Application for T-STEM Designation - New/Provisional

2017-2018

Contents

Texas Education Agency
Application for T-STEM Designation
Statutory Authority: Texas Education Code §39.235

Overview of Designation

In order to operate as a Texas Education Agency (TEA)-approved Texas - Science, Technology, Engineering, and Math (T-STEM) Academy, a district must seek and receive T-STEM designation from TEA. In order to receive the T-STEM designation, a school must exhibit key traits from the T-STEM Academy Design Blueprint included in this application. The intent of this designation is to ensure that districts operating T-STEM Academies: integrate all the key characteristics of well-researched and well-designed STEM education while serving students who may not have otherwise considered the fields of science, technology, engineering, and math.

Benefits of Designation

Recognition as an Approved T-STEM Academy:
Schools designated by TEA as state-approved T-STEM Academies will receive various forms of media recognition including, but not limited to: identification on TEA's website as a state-approved T-STEM Academy and recognition in press releases.

Participation in T-STEM Convenings:
Special events hosted by TEA for T-STEM Academy administrators and principals to provide input on policies and procedures that impact T-STEM Academies.

Membership in the T-STEM Network:
Frequently opportunities are provided for principals, teachers, and students in designated T-STEM Academies through the T-STEM network to share best practices through conferences and technical assistance sessions. Membership in the T-STEM Network allows T-STEM Academies to access online exemplars, professional development, and webinars.

Access to Professional Development and Technical Assistance:
Designated T-STEM academies will have access to high-quality technical assistance which includes advice and information from a Leadership Coach who has successfully facilitated the design and implementation of the majority of T-STEM Academies operating in Texas.

Strength of T-STEM Model:

- Through the designation process, TEA will recognize those T-STEM Academies that effectively incorporate T-STEM Design Blueprint elements. The designation process will enable districts and their partners to engage in the research and planning necessary to ensure that their T-STEM Academies are set up in the most effective way possible.
- The T-STEM Blueprint provides a framework for T-STEM Academies to access college and career opportunities that support post-secondary success.

Questions about Completing the Application

Who can fill out a T-STEM Academy designation application?

Any district or charter school campus may apply to be designated as a T-STEM Academy. Potential applicants are encouraged to carefully review the T-STEM Design Blueprint to determine readiness for implementation of the model.

Any district or charter school campus that is utilizing 2016-2017 as a planning year, and if designated will beginning implementation at the beginning of the 2017-2018 school year.

Will have to fill out the same application each year?

No. New designation applicants and those T-STEM Academies that are provisionally designated will complete the comprehensive form. T-STEM Academies that are fully designated must complete the abbreviated T-STEM designation application yearly. The abbreviated renewal application will require a designated T-STEM Academy to provide updates regarding changes in the design and operation of the Academy. However, the primary focus of the annual renewal will be to gather evidence on the Academy's progress along the T-STEM Academy Design Blueprint continuum.

Will this application be required for T-STEM Academy grantees in the future?

Yes. In future funding cycles, completion of this application will be a program requirement for T-STEM Academy grant recipients.

Who can I contact for help filling out this application?

- **New applicants** may contact the T-STEM Program Manager at tstem@tea.state.tx.us.
- **2016-2017 designated T-STEM Academies** may contact their current T-STEM coach.

Application Information

General Information:

- A district or charter must submit a separate application with the required attachments on behalf of each proposed T-STEM Academy.
- The application must be submitted via the online system by **5:00pm, March 31st, 2017**
- A campus must be designated prior to the beginning of the school year in order to operate as a T-STEM Academy for that year. T-STEM Academy approval is valid for a maximum of one year. T-STEM Academy designated must be applied for each year via the TEA T-STEM designation process.

Timeline & Process:

- March 31st, 2017: Applications are due to TEA in order to open a campus as a designated T-STEM Academy during the 2017-2018 school year.
- June 2017: Districts submitting applications by March 31st, 2017 will be notified of the selection or non-selection of the campus as a designated T-STEM Academy on or about June 2017. Applications submitted prior to the March 31st, 2017 deadline may be approved prior to June 2017.
- The district will receive a notification letter of selection or non-selection for each campus it proposes to operate as a T-STEM Academy.

Required Attachments:

- **Official signature:** Official signature of a district or charter official authorized by the local board to bind the applicant organization in a legally binding contractual agreement.

Required Supporting Documents:

- The Academy must have current versions of the following documents on file.
- Each applicant is required to provide an assurance that each of the supporting documents is current for the 2017-2018 school year, signed by all parties, and provides detailed information regarding the specific assurance.
  - **Dual Credit MOU**
  - **Professional Development Plan**
  - **Business/Industry Agreement**
  - **2017-2018 Master Schedule**

Questions:

T-STEM Program Manager
tstem@tea.state.tx.us

Required T-STEM Academy Design Program Elements

The following design elements are the minimum required components that must be demonstrated through this application in order to be designated as a T-STEM Academy:

- A campus must be designated prior to the beginning of the school year to operate as a TEA designated T-STEM Academy for that year. T-STEM Academy designation is valid for a maximum of one year school year. Any campus wishing to be a designated T-STEM Academy must apply each year via the TEA T-STEM designation process.
- The T-STEM Academy must serve grades 9 through 12 and may serve grades 6, 7, and 8.
  - If an academy implements a 9-12 model, it must at least serve students in 9th grade.
  - If an academy implements a 6-12 model, it must, at a minimum, serve students in 9th grade and a middle school grade.
- A campus will select their campus model from one of the options below:
  - Stand-Alone Academy Single Campus: All students are enrolled in the T-STEM Academy.
  - Stand-Alone Academy Multiple campuses: All students on each campus are enrolled in the T-STEM Academy. This model typically spans a middle school and a high school for those academies that are serving students in grades 6-12.
  - School-within-School: A subset of student enrolled in grades 9-12 are enrolled in the T-STEM Academy.
  - School-within-School Multiple Campuses: a subset of students in grades 6-12 are enrolled in the T-STEM Academy; this model typically spans a middle school and a high school
  - School-within-School Other Grade Levels: all students enrolled in grades 6-12 or 9-12 are enrolled in the T-STEM Academy but other grade levels exist on the campus (such as grades K-5).
  - Other: Applicant must describe their model in detail.
- All designated T-STEM Academies are required to report student enrollment on the PEIMS Indicator during submission 1 (Fall Snapshot), 3, and 4. Submission data must be in alignment with the model selected above.
- A campus must implement during the initial designation year. Campuses that intend to enter a planning year should not apply for designation until they are ready to begin implementation.

I. Mission Driven Leadership:

- The Academy's mission statement and planned advisory board must reflect the mission and vision of the T STEM Initiative.
- The Academy must use program review and formative evaluation to achieve its mission and goals.
- The Academy must promote leadership development and collaboration within the Academy and T-STEM Network.
- For Academies that include 6th, 7th, and 8th grades, leadership teams from the middle school and high school must collaborate on a regular basis.

II. Academy Culture and Design:

- The T-STEM culture must foster positive student identities through meaningful adult and peer relationships.
- All students graduating from the Academy must be prepared for postsecondary coursework and careers in the STEM fields through the integration of the Governor's economic workforce clusters and AchieveTexas STEM cluster into the curriculum.
- The Academy must support all students to graduate high school with four years of math, four years of science, four years of STEM electives, an Endorsement (with a primary focus on STEM endorsements), and a Performance Acknowledgement for a Distinguished Level of Achievement.

III. Student Access, Success, and Persistence:

- The Academy must have a clear plan for student support and success to achieve persistence rates above 70%.
- The Academy must instill the expectation that students expand their participation and leadership in STEM activities outside the classroom and provide the opportunity to do so.

IV. Teacher Selection, Development, and Retention:

- The Academy faculty must possess extensive subject knowledge and integrate project based learning (PBL) and STEM pedagogy into the classroom.
- The Academy must adopt and implement a plan for sustained professional development.

V. Curriculum, Instruction, and Assessment:

- The Academy must align curriculum, instruction, and assessment to provide students with rigorous STEM focused instruction.
- The Academy must deliver Innovative STEM programs that are well-defined, embed critical thinking and problem solving, foster innovation and invention, and are aligned to state and/or national standards, and industry expectations.
- The Academy must integrate science, technology, engineering, and mathematics throughout the curriculum.
- The Academy must continually monitor student progress through assessments and data collection.
- The Academy must promote STEM literacy and prepare students with 21st Century skills.
- The Academy must support three years of STEM electives at middle school and four years of STEM electives at high school.

VI. Strategic Alliances:

- The Academy must promote family involvement in student success.
- The Academy must integrate business partnerships into the curriculum and student learning experience.
- The Academy must partner with IHEs and college/career-preparation entities to ensure that students graduate with college credits and prepared for postsecondary success.

VII. Sustainability and Advancement:

- The Academy must have a plan for continuous improvement and growth.
- The Academy must adopt and implement a plan for sustained professional development.

Scoring of the Application

- Each applicant will be reviewed by T-STEM subject-matter experts from across the state.
- New applicants will be reviewed based on the proposed plan and a follow up with the applicant, if necessary.
- Each applicant will receive a notification letter from TEA indicating which designation category it has been assigned: Designated, Provisionally Designated, or Denied.
- The T-STEM Academy Design Blueprint has been consolidated in the application to highlight priorities for the planning period of designation. Applicants should focus on the benchmarks presented in answering the questions.

CONTACTS

1.1 T-STEM Academy

T-STEM Academy Name	La Joya ISD: La Joya High School T-STEM Academy
Mailing Address - Line 1	604 N. Coyote Blvd.
Mailing Address - Line 2	
Mailing City	La Joya
Mailing Zip Code	78560

1.2 School District

School District name	La Joya Independent School District
Mailing Address - Line 1	200 West Expressway 83
Mailing Address - Line 2	
Mailing City	La Joya
Mailing Zip Code	78560

1.3 Education Service Center Region

01

1.4 Person Completing this Application

Name Prefix	Ms.
First Name	Silvia
Last Name	Elizondo
Job Title	Academy Director
Phone	(956) 323-2870
Email	s.elizondo@lajoyaisd.net

1.5 Academy Principal/Director

Name Prefix	Ms.
First Name	Silvia
Last Name	Elizondo
Job Title	Academy Director
Phone	(956) 323-2870
Email	s.elizondo@lajoyaisd.net

1.6 Superintendent

Name Prefix	Mrs.

First Name	Alda T.
Last Name	Benavides
Phone	(956) 323-2000
Email	a.benavides@lajoyaisd.net

1.7 T-STEM Academy Partner Information

Institute of Higher Education Partner (dual credit provider)	South Texas College
STEM Business Community Industry Partner	Texas Workforce Commission

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1.8 Authorized School District or Charter Official

Name Prefix	Dr.
First Name	Alda T
Last Name	Benavides
Job Title	Superintendent of Schools
Phone	(956) 323-2001
Email	a.benavides@lajoyaisd.net
Uploaded Signature	View Uploaded Document

Provisions and Assurances Agreement

If designated, the T-STEM Academy assures the following the minimum required components will be implemented in the2017 school year.

- A campus must be designated prior to the beginning of the school year to operate as a TEA designated T-STEM Academy for that year. T-STEM Academy designation is valid for a maximum of one year school year. Any campus wishing to be a designated T-STEM Academy must apply each year via the TEA T-STEM designation process.
- The T-STEM Academy must serve grades 9 through 12 and may serve grades 6, 7, and 8.
  - If an academy implements a 9-12 model, it must at least serve students in 9th grade.
  - If an academy implements a 6-12 model, it must, at a minimum, serve students in 9th grade and a middle school grade.
- A campus will select their campus model from one of the options below:
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- A campus must implement during the initial designation year. Campuses that intend to enter a planning year should not apply for designation until they are ready to begin implementation.

