

FOLSOM CORDOVA UNIFIED SCHOOL DISTRICT

Aerospace Science & Leadership 1 Air Force Junior ROTC

Date: March 2014

Subject Area: Career Technical Education

Proposed Grade Level(s): 9 - 12

Course Length: One Year

Grading: A-F

Number of Credits: 5 per Semester

Prerequisites: None

COURSE DESCRIPTION:

Aerospace Science 1: A Journey into Aviation History

This is an aviation history course focusing on the development of flight throughout the centuries. It starts with ancient civilizations, then progresses through time to modern day. The emphasis is on civilian and military contributions to aviation; development, modernization, and transformation of the Air Force; and a brief astronomical and space exploration history. It is interspersed with concise overviews of the principles of flight to include basic aeronautics, aircraft motion and control, flight power, and rockets. Throughout the course, there are readings, videos, hands-on activities, and in-text and student workbook exercises to guide the reinforcement of the materials.

Leadership Education 1

This is an introductory course into Air Force Junior ROTC. The academic portion of the course consists of four days per week of academic instructions. Leadership Education will introduce the student to AFJROTC providing a basis for progression through the rest of AFJROTC while instilling the elements of good citizenship, health and wellness, fitness, and individual self control. Each unit of instruction and the associated student learning activities will include a multicultural perspective representative of the demographic makeup of Cordova High School.

GENERAL GOALS / ESSENTIAL QUESTIONS:

By the end of the Aerospace course, each student will be able to:

- Know the historic facts and impacts of the early attempts to fly
- Know the major historical contributions to the development of flight.
- Know the contributions of the U.S. Air Force to modern aviation history
- Know the key events of space exploration history
- Know the importance of AFJROTC history, mission, purpose, goals and objectives

By the end of the Leadership course, each student will be able to:

- Know the importance of AFJROTC history, mission, purpose, goals, and objectives.
- Know military traditions and the importance of maintaining high standards of dress and personal appearance.
- Know the importance of individual self-control, common courtesies and ethics.
- Know the importance of individual self-control, common courtesies and etiquette
- Know that an effective stress management program improves the quality of life

- Know why courtesies are rendered to the United States flag and to be familiar with the different forms of government
- Know the importance of keeping yourself well and helping others stay well

CCSS READING COMPONENT:

Students will be required to:

- Read articles related to general information
- Read the required texts.
- Read and comprehend test questions and answers.

CCSS WRITING COMPONENT:

Students will be required to:

- State their responses to questions in complete sentences.
- Develop a personal health plan and set career goals for five years.
- Complete a notebook that includes note taking from class lectures.
- Develop Power Point presentations on a variety of topics for group presentations.

CCSS SPEAKING AND LISTENING COMPONENT:

Students will be required to:

- Participate as a member of a group in leadership situation.
- Respond to questions directed to them during class discussion.
- Participate in question/answer sessions with guest speakers.

DETAILED UNITS OF INSTRUCTION:

All Units of Instruction will include:

- Introductory class discussion and teacher presentation.
- Appropriate audio-visual media.
- Hands on learning activities.
- Evaluation of student learning.
- Student reading, writing, and oral component.

Aerospace Science:

AS 1: A Journey Into Aviation History

Unit One: Imagining Flight

Unit Three: Developing Flight

Unit Two: Exploring Flight

Unit Four: Extending Flight

Leadership Education:

LE 1: Citizenship, Character, and Air Force Tradition

Unit One: Heritage, Organization, & Traditions

Unit Three: Wellness and Fitness

Unit Two: Individual Self-Control

Unit Four: Citizenship in the United States

Drill and Ceremonies

Unit One: Intro. to Drill and Ceremonies

Unit Three: Conduct basic drill movements

Unit Five: Expanding Drill Techniques

Unit Seven: Formation of Groups & Wings

Unit Two: Commands and the Command Voice

Unit Four: Saluting

Unit Six: Functions of Group and a Wing

Unit Eight: Purpose of Ceremonies and Parades

TEXTBOOKS and RESOURCE MATERIALS:

Citizenship, Character, & Air Force Tradition, McGraw Hill Custom Publishing, 2005

A Journey Into Aviation History, Pearson Custom Publishing, 2007

Drill and Ceremonies, Air Force Manual 36-2203

COMMON CORE STANDARDS TO BE ADDRESSED:

Reading: Informational Text

Integration of Knowledge and Ideas

CCSS.ELA-Literacy.RI.11-12.7 Integrate and evaluate multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question or solve a problem.

Writing

Text Types and Purposes

CCSS.ELA-Literacy.W.11-12.1 Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

CCSS.ELA-Literacy.W.11-12.2 Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.

Production and Distribution of Writing

CCSS.ELA-Literacy.W.11-12.6 Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

Research to Build and Present Knowledge

CCSS.ELA-Literacy.W.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.

Speaking and Listening

Comprehension and Collaboration

CCSS.ELA-Literacy.SL.11-12.1 Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11–12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.

