If Magnet School Assistance Program (MSAP) funds are awarded the following narrative outlines an aggressive plan for implementation. If MSAP funds are not awarded the following plan will be implemented at a slower pace. Middle school academies are a priority outlined in our community and school strategic plan known as The Palmdale PROMISE.

Each of our middle school academies will offer three learning pathways. Two pathways are district priorities: Science, Technology, Engineering, Art and Mathematics (STEAM) using selected modules from Project Lead the Way (PLTW) Gateway to Learning, and Visual and Performing Arts (VAPA). Each middle school has also developed a third campus-specific magnet program that will be developed through detailed planning in Year 1. Each magnet pathway will require teachers to teach and use “backward planning,” working with the students to design a culminating project, and then determine the planning, information, materials, information, and timeline to execute the project. By Year 3, all magnet academies will have magnet themes integrated across a multidisciplinary curriculum. For example, History and Language Arts students will explore the development and growth of STEM industries of the magnet theme, and explore current events and the effect on the advancement and expansion of magnet technologies. Students will discuss, debate, and write expository pieces to deepen their
learning. VAPA students will discover how the media and developing technologies impact the arts. They will also work alongside engineering and design students to design and build theater sets and lighting schemes for school drama performances. Magnet academies will integrate Humanities, Arts, Sciences, and Technologies through development of interdisciplinary Project Based Learning.

_Program Overview._ SAGE Academy will open August 2017 as our Magnet School for Space and Aeronautics. This is a new magnet school located in the center of the City of Palmdale, serving students grades 6-8. Antelope Valley is a national leader in aerospace and aviation, so our theme, Space and Aeronautics, closely aligns with our aerospace and aviation industry both in Palmdale and the greater Antelope Valley. Unique to SAGE Academy is a fully functional Planetarium staffed by a director who will engage students in exploring space through the planetarium. He is a member of the Antelope Valley Astronomy Club. During an eclipse, the entire club gathers at the Planetarium with their telescopes to view the eclipse. SAGE Academy students will be involved in these experiences.

*Magnet Program Curriculum and Opportunities.* SAGE Academy will offer three pathways:

**Space and Aeronautics Pathway,** PLTW and VAPA. The Space and Aeronautics Pathway will include two options: Civil Air Patrol (CAP) program and Federal Aviation Administration (FAA) development and training. Civil Air Patrol students will be introduced to the principals of flight, model rocketry, and other aerospace curricula while engaging in leadership training, a transfer skill for high school, college and career readiness. Courses of study in CAP include: rocketry, spacecraft, hot air balloons, space stations, astronauts, planets and moons, stars, the Hubble Telescope, gliders, drones and other radio-controlled aircraft. The Aerospace dimensions
has six modules: 1) Aerospace Dimensions, 2) Introduction to flight, 3) Aircraft systems and environment, 4) Rockets, 5) Space environments and 6) Spacecraft.

**Model Rocketry.** CAP students will build and launch model rockets. If students complete the program as outlined in the handbook, they can qualify for the model rocketry badge. **Introduction to Cybersecurity.** This course is an introduction to current cyber threats and provides activities for improving collective awareness and defense. **International Space Station** is built on thematic learning, which includes exploring careers in space, and introduces the concepts of microgravity and learning to grow crystals. Other thematic units include biographical study of flight pioneers Charles Lindberg, the Wright Brothers, and Amelia Earhart.

SAGE Academy will have a Paxton Patterson Action Lab. This form of PBL includes automation and robotics. The newly named principal of SAGE Academy is building relationships with key personnel at Edwards Air Force Base and has been named an Honorary Commander for the Base.

Our industry partnership with The **Federal Aviation Administration (FAA)** has resulted in the development of a series of classes that will introduce the students to aviation, weather, air transportation, aviation regulations, navigation, and aircraft engines. The FAA modules include a **Flight Simulator Laboratory.** Students will engage in hands-on learning including time on two air flight simulators that mimic the air traffic controllers’ environment. Students will learn the five essential skills for success not only for employment with the FAA, but for any career: communication, concentration, decision making, problem solving, and multi-tasking. The FAA is committed to our success as this program will provide a pipeline into their industry. Our partnership with the FAA includes hiring a consultant who has over 25 years of experience. She will help manage the implementation of our program including tours of airports (Burbank,
Mojave, Fox Airfield, etc.), writing curricula, teacher training, access and volunteer opportunities at the Los Angeles County Air Show and Flight Simulator Lab.

As curriculum is developed in the core subject areas to support space and aeronautics themes, these two programs will become more robust. Students will leave middle school with leadership and academic skills applicable to high school, the aeronautics industry, and beyond.