1. Mission Driven Leadership:
   - The Academy's mission statement and planned advisory board must reflect the mission and vision of the T STEM Initiative.
   - The Academy must use program review and formative evaluation to achieve its mission and goals.
   - The Academy must promote leadership development and collaboration within the Academy and T-STEM Network.
   - For Academies that include 6th, 7th, and 8th grades, leadership teams from the middle school and high school must collaborate on a regular basis.
3. Academy Culture and Design:
   - The T-STEM culture must foster positive student identities through meaningful adult and peer relationships.
   - All students graduating from the Academy must be prepared for postsecondary coursework and careers in the STEM fields through the integration of the Governor’s economic workforce clusters and AchieveTexas STEM cluster into the curriculum.
   - The Academy must support all students to graduate high school with four years of math, four years of science, four years of STEM electives, an Endorsement (with a primary focus on STEM endorsements), and a Performance Acknowledgement for a Distinguished Level of Achievement.
   - The T-STEM Academy must cohort T-STEM students in core classes.
5. Student Access, Success, and Persistence:
   - The Academy must have a clear plan for student support and success to achieve persistence rates above 70%.
   - The Academy must instill the expectation that students expand their participation and leadership in STEM activities outside the classroom and provide the opportunity to do so.
7. Teacher Selection, Development, and Retention:
   - The Academy faculty must possess extensive subject knowledge and integrate project based learning (PBL) and STEM pedagogy into the classroom.
   - The Academy must adopt and implement a plan for sustained professional development.

☑ the applicant assures that the above minimum required T-STEM Designation components will be implemented in the 2017-2018 school year.

BACKGROUND

2.0 Is your campus currently designated as an Early College High School (ECHS) through the TEA ECHS designation process?

No

2.1 First year of T-STEM Academy Operation

2016-2017

2.2 Academy Model:
What is the design of the T-STEM Academy requesting designation?

School-within-School: A subset of student enrolled in grades 9-12 are enrolled in the T-STEM Academy.

2.3 Target Population

What is the grade level range of students your academy will serve?

9th-12th

The T-STEM academy must serve grades 9-12 and may serve grades 6,7, and 8.
If an academy implements a 9-12 model, it must serve at a minimum grade 9 during the initial designation school year.
If an academy implements a 6-12 model, it must serve at a minimum grade 9 and one middle school grade during the initial designation school year.

Current (if applicable) and projected student enrollment:								
Grades of students to be served	**6th**	**7th**	**8th**	**9th**	**10th**	**11th**	**12th**	**Total Enrollment**
2017-2018 projected enrollment	n/a	n/a	n/a	100	10	17	N/A	127
2016-2017 enrollment (if designated in the 2016-2017 school year)	n/a	n/a	n/a	64	95	N/A	N/A	159

County-District-Campus numbers where students from each grade level are enrolled:							
Grades of students to be served	**6th**	**7th**	**8th**	**9th**	**10th**	**11th**	**12th**
9-Digit CDC #:	n/a	n/a	n/a	108912001	108912001	108912001	

BENCHMARKS

T-STEM Blueprint Instructions

The T-STEM Academy Design Blueprint consists of seven benchmarks that drive the success of an Academy. Each benchmark highlights program requirements and offers a rubric score of developing, implementing, mature, or role model. T-STEM Academies use this tool to measure growth and progress along the continuum.

All seven benchmarks are included in the application. However, applicants may notice the program requirements are not numbered sequentially. This is because not all program requirements are included in the Designation Application. Applicants are not expected to meet or even consider all program requirements at this stage in the process. Instead, those program requirements that form the building blocks of a successful designated Academy are included in the Designation Application. Focused consideration of those particular program requirements will mean a successful applicant will have a strong foundation as a designated T-STEM Academy. The technical assistance that comes as a result of designation will allow the designated Academy to implement the Blueprint Benchmarks' full program requirements over time.

Benchmarks 1-4, 6 & 7
Applicants should first review the program requirements for each benchmark presented in the body of the application. The questions that follow pertain to those specific requirements (i.e. Benchmark 1 questions pertain to Benchmark 1 program requirements). Applicant responses should reflect a close consideration of the highlighted rubric areas in the context of what the campus has in place currently and could feasibly implement during the first designated year. Applications will be scored on the response's evident understanding of the continuum of growth along the rubric, evidence of existing programs, and feasible plan to move forward for each requirement.

Benchmark 5: Curriculum, Instruction, and Assessment
Applicants should review the program requirements presented in each section and rate the campus's existing system in the rubric's check boxes. Applicants are then asked to justify the ratings with evidence, reflection, and a plan to move forward, bearing in mind that with designation comes the tools and assistance necessary to progress along the continuum. Successful applicants will reflect an understanding of Benchmark 5 and are not necessarily expected to have all elements in place before designation.

Benchmark 1: Mission-Driven Leadership

Program Requirements

1.2.C.	Develops and demonstrates support from an advisory board (AB) consisting of representatives from the Academy, school board, district, community, higher education, and STEM businesses to support and guide facility requirements, resource acquisition, curriculum development, internship, externships, and student/community outreach to ensure a successful 6-20 STEM academic and career pipeline.
1.3.A.	Integrates and assesses the level of mission-driven and data-driven decision making evident in the daily work of the Academy.
1.4.A.	For 6-12 campuses, middle school and high school leadership teams regularly collaborate to advance 6-12 alignment and student retention in STEM.

Key Elements for Success

- Job descriptions and roles for design team, leadership team, and advisory board
- Mission is posted and can be articulated by teachers, staff, students, key stakeholders, etc.
- MOUs with T-STEM Centers

	Developing	Implementing	Mature	Role Model
1.2.C.	Advisory Board (AB) established.	AB positions and subcommittees are identified.	AB develops innovative and creative approaches to support Academy mission and vision.	AB addresses major shifts in STEM, educational standards, industry expectations, and analyzes SWOT of Academy, resulting in measurable action items.
1.3.A.	Little or no evidence of data-driven and mission-driven decision making.	Data is used to design student interventions, Annual Action Plan (AAP), and to inform teaching and learning aligned to the mission.	Teachers work interdependently as teams to review data across content areas, develop targeted interventions, and develop common formative assessments.	The Academy's continual analysis of results for improvement is critical to the school's system of interventions and culture of celebration.
1.4.A.	Academy leadership occasionally collaborates with each other (6th - 12th), with T-STEM centers, and T-STEM Coaches.	Academy leaders and staff collaborate with each other (6th - 12th), and with T-STEM Centers and Coaches to integrate STEM teacher preparation, teaching, and learning. *And meets criteria from Developing*	Academy plans with regional T-STEM Center, vertical alignment teams 6th - 12th (at least quarterly), and meets with their T-STEM Coach, virtually or Face-to-Face (at least monthly). *And meets criteria from Developing and Implementing*	Academy dialogues on a regular, ongoing basis in vertical alignment teams (6th - 12th), with T-STEM Centers and Coaches, and utilizes available T-STEM resources to improve student achievement and teacher preparation. *And meets criteria from Developing, Implementing, and Mature*

Benchmark 1: Mission-Driven Leadership

- Program Requirement 1.3.A. addresses the use of data to drive design, decision making, and program review in a T-STEM Academy.
- Designated campuses will be expected to meet or exceed “Implementing” on the rubric above (Data is used to design student interventions, Annual Action Plan, and to inform teaching and learning aligned to the mission) by the end of the first designated year.

Describe below how the campus will meet or exceed this expectation.

La Joya High School T-STEM Academy teachers collaborate on a daily basis through Common Planning Time (CPT) to review different sources of data pertinent to student success. Our Academy teachers analyze and align curriculum to the district and state standards. Through CPT, teachers plan engaging lessons as well as incorporate strategies aligning the curriculum to real-world experiences that support the T-STEM Academy goals and mission statement.

Teachers use CPT to make decisions based on formative and summative assessments and find ways to support student’s needs and strengths. LJHS T-STEM Academy teachers review state and district assessments, attendance, discipline trends, and grades to address the needs of our students as they close the gaps by designing and implementing interventions appropriate to the identified need. The overall goal is to improve student academic performance, attendance, and minimize disciplinary trends to ensure our students continued success as they explore pathways related to Science, Technology, Engineering, and Math.

The Annual Action Plan is a working document that is revised periodically as T-STEM Academy student needs are identified. Teachers collaborate and decide what needs to be done or adjusted based on current data to ensure student success.

In addition, Academy teachers use the Data Management Assessment and Curriculum system (DMAC) to analyze district and state data to make necessary changes in the curriculum and address the individual student academic needs. Furthermore, schedules are adjusted as needed by the Academy Counselor placing students in Reading and Math interventions classes, after school and power hour tutorials, peer tutoring, Reading Renaissance, and System 44 as they are serviced appropriately. Additionally, students are challenged as they enroll in Advanced Placement, Dual Credit and Articulated Concurrent Enrollment classes offered during and after school.

- Program Requirement 1.2.C. details the requirements for an Academy's advisory board (AB).

List the planned AB members and their job title (example: John Smith, School Board Member; Jan Smith, STEM Business Leader, etc.). Detail how this board will support the Academy work.

The Advisory Board (AB) supports the implementation of the LJHS T-STEM Academy. They provide support by reviewing and updating the South Texas College (STC) Memorandum of Understanding (MOU) as well as share academic data to evaluate student progress and implementation of intervention strategies. The AB also supports the implementation of professional staff development for STEM teachers as well as collaborate in the alignment with institutions of higher education, such as STC.

The AB provides support in the implementation of summer bridge programs as well as reviews and evaluates data that pertains to student recruitment, enrollment, retention, completion, and transition to post-secondary.

The AB will evaluate financial operations, programmatic operations, and resources for adequate sustainability of the Academy. The AB will also evaluate STEM internship opportunities and student learning experiences as well as enhance the model and scale-up on partnering with additional STEM businesses and industries.
The Advisory Board Members are:

• Dr. Alda T. Benavides, Superintendent of Schools, provides guidance in aspects of the school programs such as curriculum, personnel, budgeting, and authorizing approval to set initiatives.

• Dr. Gisela Saenz, Assistant Superintendent of Curriculum and Instruction, will counsel, advice, and provide guidance in the areas of Curriculum and Instruction.

• Dr. Sofia Villarreal, Executive Director of College, Career, and Workforce Readiness develops partnerships with local institutions of Higher Education, expand dual enrollment pathway options, and guide the T-STEM Academy design and model.

• Melinda Flores, Executive Director of High Schools provides support in data –driven decisions, master scheduling, and sequence of courses.

• Guadalupe Chavez, Academies Director, provides and facilitates collaboration within all district T-STEM Academies to ensure fidelity and compliance.

• Alfredo Vela, Assistant Superintendent for Finance, allocates the monetary resources for sustainability of the LJHS T-STEM Academy.

• Ricardo Villarreal, Assistant Superintendent for Student Services, ensures students are properly supported through social, emotional, and developmental needs.

• Antonio Cano, Principal, supports and monitors the implementation of the LJHS T-STEM Academy within the comprehensive high school.

• Ruben Trevino, Career and Technical Education Director, provides support through the use of instructional strategies in regards to the CTE instructional programs and facilities.

• Sandra Villarreal, Gifted and Talented Coodinator, provides support, updates, and recommendations on College Board’s Advanced Placement.

• Dr. Anysia Trevino, Assistant Superintendent for Human Resources, provides direction for appropriate staffing for T-STEM.

