

Curriculum Map for: Aerospace

Prepared October 10, 2006 by Kris Kastberg

Prerequisites: None

Scope:

Assessment:

Assessment comes in a variety of forms and wherever possible should be used to reflect and enhance the teaching and learning process that occurs in a classroom. Assessment should not be seen as a separate activity, but as an integral part of the teaching and learning process. Alternative assessments apply to any and all assessments that differ from multiple choice, timed, one-shot approaches that characterize most standardized and classroom assessment. Authentic assessments are assessments that engage students in applying knowledge and skills in the same way they are used in the real-world. Performance assessment is a broad term, encompassing many of the characteristics of both authentic and alternative assessments.

As this course of study demonstrates, it is clear that no single type of assessment could provide an accurate measurement of the learning experience. Students should have the best opportunity to demonstrate their understanding of the learning experience. Therefore, it is suggested that a variety of data gathering methods be used such as objective tests, observations, products, written reports, performances and a collection of student works.

The **TIME** column offers a suggested time-line so that all topics listed in the **CONTENT/SKILLS** column are feasibly met. It is understood that times will need adjustments as the course develops. The **APPLICATION/PROJECT IDEAS** column offers suggestions and sources for the teacher. This column should be updated periodically to keep current and as new ideas are generated. The **KEY IDEA/PERFORMANCE INDICATOR** column coordinates topics with the NYS standards.

TIME	CONTENT/SKILLS	APPLICATIONS/PROJECT IDEAS	KEY IDEA/PERFORM INDICATOR
2 Weeks	History of Flight <ul style="list-style-type: none"> • Lighter Than Air Flight • Powered Flight 	Whitewings Airplanes (Control)	MST Standards 4 & 5
8 Weeks	Aircraft Components <ul style="list-style-type: none"> • Parts of a Plane • Controlling and Lifting Surfaces • Pilot Gages • Navigation • Power Sources 	Boomerang Project (Airfoils) Rocketry (Propulsion and Stability) Orienteering (Navigation)	MST Standards 1, 2, 4, 5, 7
4 Weeks	Stability and Natural forces Affecting Flight <ul style="list-style-type: none"> • Three Forms of Stability • Four Natural Forces on Flight • Aerodynamics 	Design and Wind Tunnel Project	MST Standards 1, 2, 4, 5, 6, 7
2 Weeks	Space Flight <ul style="list-style-type: none"> • History of Space Travel • Rocket Components • Liquid and Solid Fuel Rockets 		MST Standards 1, 2, 4, 5, 6, 7
3 Weeks	Aircraft Design <ul style="list-style-type: none"> • Aircraft Proportions • Lifting Surface Area • Center of Gravity 	Student designed Paper Aircraft	MST Standards 1, 2, 3, 4, 5, 6, 7

