NASA, TX PLTW Conference, PLTW Summit, JASON Learning Conference and various STEM Conferences. Our campus has a designated Instructional Coach to support teachers throughout the year; to add another layer of support, our district has established The Learner Series-a series of professional development for new teachers and Southwest U-a series of professional development offered to any teacher interested in growth.

By providing such professional development and creating a culture the support teacher growth, we are able to retain quality teachers.

Describe the current STEM pathways available at the academy.

There are currently two pathways for our students-Engineering and Computer Science.
Engineering
9th grade-Introduction to Engineering
10th grade-Principles of Engineering
11th grade-Cybersecurity
12th grade- Engineering Design/capstone course

Computer Science
9th grade-Foundations of Computer Science
10th grade-Computer Science Applications
11th grade-Cybersecurity
12th grade-Principles of Computer Science/capstone course

Describe how strategic alliances with industry partners and IHEs will support the Academy. The description should include details regarding the role of each IHE, business, and/or community partnership; along with parent/family partnerships and communication conventions with the Academy.

Our district has a community partnership with Chevron which has been generous and supportive of our district. They provide STEM field trips through our science classes, STEM conferences, materials, industry speakers and training for STEM teachers. Chevron recruiters in partnership with Project Grad provide Lunch and Learn events on the campus for parents and students to be educated on STEM endorsements, graduation plans, and career opportunities.

The district partnership with Genesys Works provides pathways to career success for high school students in underserved communities through skill training, paid work internships, and college preparedness.

Our MOU with Houston Community College provides students with the opportunity to take Dual-Credit courses in US History, Government, Economics, English Literature, Sociology, Psychology, and Speech.

Our MOU with the University of Texas-Tyler allows our students college credit in Introduction to Engineering and Principles of Engineering.

Technology Education and Literacy in Schools (TEALS) offers summer training for our Computer Science teacher and daily support by co-teaching the capstone course. Through this partnership, our students are exposed to real-world applications of computer science.

We have various opportunities to involve parents such as PBL Showcase, Project Grad evening events, course selection for all grade levels, and college/career fairs.

Describe the Academy's work-based and contextual learning in the curriculum.

The use of Project Lead the Way curriculum allows for critical thinking and real-world applications in our STEM courses. Because we are a whole-school STEM program, we utilize Project Based Learning (PBL) in all content areas and electives. PBL allows students to make connections between what they are learning in the class and the world around them while also allowing students to work collaboratively with their peers in work-based roles. Students showcase their final products twice a year at our PBL night. At this showcase, students must show mastery of soft skills such as public speaking, technical writing and creating presentations, all skills which are much needed in any work field.

Our partnership with Genesys Works allows our seniors to work in their STEM field of study half a day to support the work in their capstone course.

TEALS also provides work-based learning by providing a Computer Programmer to co-teach daily.

We have established a campus chapter of Technology Student Association (TSA) that holds various competitions for our students to showcase skills in a very structured way.

Describe the STEM-focused extracurricular activities (field experiences, clubs, and competitions) offered to students.

-Girls STEM Academy which is a gender-specific program designed to encourage girls to apply science, technology, engineering and mathematics (STEM) concepts and skills through hands-on, inquiry-based learning. Participants engage in innovative and creative applications of science content. Students will problem-solve, build confidence in construction, experiment with engineering challenges and learn about robotics, technology and engineering through hands-on activities. The Girls STEM Academy curriculum is developed to spark interest in STEM careers and support state and national initiatives to improve math and science performance. The program meets the needs of diverse learners and ultimately addresses the under-representation of women in STEM fields. Girls in this program complete five sessions at the Houston Space Center throughout the fall semester.
-Boys on the Block is a gender-specific program designed to build boys programming skills through the use of Spheros.
Our teachers and students also have the opportunity to participate in the JASON Argonaut Program. In order to participate, students must have been exposed to JASON Learning and teachers must have attended training and taught JASON modules.
-Technology Student Association (TSA)
-TSA regional competitions
-Chess Club
-Robotics Club
-College field trips