• Silvia Elizondo, Academy Director meets, with the AB and establishes goals and directions for the Academy. Ms. Elizondo ensures the Mission Statement drives the Academy in the decision-making process. She will administer personnel, supervise facilities, and guide instructional programs.

• Dr. Shirley Reed, South Texas College President, has final authority over the Institute of Higher Education college programs and availability.

• Dr. Anahid Petrosian, Vice President for Academic Affairs, promotes a learner-centered philosophy that focuses on faculty and staff commitments toward learning and success of T-STEM students.

• Nick Gonzalez, Administrator for High School Programs, coordinates the implementation of all T-STEM Academies and ensures that schools are following the models accordingly.

Program Requirement 1.1.A: Provide the Academy mission statement below.

La Joya High School STEM Texas-Science, Technolgy, Engineering, and Math Academy Mission Statement:

T-STEM Academies at La Joya Independent School District will empower students to think critically, reflectively and apply their knowledge and skills to a greater context. T-STEM students will experience rigorous, relevant, and hands-on learning opportunities that will provide them with a unique education. Students will receive project-based instruction via a highly integrated curriculum. T-STEM students will develop relations with the school community, higher education, technical, and business partners.

- Program Requirement 1.4.A details the requirements for 6th-12th campuses to collaborate on a regular basis to advance 6th-12th alignment and student retention in STEM.

Describe below how the campus will meet or exceed this expectation. If Academy is 9th-12th write, "Not Applicable".

Not Applicable

Benchmark 2: T-STEM Academy Culture and Design - Blueprint

Texas Science, Technology Engineering and Mathematics

Benchmark 2: T-STEM Academy Culture and Design
Program Requirement: 2.1 Personalization

2.1.A Addresses in AAP and strategic plan the details for remaining small, allowing for personalization and maintaining collaborative learning communities of students.
2.1.B Plans and implements a non-graded student advisory program that is regularly scheduled, noted in the master calendar/schedule, and focuses on personalizing the student experience, (builds relationships with students and parents, develops character, and fosters global literacy).
2.1.C Develops a process for hearing and responding to student voice.

Key Elements for Success	Example Artifacts
• Student IGPs w/ CCRS, Endorsements, and Performance Acknowledgement plans • Master schedule for advisory • Student enrollment	• Opportunities for orientation sharing and team building activities both on- and off-site • Advisory class curriculum • Student goal setting and reflection logs • Teacher mentors assigned to students • Pre- and post-assessments of advisory class goal • Students sit on advisory board and/or have voice in student work products, clubs, competitions, governance, and course offerings • School wide activities to build/share culture • Student ambassadors serving as classroom greeters and/or guide tour groups • Teacher/student ratios, actual class sizes • Surveys documenting students' elective requests

Developing	Implementing	Mature	Role Model
1. District and Academy resources are allocated to ensure teaching staff and facilities remain small.	1. Annual Action Plan and Academy handbook address plan for maintaining personalized, small, learning communities.	1. Students are regularly afforded multiple opportunities to build relationships with staff and peers such as working in academic and/or competitive teams horizontally and vertically.	1. Protocols are developed to ensure students have a clear and documented voice in the Academy (student council, advisory committee to the director, suggestion box, etc.
2. Student advisory is regularly scheduled and focuses on relationships, building school capital, developing and fostering global literacy.	2. Advisory class has written curriculum with goals, expectations, scope, sequence, and pacing guides.	2. Teachers work in teams to develop systemic advisory programs with horizontally and vertically aligned student outcomes.	2. Annual resources are allocated to develop, revise, and sustain advisory program with input from students, teachers, parents, and external partners.
	And meets criteria from Developing	*And meets criteria from Developing and Implementing*	*And meets criteria from Developing, Implementing, and Mature*

Benchmark 2: T-STEM Academy Culture and Design

Program Requirement: 2.1 Personalization

2.1.D Arranges for a flexible school day with blocks of time that support student learning (tutorials, collaboration, meetings).

2.1.E Celebrates high quality student work through student exhibits on-site, web-based, and/or in state and national forums.

2.1.F Provides every 6th – 12th student with an individualized STEM-focused high school graduation plan that addresses: four years of math and science; an Endorsement in STEM, Business and Industry, Public Service, or Arts and Humanities; identifies target areas for Performance Acknowledgements; and is at least annually reviewed and revised with the counselor, student, and family.

Example Artifacts

- Honor roll, grade level/school-wide celebrations
- Classroom and building displays
- Number of students participating in student exhibits
- Agendas/signatures for IGP meetings with students and family
- IGP, record folder/portfolio, 6th -16th course plan
- Master schedule, tutoring schedule
- Minutes/action items from site based committees, etc.
- Website showcasing student work
- Documentation of at least annual 6th – 12th IGP meetings with parents and students

Developing	Implementing	Mature	Role Model
1. Academy develops a flexible schedule that supports student success.	1. Schedule is developed with input from teachers, counselors, content coaches, extracurricular and internship/capstone requirements.	1. Teachers work in teams to adjust daily schedule to facilitate interdisciplinary PBL.	1. Schedule is adjusted to meet student needs according to data, student, teacher, and parent voice; intervention and extension plans.
2. Academy regularly schedules for students to share their knowledge and work products.	2. Students participate in panel presentations, debates, academic fairs, webinars, online challenges, competitions, design challenges, etc.	2. Resources are allocated to provide students with opportunities to participate in state and national forums, conferences, and competitions (financial, facilities, staffing, transportation, etc.).	2. Academy establishes protocols with input from key stakeholders to gauge the effectiveness of student participation in competitions, challenges, etc. towards promoting college and career readiness as well as Academy goals.
3. Academy develops IGP for each 6th – 12th student that addresses STEM pathways, THECB College and Career Readiness Standards.	3. Student, counselor, and family regularly review and revise the IGP to address student goals for courses, grades, Endorsements, Performance Acknowledgements, college entrance exams, PSAT/ACT/SAT, career aspirations, etc. *And meets criteria from Developing*	3. Annually reviews and revises IGP according to previously established protocols and timelines. *And meets criteria from Developing and Implementing*	3. Mentors are assigned to students to develop intervention contracts to address deficiencies or acceleration opportunities in IGP. *And meets criteria from Developing, Implementing, and Mature*

Texas Science, Technology Engineering and Mathematics

Benchmark 2: T-STEM Academy Culture and Design
Program Requirement: 2.2 Culture

2.2.A Collaborates with stakeholders to develop a new handbook or modify the existing handbook with clear procedures, policies, and consequences that support the development of a strong T-STEM culture.

2.2.B Involves all stakeholders in developing a culture of respect, responsibility, trust, and meaningful adult and peer relationships throughout the Academy in order to foster positive student identities.

2.2.C Creates a professional learning community environment of collaboration, teaming, and high expectations among administrators, teachers, and stakeholders, with a focus on and a commitment to the learning of each student.

Example Artifacts

- Handbook, attendance/discipline goals/data
- Customs and celebrations, modeling lessons for respect, responsibility, trust
- Student, teacher, parent surveys address culture
- Sharing of ideas and strategies and joint problem-solving are widespread.
- School developed common vocabulary for evidence of "good teaching"
- PLC protocols and expectations (meeting times, book studies, goals, results based on interventions, reflections on results – new actions, etc.)
- Collaborative planning of learning and teaching activities
- Widespread teamwork involving teachers and support staff
- Peer walkthroughs, lesson evaluations, and critical friends reflections

Developing	Implementing	Mature	Role Model
1. Handbook is developed to address student, parent expectations and a culture of respect, responsibility and trust.	1. Handbook addresses key tenets of cultural beliefs of Academy (student ability and achievement, efficacy and effort, power, distributed leadership, cultural sensitivity, proactive and reflective practice, etc.).	1. Handbook is developed with input from key stakeholders with clear policies, procedures, and consequences (attendance, discipline, student contracts, teacher extended days, etc.).	1. There is a high degree of commitment to school-wide professional values and a strong sense of cohesion and consistency of approach, with protocols to analyze, build, and assess effectiveness of culture.
2. Professional Learning Community (PLC) is developed which supports staff devoting effort, energy, time, and resources into incorporating valuable new strategies into their practice.	2. An inquiry-based continuous improvement orientation to practice is pervasive, with data informing practice and learning widely shared.	2. Staff regularly and consistently plans together, collaborates and shares ideas through meetings, website resources, teaming, team teaching etc., and garners input from external experts.	2. A desire to do the best for *all* students pervades the school as evidenced by protocols for regular and deep school-wide dialogue about good teaching, assessment, learning, projects, and successes of individual students.
	And meets criteria from Developing	*And meets criteria from Developing and Implementing*	*And meets criteria from Developing, Implementing, and Mature*

Benchmark 2: T-STEM Academy Culture and Design - Responses

- Applicants should consider the program requirements listed above as they pertain to a student's individualized learning experience.

Describe the campus's efforts to support students to reach this goal. This description should include plans for: an advisory period, a positive school culture, enhanced relationships with parents, and responding to student voice.

At La Joya High School T-STEM Academy, an advisory period is embedded into the master schedule giving students the opportunity to meet with teachers on a daily basis. The advisory period serves as a vehicle through which teachers provide students the opportunity to explore STEM related careers and degrees, familiarize themselves with their academic transcript, and analyze a variety of assessment scores. LJHS T-STEM teachers conduct individual conferences and offer additional support as they assist students with the interpretation of assessment scores and additional research in their specific area of interest in STEM related fields. The overall goal is to jumpstart students' curiosity and planning strategies to achieve college readiness and make post-secondary goals more attainable.

The LJHS T-STEM counselor provides students with an array of services including but not limited to academic, social, emotional and developmental support as they mature in becoming productive members of society. The Academy Director and Academy Counselor hold periodic meetings through which parents are informed about updated information, student academic progress as well as review student individual transcripts. In addition, the T-STEM Counselor provides guidance lessons, academic credit checks as well as address other topics that may arise.

As a result, students gain a positive attitude of self-concept as they develop social, emotional and developmental skills that will prepare them to meet the challenges often encountered on the road to academic college preparation.

La Joya High School T-STEM Academy enables students to experience the connections of school success, college preparation, and life experiences by exposing students to professionals in STEM careers, guest speakers in STEM careers, industry site-visits related to their preferred field of interest as well as providing opportunities for externships and internships.

Students share information and ideas to help develop and maintain a personalized small learning community campus culture at the monthly Superintendent's Student Round Table scheduled meetings.

In addition, Student Academy Ambassadors play a key role as classroom greeters and leaders of LJHS T-STEM Academy. Academy Ambassadors meet weekly with their Academy Director and Academy Counselor to discuss relevant topics pertaining to the Academy. Students make recommendations and offer suggestions for improving and increasing student success, participation, as well as maintaining a positive school culture. Incentives are offered for positive behavior, attendance and academic achievement.

La Joya High School T-STEM Academy supports the development of a positive self-concept among all stakeholders resulting in the establishment of an open channel of communication with teachers, students, and parents.

Applicants should consider the program requirements listed in the "Benchmark 2 Program Requirements" link above as they pertain to postsecondary college and career success.

- 6th-12th STEM-focused high school graduation plan: IGP with Endorsement, Performance Acknowledgement, and Distinguished Achievement.
- 6th-12th STEM career and college exploration, and college readiness preparation with students and parents to include college transition plan.
- Collaboration with IHE.
- All students should graduate with 12-30 hours college credit and be prepared for postsecondary coursework in STEM fields.

La Joya High School Academy is a 9-12 grade campus.

La Joya High School T-STEM Academy is focused on providing students with the opportunity to earn up to 18 college hours towards an Associate's of Science Degree in Engineering or Mathematics. The STEM rigor provided in these courses will prepare students for STEM post-secondary when students continue their educational attainment at their selected university.

