

Standards and Competencies for Aerospace Engineering (PLTW) (Course # 5796)

	Begin-End Yr
Standard 1 - Students will demonstrate leadership, citizenship, and teamwork skills required for success in the school, community, and workplace.	2009 -
1.1 - Exhibit positive leadership skills.	2009 -
1.2 - Participate in SkillsUSA as an integral part of classroom instruction	2009 -
1.3 - Assess situations and apply problem-solving and decision-making skills to particular client relations in the community and workplace.	2009 -
1.4 - Demonstrate the ability to work cooperatively with others in a professional setting	2009 -
Standard 2 - Students will trace the history of aviation and how it relates to aviation today	2009 -
2.1 - Assess the evolution of the aviation industry.	2009 -
2.2 - Investigate people in history who helped to shape aviation history	2009 -
2.3 - Analyze the influence of World Wars I and II on aviation.	2009 -
2.4 - Research select aircraft.	2009 -
2.5 - Examine the Jet Age.	2009 -
Standard 3 - Students will analyze career opportunities and career paths in the global world of aviation and the regulations governing those careers.	2009 -
3.1 - Explore the titles, roles, and functions of individuals engaged in aviation careers	2009 -
3.2 - Investigate employment opportunities.	2009 -
3.3 - Examine regulatory requirements affecting aviation careers	2009 -
Standard 4 - Students will relate and apply mathematics and science concepts to aviation	2009 -
4.1 - Correlate mathematical operations with aviation technology	2009 -
4.2 - Process and interpret data related to aviation.	2009 -
4.3 - Examine the principles of aerodynamics.	2009 -
Standard 5 - Students will analyze important aviation physiological factors and concepts pertaining to aeronautical decision making and judgment.	2009 -
5.1 - Explore the factors that affect aeronautical decision-making	2009 -
5.2 - Explore techniques for enhancing safety in the cockpit by improving pilot judgment and decision making skills.	2009 -
Standard 6 - Students will examine airplane systems.	2009 -
6.1 - Analyze the structure of an airplane.	2009 -
6.2 - Examine flight instrumentation and power plant operations	2009 -
Standard 7 - Students will demonstrate communication skills required in the aviation industry	2009 -
7.1 - Communicate and comprehend oral and written information typically occurring in the aviation workplace	2009 -
7.2 - Solve problems and make decisions using a logical process.	2009 -
7.3 - Use teamwork skills to accomplish goals, solve problems, and manage conflict within groups	2009 -
Standard 8 - Students will demonstrate interpersonal and employability skills required in the aviation industry	2009 -
8.1 - Infer relationships between work ethics and organizational and personal job success	2009 -
8.2 - Demonstrate attitudes conducive to workplace success.	2009 -
8.3 - Maintain a neat and orderly work area.	2009 -
8.4 - Assess implications of diversity for communities and workplaces.	2009 -
8.5 - Exhibit positive employability behaviors.	2009 -
8.6 - Develop individual time management and work sequencing skills	2009 -
Standard 9 - Students will perform safety examinations and maintain safety records	2009 -
9.1 - Pass with 100% accuracy a written examination relating specifically to aerospace industry	2009 -
9.2 - Pass with 100% accuracy a performance examination relating to the aerospace industry and equipment	2009 -
9.3 - Maintain a portfolio record of written safety examinations and equipment examination for which the student has passed an operational checkout by the instructor.	2009 -