Lunar Biosphere Scope and Sequence

Week 1
Science 8.11 A - identify that change in environmental conditions can affect the survival of individuals and of species.

Math 8.9 B - use proportional relationships in similar two-dimensional figures or similar three-dimensional figures to find missing measurements.

http://www.sofs.us/
http://www.ssn.org/

Week 2
Science 8.6 A - describe interactions among systems in the human organism.
Science 8.6 B - identify feedback mechanisms that maintain equilibrium of systems such as body temperature, turgor pressure, and chemical reactions.
Science 8.6C - describe interactions within ecosystems.
8.14 C - describe how human activities have modified soil, water, and air quality.

Math 8.11A - find the probabilities of dependent and independent events.
Math 8.11 B - use theoretical probabilities and experimental results to make predictions and decisions.
Math 8.11 C - select and use different models to simulate an event.

http://library.thinkquest.org/11353/ecosystems.htm
http://www.fi.edu/tfi/units/life/habitat/habitat.html

Week 3
Science 8.10 A - illustrate interactions between matter and energy including specific heat.
Science 8.10 B - describe interactions among solar, weather, and ocean systems.
Science 8.10 C - identify and demonstrate that loss or gain of heat energy occurs during exothermic and endothermic chemical reactions.

Math 8.14 A - identify and apply mathematics to everyday experiences, to activities in and outside of school, with other disciplines, and with other mathematical topics.
Math 8.14 B - use a problem-solving model that incorporates understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness.
Math 8.14 C - select or develop an appropriate problem-solving strategy from a variety of different types, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem.
Math 8.14 D - select tools such as real objects, manipulatives, paper/pencil, and technology or techniques such as mental math, estimation, and number sense to solve problems.

http://web.jjay.cuny.edu/~acarpi/NSC/2-matter.htm
http://www.kidskonnect.com/content/view/91/27/

Week 4
Science 8.12 A - analyze and predict the sequence of events in the lunar and rock cycles.
Science 8.12 B - relate the role of oceans to climatic changes.
Science 8.12 C - predict the results of modifying the Earth's nitrogen, water, and carbon cycles.

Math 8.2 A - select appropriate operations to solve problems involving rational numbers and justify the selections.
Math 8.2 B - use appropriate operations to solve problems involving rational numbers in problem situations.

http://www.epa.gov/climatechange/
http://aa.usno.navy.mil/data/docs/MoonPhase.php
http://www.globalchange.umich.edu/globalchange1/current/lectures/kling/water_nitro/water_and_nitrogen_cycles.htm

Week 5
Science 8.3 C - represent the natural world using models and identify their limitations.

Math 8.15 A - communicate mathematical ideas using language, efficient tools, appropriate units, and graphical, numerical, physical, or algebraic mathematical models.

http://www.esm.harvard.edu/projects/constrained-biosphere-model
http://daac.ornl.gov/MODELS/guides/IBIS_Guide.html

Week 6
Presentation and Assessment