



WEST MS/H S
T-STEM Renewal Application
2019-2020

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Background

District Affiliation

WEST ISD

CD #: 161916

Region: 12

Mailing Address (Line 1): 801 N REAGAN ST

Mailing Address (Line 2):

City, State, Zip: WEST, TX 76691

School Affiliation

WEST H S

CDC #: 161-g16-001

Region:

Mailing Address (Line 1): 801 N REAGAN ST

Mailing Address (Line 2):

City, State, Zip: WEST, TX 76691

WEST MIDDLE

CDC #: 161-g16-042

Region:

Mailing Address (Line 1): 801 N REAGAN ST

Mailing Address (Line 2):

City, State, Zip: WEST, TX 76691

Academy Information

T-STEM Academy Name:

WEST MS/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?

6-12

Grade Level	Number of Students	School / CDC # Where Students are Enrolled
6	80	WEST MIDDLE (161916042)
7	90	WEST MIDDLE (161916042)
8	110	WEST MIDDLE (161916042)
9	120	WEST H S (161916001)
10	120	WEST H S (161916001)
11	100	WEST H S (161916001)
12	100	WEST H S (161916001)

Contacts

Business Partner

Affiliation: University of Texas at Tyler Ingenuity Center

Job Title: Executive Director

Full Name: Dr. Michael Odell

Email: modell@uttyler.edu

Phone Number: 903-566-7132

Superintendent

Job Title: Superintendent

Full Name: Mr. David Truitt

Email: dtruitt@westisd.net

Phone Number: 254-981-2000

Applicant

Job Title: Principal

Full Name: Mr. Donald Snook

Email: dsnook@westisd.net

Phone Number: 254-981-2050

IHE Liaison

Affiliation: McLennan Community College

Job Title: Director of High School Pathways

Full Name: Mrs. Londa Carriveau

Email: lcarriveau@mclennan.edu

Phone Number: 254-299-8937

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
- Public Services
- 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.westisd.net/apps/pages/index.jsp?uREC_ID=1139206&type=d&pREC_ID=1406044

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

https://hs.westisd.net/apps/pages/index.jsp?uREC_ID=1139206&type=d&pREC_ID=1406047

Provide a link to the academy's master schedules.

https://hs.westisd.net/apps/pages/index.jsp?uREC_ID=1139206&type=d&pREC_ID=1406049

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

https://hs.westisd.net/apps/pages/index.jsp?uREC_ID=1139206&type=d&pREC_ID=1406053

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.westisd.net/apps/pages/index.jsp?uREC_ID=1139206&type=d&pREC_ID=1406054

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

https://hs.westisd.net/apps/pages/index.jsp?uREC_ID=1139206&type=d&pREC_ID=1406058

Free-Response

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

West ISD recruits and hires highly qualified teachers. All teachers new to West ISD are enrolled in our Mentoring Program. The goal of the mentor program is to help our teachers become leaders, designers, and guide effective instruction. In helping teachers build capacity, we are creating a learning organization with the capacity to focus on the future, the capacity to maintain direction, and the capacity to prepare all students. West ISD's mentoring program combines campus-based and district level support to reduce attrition and enhance students achievement by providing dedicated, experienced, and growth-minded teachers. West ISD's Curriculum and Instruction department is the agent for the program. The Director of Curriculum and Instruction is the facilitator for teaching and learning support and ongoing monitoring for teachers new to West ISD. Proteges are required to participate a minimum of one school year. If the mentor teacher and/or the Director determine that additional mentoring time is appropriate, the protege may remain in the program for up to 3 years. As previously stated, all teachers participate in structured PLC time led by our principal, Don Snook, who was previously the principal at a state and national model STEM school. On Wednesdays, teachers participate in a book study and learn the Ingenuity Centers STEM PBL protocols, while developing projects and reviewing in a critical friends model. The teachers also learn about technology integration and share strategies that have been successful. Using this format, teachers are able to find support in their groups while reflecting on best practices in their classrooms. Teachers may also elect to attend the Texas state STEM conference and have professional development opportunities available in the summer from the Ingenuity Center. This past year, teachers from both the middle school and high school attended training offered at the Ingenuity Center.

Describe the current STEM pathways available at the academy.

STEM Pathways include Engineering through Project Lead the Way, which consists of IED, Civil and Aerospace classes currently taught with a capstone class being added for next year.

In the Public Service Pathway, Biomedical Science through Project Lead the Way is offered to the students, which consists of Principals of Biomedical Science, Human Body Systems, Medical Interventions and a Capstone class being offered in 2019.

For the Business and Industry Pathway, Computer Science courses starting with Computer Science Essentials and Computer Science Principles currently offered and Cyber Security being offered for next year.

Ag Mechanics Pathway which consists of Principals of Ag, Ag Mechanics, Ag Facilities Design and Ag Power Systems as a sequence of classes. The Horticulture Pathway, which consists of Principals of Ag, Horticultural Science, Greenhouse Operations and an additional Ag class as a sequence of classes. In addition to those pathways, West High School offers dual credit advanced classes in Mathematics and Science, which allows students to complete a STEM pathway in those academic disciplines.

For the Arts and Humanities Pathway, we offer a sequence of 4 courses in both Theater and Art for students wishing to select this pathway.