La Joya High School T-STEM Academy teachers, counselor, and parents work cooperatively with STC, other institutions of high education, and business partners to ensure students are developing essential and marketable 21st Century workplace skills, college readiness skills, and life-long skills. LJHS T-STEM Academy students will follow a sequence of courses aligned to a STEM related degree and or career. Students will have the opportunity to participate in Pre-Advanced Placement, Advanced Placement, Articulated courses, and Dual Credited courses throughout their high school career. Students enrolled in Advanced Placement credit classes will take their respective Advanced Placement exam at the end of the year.

T-STEM Academy students will be guided starting at the beginning of their 9th grade year until they finish high school as they engage in Project-Based Learning (PBL) projects leading to their capstone final project. The capstone project is a multifaceted assignment that serves as a culminating academic and intellectual experience. Their final capstone project will be evaluated by a panel of experts for originality and creativeness, and potential implementation.

- Program requirement 2.2.C. highlights the importance of a strong Professional Learning Community for the success of all students.
- Review at the rubric continuum and tools in Example Artifacts from a successful Academy.

Describe how the campus will use these tools to progress into a "Mature" campus over time. "Staff regularly and consistently plans together, collaborates and shares ideas through meetings, website resources, teaming, team teaching, etc., and garners input from external experts." This description may include inquiry-based approaches, data informed decision making, Professional Learning Communities, collaboration, and integration of technology.

La Joya High School T-STEM Academy goal is to grow to the "MATURE" stage by integrating well-researched and well-designed key components in STEM education to better service our students in the areas of Science, Technology, Engineering and Math.

LJHS T-STEM Academy staff will assist students in graduating high school with four years of math, four years of science, four years of STEM electives (primary focus on STEM endorsements) and a Performance Acknowledgement of a Distinguished Level of Achievement. LJHS Academy teachers will participate in district wide Academy teacher meetings and trainings through which they will collaborate and network as they share ideas from conferences, webinars and or neighboring T-STEM Academies. In addition, LJHS T-STEM Academy teachers will have access to technical assistance through Texas Education Agency (TEA) as well as use their resources to access information when attending STEM leadership meetings. Furthermore, the Academy Counselor and Director will meet with a Leadership Coach (Alma Garcia) provided by Educate Texas for additional support. LJHS T-STEM Academy teachers will attend College Board Advanced Placement Institutes and The Educate Texas Conference during the summer to further their knowledge and resources in T-STEM Education. In addition, teachers will meet throughout the school year to revisit, share learned strategies, and showcase best classroom T-STEM practices. Teachers who attend other professional development that is aligned with T-STEM related activities, workshops, in-services, or conferences will be expected to provide their colleagues with training during Common Planning Time (CPT). La Joya High School T-STEM Academy will provide teachers with additional staff development opportunities throughout the 2017-18 school year targeting collaboration, curriculum alignment as well as integration of 21st Century skills into the curriculum.

Texas Science, Technology Engineering and Mathematics

Benchmark 3: Student Outreach, Recruitment, and Retention
Program Requirement: 3.1 Recruitment and 3.2 Open Access

3.1.A Develops structures and processes for marketing and recruitment to encourage participation from underserved students and families (transportation or plans for transportation to the school, child care for family events, and translation of all recruitment and marketing materials).
3.1.B Actively partners with feeder middle and/or elementary schools to develop student interest in STEM education and to increase advancement rates from middle school STEM to high school STEM.
3.1.C Develops a systemic recruitment plan that includes students, parents, counselors, teachers, district, and community.
3.2.A Develops an admission policy to include an open access, lottery-based selection process that encourages applications from all students. The application will not be based on state assessment scores, discipline history, teacher recommendation, minimum GPA, or other requirements that would be used to limit selection.
3.2.B Consists of a population that is 50% or greater economically disadvantaged and underrepresented students.

Key Elements for Success	Example Artifacts
• Written admission policy and application with lottery explained	• Recruitment schedule and locations (schools, churches, community centers, etc.) • Brochures and marketing items in English, Spanish, and/or relevant second language • Survey data (community input, enrollment trends, etc.) • STEM feeder school crosswalk recruiting curriculum • Plan to recruit with feeder schools • Documented support efforts (transportation, child care, etc.) • Needs assessment • Number and percentage of students matriculating from middle school STEM to high school STEM

Developing	Implementing	Mature	Role Model
1. Academy details a plan and process for marketing to and recruiting from appropriate communities and feeder schools to reach high need and underrepresented students.	1. Marketing and recruitment plan developed with input from key stakeholders, and targets feeder pattern, community needs, and cultural relevance.	1. Marketing plan highlights Academy's STEM pathways and Endorsements; and industry and higher education partners. Recruitment efforts include Academy staff, students, and parents. At least 80% of 8th grade MS STEM students matriculate to HS STEM Academy.	1. Students and staff from Academy collaborate with feeder schools to develop, deliver, and monitor recruitment results from STEM crosswalk engagement lessons conducted at the feeder middle schools. At least 90% of 8th grade MS STEM students matriculate to HS STEM Academy.
2. Academy has at least 50% economically disadvantaged and underrepresented students, via an open, lottery based admission policy, where the application *does not* include requirements that might deter students such as STAAR, grades, teacher recommendation, discipline, or attendance.	2. Clearly communicated admission policy that indicates target enrollment goals and implements support processes structures such as transportation, child care, etc. to meet goals. *And meets criteria from Developing*	2. Academy tracks enrollment data and indicates some increases in recruitment/enrollment rates. *And meets criteria from Developing and Implementing*	2. Academy employs a needs assessment to analyze demographic trends to ensure equitable access and recruitment of greater than 50% economically disadvantaged and underrepresented students and sustains a full complement of students at each grade level. *And meets criteria from Developing, Implementing, and Mature*

Texas Science, Technology Engineering and Mathematics

Benchmark 3: Student Outreach, Recruitment, and Retention

Program Requirement: 3.3 Student Support and Retention

3.3.A Develops and implements systemic, tiered strategies for student support and retention (outreach, early intervention strategies, mentoring, tutoring, counseling, and other supports for academic and socio-emotional growth).

3.3.B Hosts 5th – 6th and 8th – 9th orientation session(s) and summer bridge program(s) to facilitate successful student transitions and retention into a STEM-focused, college preparatory, project-based learning environment.

3.3.C Provides all students with opportunities and the expectation to assume roles of responsibility within the classroom, Academy, and community.

3.3.D Supports and monitors 6th – 12th student participation in STEM activities both within and outside the classroom to ensure that all students engage in STEM clubs, STEM competitions, and STEM field experiences.

3.3.E Hosts parent seminars to develop deep understanding and commitment to the rigor of college readiness and the high expectations of a STEM Academy.

Example Artifacts

- Student, parent, staff contracts
- Student retention and persistence plan
- Orientation and bridge agendas
- Exit interviews
- IGPs Minutes from persistence meetings, retention/attrition data
- Program adjustments due to student and community voice
- Copies of trainings and participation of parents/community
- Satisfaction/interest surveys from students, parents, community, staff, etc.
- Lists of clubs, service learning projects, STEM activities, STEM field experiences, and planned competitions

Developing	Implementing	Mature	Role Model
1. Academy develops a strategic plan for student retention and persistence, and maintains persistence rates above 70%.	1. Student persistence rates range between between 70-80% and the strategic plan addresses research-based supports such as annual IGP review, parental involvement, tiered interventions, and cultural relevance.	1. Student persistence rates range between 81-90%, and the strategic plan includes yearly metrics, analysis of why students leave, and a plan to identify and prevent at-risk students from leaving.	1. Campus engages in ongoing dialogue to address persistence data (lack of course credit, leaving the Academy) and uses data to ensure persistence rates above 90%.
2. Academy develops student orientation/summer bridge program(s), student clubs, and plans for external STEM activities and competitions.	2. The orientation/summer bridge program sets priorities and includes a timeline with skills, tools, and resources for students to successfully transition to a STEM environment.	2. The orientation/summer bridge program is implemented as planned and continually refined annually, with a complete scope and sequence and supporting materials.	2. The orientation/summer bridge program monitors initial student success, identifies struggling students early on, and ensures those students have additional support.
3. Students can select from a small number of leadership opportunities available.	3. The staff encourages students to select leadership opportunities.	3. The staff monitors student involvement in leadership and STEM activities, clubs, and competitions; and develops interventions for students who have minimally participated.	3. Student leadership is evidenced in nearly every non-classroom related initiative or event and at least 90% of students participate in leadership and/or STEM activities, clubs and competitions.
4. Academy creates STEM Academy orientation for parents and stakeholders.	4. Opportunities exist for parents and stakeholders to participate in service learning, and/or attend student presentations.	4. At least bi-annual opportunities exist for parents and stakeholders to participate in STEM activities.	4. Annual parent and stakeholder participation goals are developed and monitored for continued improvement.
	And meets criteria from Developing	*And meets criteria from Developing and Implementing*	*And meets criteria from Developing, Implementing, and Mature*

Benchmark 3: Student Outreach, Recruitment, and Retention

- Review Program Requirement 3.1.A/B/C and 3.2.A/B.

Describe the Academy's open-access admission policy, the marketing, and recruitment plan to parents, students, and the community; and partnering with feeder schools to increase advancement rates in STEM from elementary to middle to high school.

La Joya ISD has a Public Relations Office that assists with marketing and recruitment by preparing several media tools, in English and in Spanish, that facilitate communication to the students across the district about the La Joya High School T-STEM Academy. Our goal is to be transparent and provide all the necessary information to students and parents so that they can make an informed decision about their future. Our Public Relations Office assists by providing media tools such as program literacy flyers for students and parents, website information, parent meetings, the school district's local channel (KLJS 17), and other recruitment strategies designed to maximize enrollment. Working in close coordination with middle school key staff, La Joya High School T-STEM Academy staff will successfully recruit 8th grade students to enroll in our school's T-STEM Academy. The recruitment process begins in the spring of 2017 with scheduled recruitment meetings for corresponding middle school parents and students. The application enrollment process for La Joya High School T-STEM Academy is open to all 8th grade middle school students. A Selection Committee is designed to select and accept up to 100 students through a performance-blind, open-access lottery system. The Selection Committee oversees and monitors the progress and effectiveness of student recruitment to La Joya High School T-STEM Academy. Students selected to participate in LJHS T-STEM Academy will be required to attend a mandatory orientation that will be designed to provide students with information related but not limited to: academic summer bridge programs, Texas Success Initiative (TSI), associate degree plans, sequence of courses, grade point average information, student and academic support services. In addition, La Joya High School T-STEM Academy staff will also provide an orientation, both in English and Spanish, to the parents of the selected students with information on the T-STEM Academy, its services, and benefits. Currently, the school district has a Business and Community Engagement Specialist that helps elementary schools bridge with middle schools by engaging STEM business leaders into the classrooms and outside the district as well. Once our students are accepted into the Academy, our goal is to make sure our students are successful. The La Joya High School T-STEM Academy is committed to holding a parent meeting at the beginning of the 2nd semester. During this meeting, parents will have the opportunity to review their child's transcript and pathway. Parents will also have the opportunity to ask questions pertinent to the Academy. Our goal is for all stakeholders to be well informed about the academic opportunities and resources the La Joya High School T-STEM Academy has to offer.

