EXHIBIT A:

Goal 1: Provide access and opportunities for middle and high school students to engage in rigorous STEM-related activities and programs of study		
Objectives	**Activities**	**Measurable Outcomes**
1. Increase student, parent, and teacher awareness and interest in STEM to build a support system for engagement in STEM courses, programs, and careers. 2. Improve the articulation process by providing well-articulated pathways from middle school (MS) to high school (HS) to ensure equitable access to STEM related programs of study. 3. Develop and implement a process to identify and encourage potential students who would be successful in STEM programs. 4. Increase the number of students participating in STEM job shadowing, internships and apprenticeships.	<u>Awareness</u> a. Conduct information training for MS and HS teachers, guidance counselors, parents and students. b. Invite speakers to motivate and provide information about STEM fields (e.g., motivational speakers, webinars). c. Establish career activities to familiarize students with STEM careers. d. Schedule HS students and teachers to present information about their programs to MS students. <u>Marketing and Dissemination</u> e. Develop informational materials to enhance communication to students, parents and stakeholders. f. Design materials to advertise offered STEM courses/programs. <u>STEM Enrollment and Experiences</u> g. Develop and implement strategies for identifying student early potential, promoting access, and placement into STEM accelerated courses. h. Expose students to STEM careers through off-site visits to local business and academies.	• Increases in the percent of students who enroll in and succeed in advanced mathematics and science course work (i.e., Honors, AP, DE, or CTE mathematics, engineering, or science courses). • Increases in the number of students scoring proficient or higher on the state exams. • Increase the percent of students who are college ready in math and science. • Documented procedural changes to promote student recruitment and placement in STEM courses and programs. • Increased parent and student awareness of STEM careers and fields of study. • Increases in the percent of students who earn industry certification.

	i. Engage Students in STEM Summer Camp and other enrichment experiences (e.g., clubs). j. Partner with local businesses, agencies, and universities to develop and implement strategies to provide additional internship opportunities for students. k. Develop scholarship programs and incentives for student participation.	• The number of internships available to students • Increases in the number of students participating in STEM job shadowing, internships and apprenticeships. • The number of scholarships available to students.

Goal 2: Implement a coherent, challenging, and rigorous STEM-related curriculum and instruction.

Objectives	Activities	Measurable Outcomes
1. Align mathematics, science and CTE courses with the state standards and the formative assessment system. 2. Develop formative assessments in mathematics and science aligned to the instructional focus calendars. 3. Ensure that all schools have needed materials to support a rigorous STEM curriculum supported by technology.	a. Develop Instructional Focus Calendars (IFC) for math and science that reflect the state standards. b. Expand and enhance district formative assessment in math and science that are aligned to state standards, course objectives, and high stakes exams. c. Develop strategies to infuse technology into the instructional and learning environment (e.g., online learning, Angel). d. Determine needs and begin to purchase tools and kits (similar to CTE) aligned with the curriculum.	• Revised district curriculum and instructional focus calendars are integrated and aligned to state standards. • Availability and use of formative assessments. • School technology inventory and site visits.

Goal 3: Prepare teachers to effectively deliver high quality instruction in STEM-related courses using instructional technology to enhance students' experiences.

Objectives	Activities	Measurable Outcomes
1. Provide time for teachers to collaborate on STEM initiatives and instructional approaches. 2. Implement inquiry-based instructional practices in STEM courses. 3. Enhance the use of formative assessment to support instructional design and decision making. 4. Promote and support the use of instructional technology to enhance lessons delivered in STEM courses.	Professional Development a. Provide PD in the understanding and application of the new math and science standards and the IFCs. b. Provide PD in the use of the Gradual Release of Responsibility (GRR) model and its application to STEM programs. c. Provide PD in the interpretation and use of formative assessments to target instruction and monitor student progress. Instructional Planning & Design d. Provide ways to familiarize teachers with inquiry-based activities and the design of project-based lessons to engage students. e. Implement strategies to facilitate teachers' use of instructional delivery using technical programs (e.g., Safari Montage). f. Adjust class schedules to permit teacher collaboration during the Academic Year. g. Develop online learning environments for STEM teachers. Classroom Implementation h. Implement differentiated instructional strategies and technology-supported instructional activities. i. Implement strategies to assist teachers in using online learning environments.	• Number of teachers who complete appropriate professional development programs. • Description of the relevance and coherence of the PD program. • Increased teacher knowledge and awareness of STEM field and career needs and requirements. • Changes in teacher practices (i.e., increases use of instructional technology). • Teachers' demonstrated understanding of the state math and science standards through lesson objectives, instructional activities, and alignment of assessments. • Evidence that students are actively engaged in the learning process.