CCSS.ELA-Literacy.SL.11-12.2 Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data.

Presentation of Knowledge and Ideas

CCSS.ELA-Literacy.SL.11-12.5 Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.

Literacy in Technical Subjects

Key Ideas and Details

CCSS.ELA-Literacy.RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

Integration of Knowledge and Ideas

CCSS.ELA-Literacy.RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

DISTRICT ESLRs TO BE ADDRESSED:

Students will be:

- **Self –Directed learners** – students will work independently to determine positive and collaborative outcomes to group problems
- **Effective communicators** – students will communicate through both written and oral presentations made in class and to local middle schools.
- **Quality Producers/Performers** – student work will be held to a high standard as set by the Air Force Junior ROTC worldwide program.
- **Constructive Thinkers** – students will be able to deconstruct, organize, plan and implement group projects and intramural events, document activities, and apply project management skills.
- **Collaborative Workers** – students will understand the importance of teamwork and complete various projects as a member of a team.
- **Responsible Citizens** – students will participate in community service activities

Appendix

Transportation Knowledge and Performance Anchor Standards

1.0 Academics

Analyze and apply appropriate academic standards required for successful industry sector pathway completion leading to postsecondary education and employment. Refer to the Transportation academic alignment matrix for identification of standards.

2.0 Communications

Acquire and accurately use Transportation sector terminology and protocols at the career and college readiness level for communicating effectively in oral, written, and multimedia formats. (Direct alignment with LS 9-10, 11-12.6)

2.1 Recognize the elements of communication using a sender–receiver model.

2.2 Identify barriers to accurate and appropriate communication.

2.3 Interpret verbal and nonverbal communications and respond appropriately.

2.4 Demonstrate elements of written and electronic communication such as accurate spelling, grammar, and format.

2.5 Communicate information and ideas effectively to multiple audiences using a variety of media and formats.

2.6 Advocate and practice safe, legal, and responsible use of digital media information and communications technologies.

3.0 Career Planning and Management

Integrate multiple sources of career information from diverse formats to make informed career decisions, solve problems, and manage personal career plans. (Direct alignment with SLS 11-12.2)

3.1 Identify personal interests, aptitudes, information, and skills necessary for informed career decision making.

3.2 Evaluate personal character traits such as trust, respect, and responsibility and understand the impact they can have on career success.

3.3 Explore how information and communication technologies are used in career planning and decision making.

3.4 Research the scope of career opportunities available and the requirements for education, training, certification, and licensure.

3.5 Integrate changing employment trends, societal needs, and economic conditions into career planning.

3.9 Develop a career plan that reflects career interests, pathways, and postsecondary options.

4.0 Technology

Use existing and emerging technology to investigate, research, and produce products and services, including new information, as required in the workplace environment. (Direct alignment with WS 11-12.6)

4.1 Use electronic reference materials to gather information and produce products and services.

4.3 Use information and communication technologies to synthesize, summarize, compare, and contrast information from multiple sources.

4.5 Research past, present, and projected technological advances as they impact a particular pathway.

5.0 Problem Solving and Critical Thinking

Conduct short, as well as more sustained, research to create alternative solutions to answer a question or solve a problem unique to the Transportation sector using critical and creative thinking, logical reasoning, analysis, inquiry, and problem-solving techniques. (Direct alignment with WS 11-12.7)

5.1 Identify and ask significant questions that clarify various points of view to solve problems.

5.2 Solve predictable and unpredictable work-related problems using various types of reasoning (inductive, deductive) as appropriate.

5.3 Use systems thinking to analyze how various components interact with each other to produce outcomes in a complex work environment.

5.4 Interpret information and draw conclusions, based on the best analysis, to make informed decisions.

6.0 Health and Safety

Demonstrate health and safety procedures, regulations, and personal health practices and determine the meaning of symbols, key terms, and domain-specific words and phrases as related to the Transportation sector workplace environment. (Direct alignment with RSTS 9-10, 11-12.4)

6.2 Interpret policies, procedures, and regulations for the workplace environment, including employer and employee responsibilities.

6.3 Use health and safety practices for storing, cleaning, and maintaining tools, equipment, and supplies.

6.4 Practice personal safety when lifting, bending, or moving equipment and supplies.

9.0 Leadership and Teamwork

Work with peers to promote divergent and creative perspectives, effective leadership, group dynamics, team and individual decision making, benefits of workforce diversity, and conflict resolution.

9.1 Define leadership and identify the responsibilities, competencies, and behaviors of successful leaders.

9.2 Identify the characteristics of successful teams, including leadership, cooperation, collaboration, and effective decision-making skills as applied in groups, teams, and career technical student organization activities.

9.3 Understand the characteristics and benefits of teamwork, leadership, and citizenship in the school, community, and workplace setting.

9.5 Understand that the modern world is an international community and requires an expanded global view.

9.6 Respect individual and cultural differences and recognize the importance of diversity in the workplace.

9.7 Participate in interactive teamwork to solve real world issues and problems

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