- STEM Academies host orientation, summer bridge, and college preparatory seminars for parent and students; encourage student leadership, monitor student participation in STEM activities, clubs, competitions and field experiences; and develop intervention plans for students who minimally participate.
- STEM Academies maintain persistence rates above 70%, with a goal of at least 90%

Describe the campus plan to progress to "Mature" on the continuum for Program Requirement 3.3 Student Support and Retention (review the "Benchmark 3 Program Requirements" link at the top of this page).

La Joya High School T-STEM Academy will spearhead activities addressing student introduction into the Academy such as, retention, progress, and overall success. Students will engage in a program orientation where they will receive information about the Academy structure. The summer bridge program will serve as a vehicle to immerse students deeper into the culture and expectations of the Academy, as they will be required to attend this two-week summer program prior to the beginning of their first year in the Academy. Through a summer bridge program, students will reinforce their 21st Century skills as they will explore opportunities in STEM fields and participate in a preparatory curriculum geared to becoming Texas Success Initiative (TSI) ready. Our goal is for students to be TSI ready before the end of their 10th grade year in preparation for dual credit in their 11th grade year. Furthermore, students will partake in educational field trips to different institutions of higher education in the Rio Grande Valley and across Texas. Through these visits, students will visit with university professors and advisors about the different STEM degrees they can pursue. Students will also visit a variety of STEM business-related sites. We want our students to interact with professionals and have a clear understanding of what that profession entails in a real-life setting. Students will use these visits to learn more as well as acquire ideas in preparation for their senior year capstone project. In addition, our students will participate in leadership workshops and conferences where they will learn how to become effective leaders in their school and community. LJHS T-STEM Academy students will also have an opportunity to immerse in STEM clubs that allow for exploration and STEM awareness. As students' progress through LJHS T-STEM Academy, students will have an opportunity to join Nuclear Energy, Engineering, TI-Inspires, Girls and Boys clubs in STEM. These clubs allow students to use high-level thinking, working in teams as well as individually. Through partnership with STC and the University of the Rio Grande Valley, students are able to participate in STEM competitions, forums, and symposiums such as the Nurturing Education, Undergraduate Research, and Opportunities in Nanotechnology (NEURON) Symposium; Hispanic Engineering Science and Technology (HESTEC) community event, and the STC Regional Science Olympiad.

In addition, LJHS T-STEM Academy will also host student/parent meetings to educate them about college, career, and workforce ready. Through these meetings, other pertinent information will be disseminated to parents in reference to job projection, salary trends, and the current job trends in specific geographical locations. LJHS T-STEM Academy is committed to ensure students are successful; consequently, an intervention plan to maintain student participation and their success in the Academy will be drafted. LJHS T-STEM Academy teachers will conference with students and parents to facilitate the students' success in the Academy. If further interventions are needed the LJHS T-STEM Academy Director and Counselor will intervene to assure every student meets the goals of the program requirement.

Benchmark 4: Teacher Selection, Development, and Retention

4.1.E.	Provides opportunities for ongoing professional development to improve teachers' content knowledge, technology embedded instruction, integrative STEM pedagogy, college and career readiness standards, instructional strategies for ensuring a successful P-20 pipeline, and leadership capacity.
4.2.A.	Develops a Professional Development (PD) plan for a sustained professional development model of continuous learning based on student results, teacher development, and the short- and long-term goals of the Academy.
4.2.B.	Adopts a systemic professional development model of continuous learning that addresses prioritized needs as informed and evaluated by multiple sets of quantitative and qualitative data (student assessment data, instructional/classroom evaluations, technological developments, workforce demands, demographic changes, and community/societal expectations and needs).
4.2.C.	Sustains a PLC by instituting job-embedded ongoing opportunities for continuous learning, peer coaching/mentoring, STEM externships, and participation in STEM teacher and leader cadres for teachers and administrators (research-based practices, content competence, new instructional strategies, technology integration, reflective inquiry, and student artifact analysis).
4.3.C.	Adopts and implements a plan for new teachers to include orientation, induction, acculturation, mentoring, professional development, and administrative support.
4.3.D.	Designs or employs innovative programs to support the recruitment and selection of highly qualified STEM teachers.

Key Elements for Success

- Master schedule with common planning time
- Teacher turnover rate
- Teacher mentoring program
- Written recruitment plan

	Developing	Implementing	Mature	Role Model
4.1.E	Academy has authority to hire "best" qualified for goals of the Academy and STEM blueprint requirements.	Develops a written plan for creative recruiting to ensure high qualified, effective teachers.	Develops annual needs assessment and actively implements a teacher recruitment and placement program.	Resources are allocated for recruitment of best qualified candidates, with the Academy partnering with teacher preparation programs such as UTeach, to recruit highly qualified teachers for Academy needs.
4.2.A. 4.2.B.	Develops PD plan with clear pedagogy expectations, aligned with mission goals, teacher needs, and student needs	Academy regularly uses diverse assessment tools/processes, enhanced media, adult learning theories, professional reflection time, problem-solving protocols, and self-paced learning with computer and human interaction for support, coaching, mentoring, and collegial interaction.	Needs assessment and PD plan address teacher and student retention to include teacher, student, and parent voice in decision-making process.	Meaningful partnerships with external organizations ensure progressive expectations for educators' application of content knowledge, curriculum design, and delivery.
4.2.C.	Develops a PLC plan that identifies ways in which teachers will work in collaborative teams to build shared knowledge and formative/summative data.	Teachers collaboratively develop 6th - 12th common essential student outcomes which reflect their efforts to build shared knowledge regarding best practice, (STEM integration, college and career readiness, 21st century skills,).	Teachers collaboratively clarify the criteria they use to judge quality of student work and criteria is consistently applied horizontally and vertically.	Teachers participate in externships and mentorships with higher education and industry. PLC plan is annually monitored, evaluated, and revised for effective practice.
4.3.C	Develops an Orientation plan aligned to Academy mission and vision, and teacher enculturation.	Induction plan addresses Academy expectations for instructional skills; interactions with students, parents, and community; classroom management; assessment of learning; technology; professional development; and mentoring.	Induction process is clearly enunciated, consistently practiced, and evaluated and revised for effectiveness.	Each new teacher participates in the induction process, is assigned a mentor teacher, understands the strategic goals of the Academy, and completes a Needs Assessment that identifies areas for individual professional development.
4.3.D.	Common planning time within the school day focuses on PLC collaboration.	Teams develop team-time norms, set goals, and evaluate effective use of team-time for curriculum development, student artifact reflection, parental involvement, etc. *And meets criteria from Developing*	Teams develop common metrics to measure and inform, in order to identify strengths and weakness in their individual practice, and to collaboratively improve their individual and collective efforts to help all students learn. *And meets criteria from Developing and Implementing*	Collaborative school-level planning is judged effective as evidenced by student learning outcomes. *And meets criteria from Developing, Implementing and Mature*

Benchmark 4: Teacher Selection, Development, and Retention

- Review program requirements for benchmark 4 in the link above.

Describe how the Academy will recruit, support, and retain highly qualified teachers. This should include plans for:

- Teacher recruitment and retention plan
- Sustained professional development (PD) plan which incorporates project-based learning and an integrated STEM curriculum into instructional practices based on qualitative and quantitative student data. (A timeline of planned PD will be uploaded in Benchmark 7.)
- A job-embedded Professional Learning Community with common planning times for collaboration.
- New teacher support (new to Academy and/or teaching profession).

La Joya High School T-STEM Academy process for hiring teachers is the same as La Joya Independent School District's hiring process. There is a concentrated effort to hire educators with a Master's Degree in STEM. Teaching staff that meets the academic, social, and behavioral needs of the students will be selected for LJHS T-STEM Academy. The LJHS T-STEM Academy will ensure teachers are highly qualified by providing professional development opportunities such as Project-Based Learning (PBL), Common Instructional Framework (CIF), Sheltered Instruction Observation Protocol (SIOP), Working on the Works (WOW), Advanced Placement Institutes mentor programs, summer institutes, Rubric Training, cooperative learning, and advanced academic training. PBL helps students develop intellectually and emotionally as it uses real-world scenarios, challenges, and problems. Through PBL, students gain useful knowledge and skills that facilitate the work during designated projects. The goal of using complex questions or problems is to develop and enhance student learning by encouraging critical thinking, problem solving, teamwork and self-management. The project's proposed question drives students to make their own decisions, perform their research, and review their own and fellow students' process/projects. The CIF model are strategies that allow for powerful learning and teaching as teachers form the basis of a curriculum. The SIOP Model is research-based and validated instructional model that has proven effective in addressing the academic needs of English learners. The Cooperative learning model that is implemented at La Joya High School T-STEM Academy is a support system for teachers, which provides best practices, collaboration on instructional strategies and the opportunity to link Academy teachers with STC instructors to discuss curriculum alignment, classroom management, instructional strategies and other academic classroom-related components. Advanced Academic Trainings engages the teachers in a timely dialogue around innovative instructional teaching models. Teachers interact by discussing the synergy that takes place in the classroom by allowing students to learn from each other. Teachers also learn how different teaching strategies impact student learning and its benefits to long life learning. Opportunities for professional development are provided by the district, Region I and Educate Texas. The LJHS T-STEM Academy staff meets with STC personnel at the beginning of each semester to receive orientation and training to align course instruction. LJHS T-STEM Academy teachers will be provided feedback through classroom observations throughout the school year. The LJHS T-STEM Academy is committed to providing ongoing professional development opportunities to teachers. Our goal is to improve their skills and knowledge in their content area and instructional practices that promote critical thinking and problem-solving skills in STEM. La Joya ISD is committed to supporting their teachers and as a result, they have designed a first year mentorship program. Through this program, teachers are paired up with seasoned teachers who provide ongoing support throughout the year. In addition, teachers participate in monthly staff development meetings where they are introduced to WOW, SIOP, and other programs.

Benchmark 5: Curriculum, Instruction, and Assessment

Example Artifacts: 5.1

- Course syllabi, lesson plans, unit lessons, PBL, scope, sequence, pacing guides
- Lessons include STEM standards, state standards, national standards, college and career readiness standards, 21st century skills
- Benchmark schedule, course passing rates, retention rates
- Student portfolios, IGPs, counseling, advising, college crosswalk, and feedback loop
- Plans for PSAT, Accuplacer, TSI, CTE, interventions, etc.
- Horizontal and vertical alignment of curriculum
- Students graduate with Endorsements & Performance Acknowledgements

In Benchmark 5, all program requirements are scored individually. There are no separate metrics. Assess the level of implementation for the program requirements below according to the standards to the right.		**Developing** Investigate, Research, and Create	**Implementing** Formalize, Revise, and Publish	**Mature** Data-driven evaluation of effectiveness of program requirements	**Role Model** Continually assesses to document successes and challenges with action plans implemented to correct deficiencies in performance
5.1.A.	Aligns curriculum, instruction, and assessment (such as, but not limited to, Texas CCRS, national and state standards, content, context, culture, cognitive level, competencies, skills, processes, 21st century skills, and STEM synthesis).			*Mature*	
5.1.B.	Develops a scope, sequence, and pacing guide for a vertically and horizontally aligned curriculum centered on state standards, career and college readiness standards, STEM integration, and industry expectations.			*Implementing*	
5.1.C.	Develops an assessment and intervention plan to address gaps in student achievement and areas for extension.			*Mature*	
5.1.D.	Supports and encourages all students to successfully complete four years of mathematics, four years of science, four years of STEM electives, and at least one Endorsement in STEM, Business and Industry, Public Services, or Arts and Humanities, with a primary focus on a STEM Endorsement; and earn a Distinguished Level of Achievement as well as a Performance Acknowledgement in order to graduate college ready.			*Mature*	
5.1.E.	Offers dual credit, articulated concurrent enrollment, AP or IB courses that all students will graduate with 12-30 college credit hours.			*Mature*	
5.1.F.	Establishes curriculum expectations, monitoring, and accountability mechanisms that are reflectively revised to ensure a constancy of mission purpose (aligned resource allocation, integrated STEM curriculum development, teacher professional growth, and student results).			*Mature*	

5.1 Rigor

- Review the program requirements for Benchmark 5.1 Rigor on the previous page.

