Aerospace Dimensions: Module 1
(Introduction to Flight)

Science Standards	Mathematics Standards	English Language Arts Standards	Social Studies Standards	Technology Standards
Science as Inquiry	1. Numbers and Operations Standard: • Compute fluently and make reasonable estimates.	1. Reading for Perspective	2. Time, Continuity, and Change	7. Understanding of the influence of technology on history.
Physical Science: • Motions and Forces	4. Measurement Standard: • Understand measurable attributes of objects and the units, systems, and processes of measurement. • Apply appropriate techniques, tools, and formulas to determine measurements.	2. Understanding the Human Experience	8. Science, Technology, and Society	8. Understanding of the attributes of design.
Science and Technology: • Abilities of technological design • Understanding about science and technology	6. Problem Solving Standard: • Solve problems that arise in mathematics and in other contexts.	3. Evaluation Strategies		9. Understanding of engineering design.
	9. Connections Standard: • Recognize and apply mathematics in contexts outside of mathematics.	12. Applying Language Skills		10. Understanding of the role of troubleshooting, research and development, invention and innovation, and experimentation in problem solving.
				11. Ability to apply the design process.

Aerospace Dimensions: Module 2
(Aircraft Systems and Airports)

Science Standards	Mathematics Standards	English Language Arts Standards	Social Studies Standards	Technology Standards
Science as Inquiry	1. Number and Operations Standard: • Understand numbers, ways of representing numbers, relationships among numbers, and number systems.	1. Reading for Perspective	8. Science, Technology, and Society	8. Understanding of the attributes of design.
Physical Science: • Motions and Forces	4. Measurement Standard: • Understand measurable attributes of objects and the units, systems, and processes of measurement.	3. Evaluation Strategies	9. Global Connections	9. Understanding of engineering design.
Science and Technology: • Abilities of technological design	6. Problem Solving Standard: • Solve problems that arise in mathematics and in other contexts.	4. Communication Skills		13. Ability to access the impact of products and systems.
Science in Personal and Social Perspectives: • Science and technology in society	9. Connections Standards: • Recognize and apply mathematics in contexts outside of mathematics.	12. Applying Language Skills		18. Understanding of and ability to select and use transportation technologies.
	10. Representation Standard: • Use representations to model and interpret physical, social, and mathematical phenomena.			

Aerospace Dimensions: Module 3
(Air Environment)

Science Standards	Mathematics Standards	English Language Arts Standards	Social Studies Standards	Technology Standards
Physical Science: • Transfer of energy • Motions and forces	1. Number and Operations Standard: • Understand numbers, ways of representing numbers, relationships among numbers, and number systems. • Compute fluently and make reasonable estimates.	1. Reading for Perspective	8. Science, Technology, and Society	3. Understanding of the relationships among technologies and the connections between technology and other fields of study.
Life Science: • Regulation and behavior	4. Measurement Standard: • Understand measurable attributes of objects and the units, systems, and processes of measurement.	3. Evaluation Strategies		6. Understanding of the role of society in the development and use of technology.
Earth and Space Science: • Structure of the earth system	6. Problem Solving Standard: • Solve problems that arise in mathematics and in other contexts.	12. Applying Language Skills		
Science and Technology: • Abilities of technological design	9. Connections Standard: • Recognize and apply mathematics in contexts outside of mathematics.			
Unifying Concepts and Processes: • Constancy, change, and measurement	10. Representation Standard: • Use representations to model and interpret physical, social, and mathematical phenomena.			

Aerospace Dimensions: Module 4
(Rockets)

Science Standards	Mathematics Standards	English Language Arts Standards	Social Studies Standards	Technology Standards
Science as Inquiry	3. Geometry Standard: • Specify locations and describe spatial relationships using coordinate geometry and other representational systems.	1. Reading Perspective	2. Time, Continuity, and Change	6. Understanding of the role of society in the development and use of technology.
Physical Science: • Motions and forces • Properties and changes of properties in matter	4. Measurement Standard: • Apply appropriate techniques, tools, and formulas to determine measurements.	2. Understanding the Human Experience	8. Science, Technology, and Society	7. Understanding of the influence of technology on history.
Science and Technology: • Abilities of technological design • Understanding about science and technology	5. Data Analysis and Probability Standard: • Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them.	3. Evaluation Strategies		8. Understanding of the attributes of design.
Unifying Concepts and Processes: • Evidence, models, and explanation • Change, constancy, and measurement	6. Problem Solving Standard: • Solve problems that arise in mathematics and in other contexts.	7. Evaluating Data		9. Understanding of engineering design.
	10. Representation Standard: • Select, apply, and translate among mathematical representations to solve problems.	12. Applying Language Skills		10. Understanding of the role of troubleshooting, research and development, invention and innovation, and experimentation in problem solving.
				11. Ability to apply the design process.