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.

West High School conducts meetings with parents to communicate information and to solicit concerns. Parents also receive communication via weekly parent newsletters sent out by teachers, access to the LMS (Schoology), email blasts, telephone blasts, school and district websites and the community newspaper.

West High School hevening events in which all parents and students are invited to attend. At the event, the parents are educated on STEM expectations, sessions about software products that we use, navigating the LMS, and accessing our grading system. There are also informational meetings discussing course selection, endorsements, dual credit offerings, and STEM careers. There is also a TSI camp held to ensure that students are prepared for the TSI test necessary for enrollment in college courses. The test is provided at no cost to the student since the MS/HS is a testing site.

West Middle/High School communicates with parents in multiple ways. All events are posted on our website

and social media pages. Teachers also produces an electronic weekly newsletter to communicate events and information to parents. The district uses an alert now system within their software to communicate

immediate information via telephone and email. Teachers also utilize Remind, a third party application that allows for mass texting of messages to stakeholders.

Before implementing new programs, West High School polls all students to ensure student consideration of issues. Input from parents and students is important part of the decision making process prior to implementing anything new. Once new programs are implemented, meetings are again held to inform parents and to allow final input. Parents also serve on the campus improvement team and SHAC committee. Parents are encouraged to visit the campus prior to enrollment to meet with the principal and campus counselor to discuss expectations and strategies for high student performance. Transparency and clarification are important for the success of the school.

West Middle/High School has an important and highly involved relationship with McLennan County College

and the Texas State Technical College. There is a relationship with the University of Texas at Tyler and The Ingenuity Center as well. The Ingenuity Center conducts Professional Development in PBL and STEM fields.

McLennan County College and Texas State Technical College provides Dual Credit support for students. All students enrolled in dual credit have full access to the college. WestMiddle/High School has an annual action plan that is revised yearly with involvement with our partners.

Partners are being actively sought to provide internships for teachers and students. Currently, Baylor Scott and White has provided internship opportunities for our students. Additional organizations are being recruited for the 2019-2020 school year.

Baylor University and the teacher certification program at McLennan County College provides quality math

and science instructors.

Our partnership with MCC and TSTC allow for meaningful experiences for our students.

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

West Middle/High School has well-defined programs that are aligned with the TEKS and CCRS. To address industry standards we have adopted Project Lead the Way to assure relevance and rigor for engineering and biomedical sciences. STEM Electives: At the Middle School Level grades 7-8 students complete PLTW Gateway to Technology courses. Gateway provides engineering and biomedical science curriculum for middle school students that challenges, inspires, and offers schools variety and flexibility. Students get rigorous and relevant experiences through activity-, project-, and problem-based learning. They use industry-leading technology to solve problems while gaining skills in communication, collaboration, critical-thinking, and creativity (PLTW Website).

Students complete GTT modules at each grade. 6th graders complete design and modeling while 7th graders complete automation and robotics, 8th graders complete medical detectives and flight and space. These units were chosen to complement the engineering and biomedical sequences offered at the high school level. At the High School Level, students will complete a STEM Pathway in Engineering, PLTW courses Biomedical Sciences for the Public Service strand, and Computer Science in the Business and Industry strand are offered as well. All courses lead to a culminating senior capstone class with presentation requirements. These courses were chosen to align with CTE standards. From the PLTW Website: PLTW Engineering is more than just another high school engineering program. It is about applying science, technology, engineering, and math to solve complex, open-ended problems in a real-world context. Students focus on the process of defining and solving a problem, not on getting the answer. They learn how to apply STEM knowledge, skills, and habits of mind to make the world a better place through innovation. Through hands-on projects, students explore various engineering disciplines before beginning post-secondary education or careers. PLTW Biomedical Science is a rigorous and relevant four-course sequence that allows students to play the roles of biomedical professionals as they investigate and study the concepts of human medicine, physiology, genetics, microbiology, and public health. Students examine the structures and interactions of human body systems and explore the prevention, diagnosis, and treatment of disease, all while working collaboratively to understand and design solutions to the most pressing health challenges of today and the future. Assessments: All students will complete performance and project-based assessments in all classes as part of Discipline-based PBL or PLTW. In addition PLTW has just developed a partnership with STEM Premier to provide all PLTW Students with electronic portfolio so they can market their STEM abilities. Extracurricular STEM: We already have developed Vex Robotics Teams and plan to participate in the real-world Design Challenge at the High School Level for the next school year. This school year, we have a TSA club at the middle school and high school as well as VEX robotics teams at both schools. Secondary students are working with the elementary school in the development of a VEX IQ team. Our students will also have the opportunity to participate in UIL Academic competitions and develop their own clubs based on interest.

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

We already have developed Vex Robotics Teams and plan to participate in the real-world Design Challenge at the High School Level for the next school year. This school year, we have a TSA (Technology Student Association) club at the middle school and high school as well as VEX robotics teams at both schools. Secondary students are working with the elementary school in the development of a VEX IQ team. Our students are also active in Destination Imagination, with multiple teams at the middle and high school level. Our TSA and robotics teams participate in DEAR day at the elementary as well as in various community service activities such as "Trick or Treat So Kids Can Eat", to fill the local food banks.