Describe how the Academy will progress along the continuum. This should include plans for:

- Alignment of curriculum and instruction as supported by assessment
- Assessment/intervention or acceleration plans for students
- Plan for four tears of math, science, and 12-30 college credit hours (dual credit/AP/IB)
- HS Endorsements available to Academy students

La Joya High School T-STEM Academy aligns the curriculum, instruction, and assessments with the Texas College and Career Readiness Standards and provides a culture of learning at the highest standards. The LJHS T-STEM Academy integrates rigorous academic instruction and career-relevant learning curriculum required for a broad range of career paths. The La Joya High School T-STEM Academy teachers align the assessment results, instruction, state standards, content requirements, 21st-century skills, and cognitive level learning skills to the curriculum. Content core area and Career and Technology Education teachers plan during Common Planning Time (CPT) to ensure students acquire applied knowledge and skills required for meeting rigorous state and national academic standards, and technical standards. Lesson plans and activities are aligned to the districts scope and sequence. The La Joya High School T-STEM Academy develops common assessments to consistently assess and monitor student's progress in order to cultivate, support and retain students in the Academy. Teachers plan together, look at assessment results, and analyze areas in which students did not perform well. Consequently, teachers identify materials that need to be reviewed and revisited and plan accordingly for student success. All stakeholders are encouraged to be active participants in the school's vision; this is done through weekly communications such as counseling, advising, parental/student informative meetings, Academy faculty meetings, and students. Students are highly encouraged to complete their sequence of courses and acquire their credit hours as designated by their Personal Graduation Plan (PGP). Teachers will conference with students and discuss student's progress to make instructional adjustments in order to provide timely support and close the achievement gap. The La Joya High School T-STEM Academy students are provided the opportunity to enroll in concurrent and dual credit, Advanced Placement, and CTE courses in order to graduate with up to 18 college credit hours. LJHS T-STEM Academy teachers will help students develop into experts in problem-solving strategies, critical thinking, teamwork and technology applications as well as communication skills so that they defend or debate their points of view. Teachers are closely monitored to ensure research-based instructional practices are being implemented. The La Joya High School T-STEM Academy stakeholders work collectively to meet the goals of the Academy, work rigorously, and sets high standards to get students to score at advanced levels on their End of Course Exams.

Identify the endorsement areas that the T-STEM Academy will be offering to students in the 2017-2018 school year by checking each individual endorsement area.

☑ STEM (All designated T-STEM academies are required to offer the STEM endorsement)
✖ Business and Industry
✖ Public Service
✖ Arts and Humanities
✖ Multidisciplinary Studies

Benchmark 5: Curriculum, Instruction, and Assessment

Example Artifacts: 5.2

- Defined engineering coursework (Infinity Project, Project Lead the Way)
- Student journals, student presentations, peer performance assessment rubrics, and peer mentors
- Self-paced learning, student contracts, progress reports, exit interviews, parent/teacher/student conferences
- Lessons include work force clusters, expert practitioners, field-based learning, research of current issues, PBLs, guest speakers, differentiation, intervention and acceleration plans, student choice
- Number of offerings and number of students participating in co-curricular activities, clubs, academic teams, and competitions (UIL, Brain Bowl, Science Olympiad, Model UN, FIRST, BEST, Vex etc.)
- Design conceptual internships, identify STEM opportunities, business partners, scientific organizations, and universities
- IGP w/capstone project (research, annual review, and analysis)

In Benchmark 5, all program requirements are scored individually. There are no separate metrics. Assess the level of implementation for the program requirements below according to the standards to the right.		**Developing** Investigate, Research, and Create	**Implementing** Formalize, Revise, and Publish	**Mature** Data-driven evaluation of effectiveness of program requirements	**Role Model** Continually assesses to document successes and challenges with action plans implemented to correct deficiencies in performance
5.2.A.	Delivers innovative STEM programs that are well-defined, embed critical thinking and problem solving, innovation and invention, and are aligned to state and/or national standards and industry expectations.	*Implementing*			
5.2.B.	Supports and encourages students to complete three years of STEM electives at middle school and four years of STEM electives at high school.	*Mature*			
5.2.C.	Develops performance-based and project-based assessments aligned to these innovative programs and state/national/industry standards.	*Implementing*			
5.2.D.	Develops and implements a plan for supporting accelerated student achievement for students with demonstrated deficiencies or proficiencies in mathematics and science, to promote all students graduating ready for enrollment in credit-bearing postsecondary courses (e.g. Algebra I enrollment by 8th grade).	*Mature*			
5.2.E.	Incorporates into the curriculum work-based contextual learning with a global perspective.	*Implementing*			
5.2.F.	Participates in extra-curricular academic activities centered on science, technology, engineering, and mathematics; i.e. STEM field experiences, clubs, and competitions.	*Implementing*			
5.2.G.	Develops 6th-12th students' portfolios of interest in: STEM capstone projects, STEM internship opportunities, and global STEM college, degree, and career explorations. Requires all high school students to complete an internship, and/or a STEM-related capstone project, presentation, and defense; primarily focused in the state's STEM-related economic development clusters (information and computer technology, energy, petroleum refining and chemical products, advanced technologies and manufacturing, aerospace and defense, biotechnology and life sciences.).	*Implementing*			

5.2 STEM-Focused Curriculum

- Review program requirements for Benchmark 5.2 STEM-Focused Curriculum on the previous page.

Describe how the Academy will progress along the continuum. This should include plans for:

- Well-defined STEM programs that are aligned with state, college and career readiness, and industry standards and embed critical thinking and problem solving, and foster innovation and invention
- Three years of STEM electives at middle school and four years of STEM electives at high school. For high schools, list the CATE elective pathways and courses that support each Endorsement offered by the Academy
- Performance and project-based assessments aligned to state, college and career readiness, and industry standards
- Work-based and contextual learning in the curriculum
- STEM-focused extracurricular activities (field experiences, clubs, and competitions)
- STEM-related internships and/or senior capstone projects, presentation, and defense
- Plan for 6th-12th student STEM portfolios

La Joya High School T-STEM Academy is committed to graduating students from high school in four years. Our goal is for students to build a strong foundation in STEM core classes as they will complete four years of high school science and math in conjunction with four high school STEM electives. Students at La Joya High School T-STEM Academy will have the opportunity to graduate with up to 18 college hours taking dual credit, Advanced Placement, articulated and concurrent enrollment courses. Not only will they graduate with college credit hours, they will also engage in a rich project-based learning curriculum that will foster and reinforce their 21st Century Skills. Starting their 9th grade year, students will be given multiple opportunities to start filling their STEM portfolios with information and research that will later assist them through their capstone project. The capstone project is a culminating project that takes place during the student's senior year in high school. Students select a specific STEM-related topic of interest and begin to do an in-depth research exploration using their intellectual knowledge of what they have learned. This multi-facet assignment allows students to build on their college career and workforce readiness as they advance every year across their high school grade levels. Through the support of teachers and campus leadership staff, students do studies, conduct interviews, use technology to create pie charts, graphs, and other data points to show and validate the problem of their study. Collection of data for their study also includes interviews, surveys, focus groups, phone conferences, meetings and using online resource tools. During their completion of the capstone project, students get the opportunity to connect with STEM business leaders, industries, and other civic engagement. The final product is presented to a panel of STEM experts, community members, and district leaders. In addition, LJHS T-STEM Academy will provide students with opportunities to partake in field experiences at STC and other institutions of higher education where they will collaborate with professionals solving real-life problems. Other opportunities will include job fairs and other workforce-related events set up through our District Business and Community Engagement Specialist. T-STEM Academy students will be given the opportunity to engage in STEM-related internships and externships their 11th and 12th grade year. Through these internships and externships, students will get real-life experiences in their selected field as they will work hand in hand with professionals. Furthermore, students will have the opportunity to join STEM-related clubs and organizations on campus and take leadership roles within these organizations making them their own. Student outcomes and project-based assessments will be aligned to state and industry standards that will support college and career readiness standards and reinforce 21st Century Skills.

Describe the current STEM pathways available at the academy and list all industry certifications that students have the opportunity to earn by graduation.

La Joya HIgh School T-STEM Academy will encourage early commitment for predominantly minority high school students to careers in STEM. La Joya High School T-STEM Academy students will have the opportunity to enroll in a STEM-related fields in Engineering or Mathematics. In addition to providing students the opportunity to earn up to 18 college credit hours towards an Associate's Degree in Engineering or in Mathematics, students will also have the opportunity to enroll in a CTE coherent sequence of courses related to STEM. These courses include, Principles of Applied Engineering; Engineering Design and Presentation I; Engineering Design and Presentation II; and either Engineering Mathematics or Practicum in Engineering, and Mathematics. This coherent sequence is aligned to South Texas College's Architectural and Engineering Technology Certificate of Completion. Through this aligned dual enrollment college coursework and STEM-related activities, La Joya High School T-STEM Academy will prepare their students for higher education, industry certifications, and careers in Engineering or Mathematics. La Joya High School T-STEM Academy will also satisfy the House Bill 5 requirements as set forth by the Texas Legislature and will ensure that all courses are aligned with the new Texas Education Agency Endorsement Initiative. After the students graduate from high school and earn up to 18 college hours either in Engineering or Mathematics, they will matriculate into a two-year community college or four-year university and go on to earn an Associate's or Bachelor's degree in a STEM discipline. Furthermore, many of these students will continue their formal education by earning specialized graduate degrees in a STEM-related field. La Joya High School T-STEM Academy will require students to follow a schedule of college academic classes that, through curriculum adjustments to be taught at industry standards, will place an emphasis in STEM degree pathways. In an effort to increase access to higher education for students, the La Joya Independent School District Board of Trustees and the Superintendent of Schools approved a policy to waive all tuition, fees, and textbook costs for students that take dual enrollment courses. La Joya ISD has a strong partnership with STC. Through this partnership both entities have developed and implemented a MOU that defines all programmatic and financial operating aspects.

Benchmark 5: Curriculum, Instruction, and Assessment

Example Artifacts: 5.3

- Peer observations, mentors, cross-curricular teams
- Walkthroughs, observations, model lessons
- Data informs scaffolding, re-teaching, and extension
- Team planning that defines student products, assessments, rubrics, and standards for cross-curricular and other PBLs, teacher research on STEM field expectations, current issues, and technology.
- Student presentations include digital materials, peer and internal/external expert evaluation
- Academy teachers have mentors at university and industry level that provide input to curriculum development
- Year-at-a-glance checklist documenting course coverage of state standards, 21st century skills, college readiness standards throughout grading period

In Benchmark 5, all program requirements are scored individually. There are no separate metrics. Assess the level of implementation for the program requirements below according to the standards to the right.		**Developing** Investigate, Research, and Create	**Implementing** Formalize, Revise, and Publish	**Mature** Data-driven evaluation of effectiveness of program requirements	**Role Model** Continually assesses to document successes and challenges with action plans implemented to correct deficiencies in performance
5.3.A.	Incorporates data-driven instruction.	*Role Model*			
5.3.B.	Creates an environment for shared teacher responsibility and accountability for student learning across programs, content areas, and classrooms.	*Role Model*			
5.3.C.	Organizes instructional expectations around problem-based and project-based learning with clearly defined learning outcomes for students and teachers that address state and national performance standards, college and career readiness standards, and industry expectations.	*Implementing*			
5.3.D.	Ensures teachers' use of the aligned scope and sequence and integration across the disciplines.	*Implementing*			
5.3.E.	Ensures teachers' use of high-quality curricular materials aligned with state and national standards, college and career readiness standards, and industry standards.	*Mature*			
5.3.F.	Provides opportunities for students to exercise choice and voice within a relevant and rigorous context.	*Mature*			

5.3 Instructional Practices

- Review the program requirements for Benchmark 5.3 Instructional Practices on the previous page.