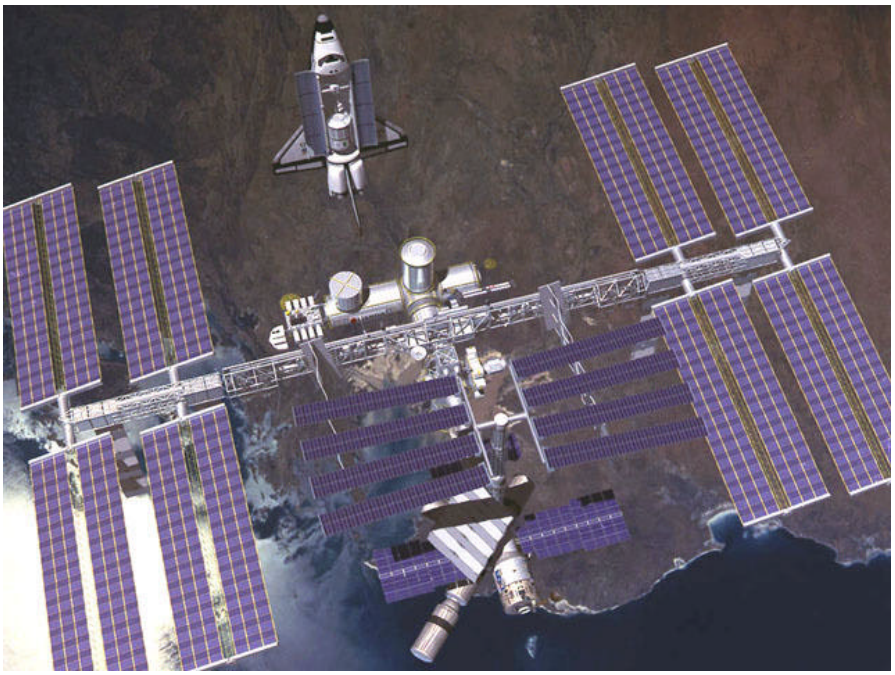
Aerospace Dimensions: Module 5
(Space Environment)

Science Standards	Mathematics Standards	English Language Arts Standards	Social Studies Standards	Technology Standards
Science as Inquiry	1. Number and Operations Standard: • Understand numbers, ways of representing numbers, relationships among numbers, and number systems. • Compute fluently and make reasonable estimates.	1. Reading for Perspective	8. Science, Technology, and Society	1. Understanding of the characteristics and scope of technology.
Physical Science: • Motions and forces • Properties and changes of properties in matter • Transfer of energy	4. Measurement Standard: • Apply appropriate techniques, tools, and formulas to determine measurements.	3. Evaluation Strategies		3. Understanding of the relationships among technologies and the connections between technology and other fields of study.
Earth and Space Science: • Earth in the solar system	6. Problem Solving Standard: • Solve problems that arise in mathematics and in other contexts.	4. Communication Skills		6. Understanding of the role of society in the development and use of technology.
Science and Technology: • Abilities of technological design	10. Representation Standard: • Create and use representations to organize, record, and communicate mathematical ideas.	7. Evaluating Data		
Unifying Concepts and Processes: • Evidence, models, and explanation • Constancy, change, and measurement • Systems, order, and organization		12. Applying Language Skills		

Aerospace Dimensions: Module 6
(Spacecraft)

Science Standards	Mathematics Standards	English Language Arts Standards	Social Studies Standards	Technology Standards
Science as Inquiry	3. Geometry Standard: • Use visualization, spatial reasoning and geometric modeling to solve problems.	1. Reading for Perspective	2. Time, Continuity, and Change	1. Understanding of the characteristics and scope of technology.
Physical Science: • Motions and forces • Properties and changes of properties in matter	4. Measurement Standard: • Apply appropriate techniques, tools, and formulas to determine measurements.	2. Understanding the Human Experience	3. People, Places, and Environments	3. Understanding of the relationships among technologies and the connections between technology and other fields of study.
Life Science: • Regulation and behavior	10. Representation Standard: • Use representations to model and interpret physical, social, and mathematical phenomena.	4. Communication Skills	6. Power, Authority, and Governance	4. Understanding of the cultural, social, economic, and political effects of technology.
Earth and Space Science: • Earth in the solar system		12. Applying Language Skills	8. Science, Technology, and Society	6. Understanding of the role of society in the development and use of technology.
Science and Technology: • Abilities of technological design			9. Global Connections	7. Understanding of the influence of technology on history.
Science in Personal and Social Perspectives: • Personal Health • Science and technology in society				8. Understanding of the attributes of design.

Unifying Concepts and Processes: • Evidence, models, and explanation • Constancy, change, and measurement				9. Understanding of engineering design.
				10. Understanding of the role of troubleshooting, research and development, invention and innovation, and experimentation in problem solving.



International Space Station and Shuttle

Sources for National Standards and Web Sites

1. **National Science Standards – National Research Council**
   http://www.nap.edu/readingroom/books/nses/html

2. **National Mathematics Standards – National Council of Teachers of Mathematics**
   http://standards.nctm.org/document/index.htm

3. **National English Language Arts Standards – National Council of Teachers of English**
   http://www.ncte.org/standards/standards.shtml

4. **National Social Studies Standards – National Council for the Social Studies**
   http://www.ncss.org/standards/toc.html

5. **National Technology Standards – International Technology Education Association**
   http://www.iteawww.org/TAA/Listing.htm

6. **National Physical Education Standards – Association for Sport & Physical Education**
   http://www.ed.gov/databases/ERIC_Digests/ed406361.html

7. **National Health Standards – American Association for Health Education**
   http://www.ed.gov/databases/ERIC_Digests/ed387483.html

8. **National Music Standards – National Committee for Standards in the Arts (Music Educators National Conference)**
   http://www.menc.org/

9. **National Visual Arts Standards – National Committee for Standards in the Arts**
   http://www.education-world.com/standards/national/arts/index.shtml