Describe how the academy will progress along the continuum. This should include plans for:

- Data driven instruction
- Shared teacher responsibility and accountability (PLC)
- Project Based Learning (PBL)
- Alignment of scope and sequence with state, CCRS, and industry standards
- Students exercise choice/voice within relevant and rigorous curriculum

The La Joya High School T-STEM Academy ensures multiple sources of data are used to design, implement, and evaluate instruction to improve student learning and to build a strong STEM foundation. Data-driven decisions are aligned to the Academy's mission and vision statement, values, and belief. The La Joya High School T-STEM Academy teachers plan and use instructional strategies that require student collaboration, self-reflection, and development of critical thinking 21st Century skills. LJHS Academy T-STEM Teachers use data from state and district assessments to align instruction vertically and horizontally. During CPT, teachers plan for personalize instruction and interventions to address individual student learning needs especially for those who may be struggling.

LJHS T-STEM Academy teachers utilize CPT, to share and model lessons aligned to college and career readiness standards with a high emphasis on STEM activities. The Academy Director will ensure teachers are planning and aligning the lesson delivery to state and district scope and sequence to ensure students are learning through best instructional practices and hands-on learning experiences.

The LJHS T-STEM Academy Director and school leaders will consistently monitor instructional practices through supervision and evaluation procedures. The LJHS T-STEM Academy Director will ensure that the instruction is engaging all students in a classroom culture that is evident to STEM fields, and that PBL is aligned to other content areas. Furthermore, LJHS T-STEM Academy Director will meet with teachers to collaborate, share, and provide feedback as well as support from informal and formal walkthroughs and observations to enhance lesson planning and delivery.

PBL will have a focus on exploring challenging real-world problems using an innovative comprehensive approach. La Joya HIgh School T-STEM Academy teachers will meet with IHE personnel to orientate, and collaborate with the district to develop a framework of support and align their curriculum to develop a rigorous sequence of courses for each pathway.
The La Joya High School T-STEM Academy will be implementing a "Student Round Table" advocacy group. No more than seven students will be selected at random on a monthly basis. Through these meetings, students will get to meet with district personnel as well as other classmates to engage in conversations about how we can better service our students through the Academy. Students will have an opportunity to make suggestions and share recommendations about enhancing the overall LJHS T-STEM Academy culture and instructional practices as they are aligned to student learning.

Benchmark 5: Curriculum, Instruction, and Assessment

Example Artifacts: 5.4

- Project Based Learning (PBL)
- Systemic expectations for number of presentations per class, documentation of students presenting to internal and external panels
- Design teams, group projects, multiage projects, simulations, robotics teams, green teams
- Project scenarios based on real-world issues (Future City, FIRST, Odyssey of the Mind, etc.)

In Benchmark 5, all program requirements are scored individually. There are no separate metrics. Assess the level of implementation for the program requirements below according to the standards to the right.		**Developing** Investigate, Research, and Create	**Implementing** Formalize, Revise, and Publish	**Mature** Data-driven evaluation of effectiveness of program requirements	**Role Model** Continually assesses to document successes and challenges with action plans implemented to correct deficiencies in performance
5.4.A.	Promotes instructional strategies that challenge students to think critically, innovate and invent to solve real-world, contextual problems.	*Mature*			
5.4.B.	Exposes students to critical readings in STEM-related fields and requires students to demonstrate their understanding of STEM disciplines in a work-based, contextual environment.	*Implementing*			
5.4.C.	Offers standards-based STEM programs that incorporate integrative STEM literacy and innovative instructional tools.	*Implementing*			
5.4.D.	Promotes applied and collaborative learning, and provides students with opportunities to present/defend their work to peers, community, industry, and university leaders.	*Implementing*			
5.4.E.	Promotes a rich culture that incorporates a natural use of current technologies to enhance instruction, curriculum, teaching, and learning, and STEM literacy.	*Mature*			

5.4. STEM Education Integration

- Review the program requirements for Benchmark 5.4. STEM Integration on the previous page.

Describe how the Academy will progress along the continuum. This should include plans for:

- Students apply critical thinking, innovation and invention, to problem-solve real-world scenarios.
- Student exposure to STEM related fields and understanding of STEM disciplines in a work-based, contextual environment
- Students present/defend their learning (PBLs and capstone projects) to external experts
- Use of current technologies to enhance instruction, curriculum, teaching and learning, and STEM literacy

The La Joya High School T-STEM Academy will require all students to participate and develop a T-STEM related capstone project. The capstone projects will be heard, reviewed, and critiqued by T-STEM business partners and professionals. The LJHS T-STEM Academy students will be guided in developing their own design and simulate. In addition, students will develop and maintain a portfolio/running record of their leadership conferences, presentations, studies, seminars, research, and mentorships.

The La Joya High School T-STEM Academy students will be afforded the opportunity to become members of the National Honors Society and Student Council. Through this organizations, students will engage in restoration efforts, recycling, supporting and cleaning the school areas, and activities that involve extensive community efforts that leave a mark of excellence as it transforms their community. The LJHS T-STEM Academy students will also participate and lead discussions at the annual CTE Career Fairs in elementary and secondary schools at La Joya ISD. The La Joya High School T-STEM Academy students will participate and be part of ongoing T-STEM literacy events through on-site presentations. In addition, business and community mentor/speakers will be invited to share and discuss graduation and career pathways with the La Joya High School T-STEM Academy students. Mentors and speakers will also provide their expertise and guidance as they will enhance the development of student’s knowledge and skills in the workplace. The students will participate in the RGV LEAD, Ambassador Leadership Conferences and Engineering, Science and Technology Conference (HESTEC) to connect real world experiences. Students will be given access to Chrome books or I-PADs to facilitate the learning environment and enhance instruction. Providing students with these learning opportunities will engage them and make real-world connections. The LJHS T-STEM Academy will use technology enhanced curriculum in the STEM classes that are related to the endorsement pathways. The LJHS T-STEM Academy promotes the use of technology to help prepare students for their future careers. Integrating technology into the classroom is a way to reach diversity in their learning styles. It gives students the chance to interact with their classmates more by encouraging collaboration. By having technology readily available in the classroom, students are able to access the most up-to-date information quicker and easier. Technology in the classroom allows the teacher to be the encourager, adviser, and coach, therefore, students become more responsible. Technology helps students take more control over their own learning. They learn how to make their own decisions and actually think for themselves. Having access to technology in the classroom allows the students to have updated information as well as be more creative and innovative. STEM literacy is displayed in all classes with in the Academy and in the hall ways. The La Joya High School T-STEM Academy emphasizes STEM literacy to enhance the students ability to understand and apply concepts in Science, Technology, Engineering and Math in order to solve complex problems.

Benchmark 5: Curriculum, Instruction, and Assessment

Example Artifacts: 5.5

- Academy-developed process in place to identify STEM and content relevant vocabulary and just-in-time literature
- Plan for vertical and horizontal expectations, per grade level, of STEM vocabulary and relevant literature
- Literature- and language-rich environment which includes technical language journals, articles, periodicals, current events newspapers, online resources, webinars, and texts
- STEM-focused strategies and activities such as word walls, student journals, literature circles, mock trials, student forums, debates
- Stakeholder input into selection of STEM instructional materials student goals and reflections (literacy in STEM, 21st century skills, technology, etc.)
- Integrative instruction and instructional materials

In Benchmark 5, all program requirements are scored individually. There are no separate metrics. Assess the level of implementation for the program requirements below according to the standards to the right.		**Developing** Investigate, Research, and Create	**Implementing** Formalize, Revise, and Publish	**Mature** Data-driven evaluation of effectiveness of program requirements	**Role Model** Continually assesses to document successes and challenges with action plans implemented to correct deficiencies in performance
5.5.A.	Promotes technologically proficient and scientifically literate students with highly developed academic vocabulary and STEM technical vocabulary.	*Implementing*			
5.5.B.	Graduates 21st century literate students proficient in: English, reading, speaking, writing, numeracy, arts, health, sciences, and world languages; government, civics, history, and geography; environmental science; global awareness; information, communications, and media technology; and financial, economic, business, and entrepreneurship.	*Implementing*			
5.5.C.	Selects appropriate STEM curriculum and culturally relevant instructional materials that foster widespread use of literacy strategies within the STEM curriculum.	*Implementing*			
5.5.D.	Provides opportunities for students to demonstrate the relevancy of the content through reading, writing, speaking, and presenting.	*Mature*			

5.5. Literacy

- Review the program requirements for Benchmark 5.5 Literacy on the previous page.

Describe how the Academy will progress along the continuum. This should include plans for:

- Technologically and scientifically literate students
- 21st Century skills-literate students
- STEM curriculum and culturally relevant instructional materials
- Academy literacy plan

The LJHS T-STEM Academy ensures that Academy students are highly competent in 21st Century skills as it will facilitate their success in the future. In addition to 21st Century Skills, students will become avid readers, writers, articulate speakers, and technologically savvy students. Our goal is to produce well rounded students in all academic areas with a higher emphasis in STEM. LJHS T-STEM Academy teachers will consistently advocate the use of scientifically literate strategies by ensuring students know and understand the scientific concepts and processes required for participating in society. Students have the opportunity to solve real-life problems by working collaboratively with others as they research solutions for specific problems. Through scientifically literate strategies, students will engage in describing, explaining, and predicting natural phenomena as they identify underlying national and local problems. LJHS T-STEM Academy is committed to providing students with opportunities to read scientific articles in popular press and engage students in conversations about the validity of the conclusions prompting their curiosity to question and not just accept what others say. It is important for students to evaluate the quality of scientific information on the basis of its source and the methods used to generate those results. Students will have the opportunity to pose and evaluate arguments based on evidence and apply conclusions from such arguments appropriately. LJHS T-STEM Academy's goal is to give students an opportunity to use their 21st Century Skills as well as scientific concepts and processes effectively. Students will have access to media resources that will aid them with acquiring technology skills needed to succeed in STEM pathways. Furthermore, technology will be available for students to help them generate research papers, power-point presentations, and access online resources. LJHS T-STEM Academy students will use TI-Inspire Calculators and IPADS to complete assignments in their core STEM classes. The LJHS T-STEM Academy will develop a literacy plan that focuses on improving students' skills in reading and writing and as a result will implement across-curriculum journal writing. LJHS T-STEM Academy teachers will connect students with high quality non-fiction educational books to enhance their STEM vocabulary and exposure to relevant literature in their designated STEM pathway. This will enable our students to continue learning and increasing their knowledge in their STEM field of choice. LJHS T-STEM Academy teachers utilize best practices to enhance their lesson delivery and enrich their classroom environment. These practices include, word walls, student debates, presentations, and others. The overall goal is to produce students who can think for themselves as they create, question, solve, and become inventors and innovators.

As part of the college classes that students will be taking at South Texas College, students will be required to use Blackboard. Blackboard is an instructional student platform that allows college professors to provide virtual online instruction. Through Blackboard, students are able to submit assignments, post online board discussions and track the progress of their academic standing for enrolled dual credit classes.

Benchmark 5: Curriculum, Instruction, and Assessment

Example Artifacts: 5.6

- Data informs instruction, plan for gaps and extension
- Curriculum aligned with standards, STEM, industry, and higher education
- Formative, diagnostic, and summative assessments, lesson redesign
- Student artifact reflection is used to inform diagnostic tools and processes
- Pre/post tests, cumulative folders, parent conferences, parent portal, student learning logs
- Pre-assessments/ post-assessments, course offerings for interventions, grades, end of course exams, student presentations, narrative assessments, oral assessments, product based assessment
- IGPs, progress reports, student information sheets, home visits, parent conferences, PEIMS info, call logs, counseling schedule/visits
- Student designed projects, project rubrics, peer reviews, panel reviews, adult/expert reviews
- Project lists knowledge and skills, 21st century skills and levels of skill mastery; course syllabus provides list of performance-based assessments; PD for teachers on developing PBLs

In Benchmark 5, all program requirements are scored individually. There are no separate metrics. Assess the level of implementation for the program requirements below according to the standards to the right.		**Developing** Investigate, Research, and Create	**Implementing** Formalize, Revise, and Publish	**Mature** Data-driven evaluation of effectiveness of program requirements	**Role Model** Continually assesses to document successes and challenges with action plans implemented to correct deficiencies in performance
5.6.A.	Uses diagnostic, ongoing, and vertically and horizontally aligned formative and summative assessments for all students to drive instructional decisions.	*Mature*			
5.6.B.	Uses state and national standards, college and career readiness standards, industry standards, and STEM program requirements to develop common benchmark assessments.	*Mature*			
5.6.C.	Employs student readiness assessments or diagnostics to identify and address gaps in learning.	*Mature*			
5.6.D.	Tracks and reports student progress using student information systems.	*Mature*			
5.6.E.	Uses performance-based assessments that allow students to demonstrate their understandings of STEM concepts.	*Mature*			

5.6 Assessments

- Review the program requirements for Benchmark 5.6 Assessments on the previous page.

Describe how the Academy will progress along the continuum. This should include plans for:

- diagnostic, ongoing and vertically and horizontally aligned formative and summative assessments;
- state, college and career readiness, and industry standards alongside STEM program requirements;
- student readiness assessment to address gaps;
- student information systems to track progress; and
- performance based assessments that demonstrate student understanding of STEM concepts

The La Joya T-STEM Academy ensures that all students in the cohort are following an Individual Graduation Plan (IGP). The IGP is designed to identify students' educational goals, and to provide innovative methods to promote student success. During CIP, LJHS T-STEM Academy teachers engage in in-depth discussions on students learning expectations and address gaps or college readiness.
The teachers plan and align STEM standards to formative and summative assessments. Planning will include colleagues in other subject areas (horizontally) and colleagues across grade levels (vertically). This practice will allow teachers to track student learning, adjust instructional strategies, and evaluate their learning by comparing assessments to college readiness standards.
All new 9th grade LJHS T-STEM Academy students will take the ACT Engage Diagnostic Assessment. ACT Engage is an inventory instrument used to predict which students will be likely to struggle with academic achievement, timely graduation, and college admission. The results allow LJHS T-STEM Academy teachers to take proactive measures to maximize student achievement. Teachers are able to address specific deficiencies with students that are below grade level or who may encounter academic challenges through their four-year course of study. This instrument is also used to provide data that increases student's Grade Point Average (GPA) and facilitate the completion of college graduation requirements.
In addition, Progress Monitoring Intervention System is used to assess students' academic performance. This assessment gives teachers practical information on student learning. It is used to quantify students' rate of improvement or responsiveness to instruction, and to evaluate the effectiveness of instruction. Students' samples of work, assessments, and journals will be used to provide LJHS T-STEM Academy teachers an opportunity to assess the student's ability and the effectiveness of the STEM curriculum. Enrichment for college readiness academics and interventions strategies will include afterschool and Saturday tutorials.

Ultimately, through the use of performance assessments, LJHS T-STEM Academy Director and Academy Counselor will determine if adjustments to the curriculum needs to be realigned with T-STEM goals and mission statement.
The LJHS T-STEM Academy Counselor and Academy Director provide ongoing academic advisement for the parents to ensure LJHS T-STEM Academy students are afforded the best opportunity and knowledge to perform to their maximum extent. The Academy ensures that teachers continue an open communication rapport with parents using the Parent Connect district system. This system informs parents of any future Academy meetings or parent personal enrichment. The meetings keep them informed of their child's individual academic performance and T-STEM expectations to facilitate students' success.
LJHS T-STEM Academy provide teachers with an opportunity to visit T-STEM sites and attend T-STEM professional development trainings. Teachers meet with neighboring T- STEM Academies and share best instructional practices and Project-Based Learning activity projects. In conclusion, LJHS T-STEM Academy aligns classroom instruction with the Academy's Mission and Vision Statement to ensure T-STEM requirements are modeled with fidelity.

Benchmark 6: Strategic Alliances

Program Requirements

6.2.A.	Identifies and secures key business, industry, and community partners to support STEM Academy efforts (mentorships, service learning projects, etc.).
6.2.C.	Identifies and secures key business and industry partners to provide STEM-related job shadowing, internships, and externships for students and teachers.
6.3.A	Develops a Memorandum of Understanding (MOU) for dual credit.
6.3.C	Develops partnerships to support a college going culture and to provide STEM graduates access to college support services (college trips, college entrance aid, GEAR UP and P-20 initiatives).
6.1.B	Provides opportunities to educate students/parents on STEM Academy expectations such as parental engagement, college connections, scholarship opportunities, mentorships, etc.

	Developing	Implementing	Mature	Role Model
6.2.A 6.2.C	Initiates a few partnerships with business, community, and industry.	Initial contact made and some support is provided by community business partners. Business and industry relationships are limited to onsite mentoring activities and some minor financial support.	Partnership with business and industry is formalized via established agreements. Outcomes and expectations are concrete and regularly reviewed. Partnership is evident by two-way communication of goals and vision as to what the STEM program provides.	Each major academic area is sponsored by corporate or community partners. Industry representation is a key component of the STEM strategic planning process. Integration of Academy students in business and community activities is visible.
6.3.A 6.3.C	Initial contact made and some support is provided by higher education organizations. Some courses are available to enhance STEM curriculum integration.	Develops Higher Ed connections to facilitate MOUs, crosswalk plans, teacher mentors, and externships.	Partnerships and MOUs with higher education communities are an integral component of Academy delivery model.	College credit is given to STEM students upon completion of academic work sanctioned by accredited colleges. Admission rates for STEM students to IHE exceed the normalized rates for all students within the sponsor school system.
6.1.B	Minimal strategic communications with parents and families.	Regularly scheduled distribution of communications is planned and presented to key stakeholder groups. *And meets criteria from Developing.*	Strategic communications are timely and are developed ad hoc as conditions warrant. Key messages are presented by leadership emphasizing the importance of the communication to the intended audiences, via community town halls, PTO meetings, advisory board meetings, and school board presentations. *And meets criteria from Developing and Implementing.*	Real time communications are evident via communications technologies such as websites, newsletter articles, and media presentations using the community's public service forums, (public television and radio). Leadership is easily accessible and continuously engages partnerships with stakeholders in community and student families. *And meets criteria from Developing, Implementing, and Mature.*

Benchmark 6: Strategic Alliances

- Review the program requirements for Benchmark 6 above.

Describe how these strategic alliances 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.

La Joya High School T-STEM Academy will develop partnerships with higher learning institutions in the community to support a college readiness culture. The LJHS T-STEM Academy students will visit different universities that offer degrees in STEM. The LJHS T-STEM Academy and Region One Service Center work together to support students and parents with access and services that cultivate and engage them in STEM fields. LJHS T-STEM Academy will provide internships and externships that will become available for students during their courses of study. In addition, LJHS T-STEM Academy will be providing college trips, college financial aid awareness, service learning and other student affairs and college transition support services. The La Joya High School T-STEM Academy informs students and parents of the opportunities available through parent meetings, conferences, workshops, brochures, district websites, Facebook, Instagram, Twitter, Channel 17 and student mentorship. The LJHS T-STEM Academy identifies and secures key business, industry, and community partners to support T-STEM efforts as well as provides opportunities for students to apply 21st century skills. The LJHS T-STEM Academy students are encouraged to network with STEM business-industry partners for personal and group projects. Through these connections as well as internships/externships, students will gain experience, develop skills, build a network, strengthen their resumes, and learn about various STEM fields. The LJHS T-STEM Academy will develop relationships with parents by inviting them to professional guest speaker and capstone project presentations. The LJHS T-STEM Academy has recruited a Design Team to ensure collaboration, partnership, and community support between stakeholders and LJHS T-STEM Academy. The Design Team at the LJHS T-STEM Academy focuses on achieving the goals and objectives of the seven (7) benchmarks from the T-STEM Blueprint. The Design Team is regularly involved in several aspects of the Academy’s program including needs assessment, mid-year review, program awareness and implementation, evaluation, and sustainability. Through an MOU, the partnership between LJHS T-STEM Academy and STC provides opportunities to all LJHS Academy students. Through meetings, both education institution leadership teams will use their resources to make every effort to increase awareness, accessibility and ensure that students maximize the use of STC resources and facilities. STC will ensure that all students are issued an STC JAGNET account, which allows personalized access to web services at the partnership college. The web services include access to all student support services, degree audits, academic support services and other educational and academic resources. STC will provide students with full access to the college’s Center for Learning Excellence for all Academy students. In these centers, students can obtain additional tutoring services and will have access to individual and group study rooms. Students will also have access to STC activities and programs. Through a developed timeline, LJHS T-STEM Academy Design Team will develop a systematic approach allowing T-STEM students from different grade levels to take advantage of STC’s academic and support facilities.

Benchmark 7: Assurances

The following document must be attached in order for the T-STEM Designation application to be submitted.

Official signature: OOfficial signature of a district or charter official authorized by the local board to bind the applicant organization in a legally binding contractual agreement. By signing the designation application, the district assures the minimum requirements for T-STEM Designation will be implemented in the designation year.

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Dual Credit MOU: The district or CMO provides assurance that a Memorandum of Understanding (MOU) with an Institution of Higher Education that defines the dual credit agreement is current (for the 2017-2018 school year). The MOU must be signed by all parties and ensure that sufficient detail are included and is on file at the T-STEM Academy. The executed IHE MOU for dual credit must be available for review by TEA upon request.

☑ Assurance Provided

If the T-STEM Academy is only providing AP coursework, list the AP courses that will be taught in the 2017-2018 school year.

Professional Development Plan: The T-STEM Academy applying for designation, provides assurance that a Professional Development Plan detailing the types, frequency, the provider of STEM professional development to be provided during the 2017-2018 school year, and is on file at the T-STEM Academy. The professional development plan must be available for review by TEA upon request.

☑ Assurance Provided

Business Agreement: The T-STEM Academy applying for designation, provides assurance that a minimum of one business agreement is current (for the 2017-2018 school year), signed by all parties, provides sufficient detail regarding the role of each party, (which allows students to participate in internship programs, capstone projects, or conduct field work) and is on file at the T-STEM Academy. The business agreement must be available for review by TEA upon request.

☑ Assurance Provided

2017-2018 Master Schedule: The T-STEM Academy applying for designation, provides assurance that the proposed master schedule, demonstrating a commitment to STEM education, rigorous coursework including Dual Credit, AP, or IB courses, and a vertically and horizontally aligned curriculum is on file at the T-STEM Academy. The 2017-2018 master schedule must be available for review by TEA upon request.

☑ Assurance Provided