

Curriculum Mapping: Integrating Magnet Theme with Ongoing Units  
School: John Muir K-12 Magnet School for Global Citizenship

Grade level; 10 Date: 4-16-09

Essential questions: How do we become globally aware? How do we draw together as a community to use our collective knowledge to create positive change?  
(Include infusion of Paideia, technology and our global theme. How does our curriculum look different from other programs?)

Subject: Biology	Cell Biology	Genetics	Evolution	Ecology	Human Physiology
	“We will study the basic compounds and components of living things: How living things are alike on all parts of Earth”	“This unit will be shaped to focus on our theme by learning how our genes shape us and all living things. We will learn about biotechnology and its benefits and problems.”	“We will study the basic ideas about evolution on a genetic level and will look at how evolution affects genotypes and phenotypes across the globe.”	“We will learn about how living things interact with their environments with emphasis on how humans interact with the environment and how they affect nutrient cycles and all aspects of life on earth.”	“We will learn about the immune and nervous systems in humans, how the body systems interact with one another and how the human body is incredibly complex, but shaped by the same forces that shape all of life here on Earth.”
Process, product, and materials	Students will do a cell analogy powerpoint and present it to class in pairs – Poster Product on Cells	Product is genetic disease and treatment online posting with research, both online and in library	Product is to show in an animated presentation how an animal group evolved, where it evolved, how Earth and the animal have changed and will change in the future	Product is to produce a public service announcement on a local environmental issue . It will be shared with a diverse audience other than just the class. Podcast or Video depending on time. Shared with SDSFair in Balboa Park	Product is a brochure on human body tours, using the nervous and immune systems as two of the systems that are featured in the tour to be posted online, possibly shared at San Diego Science fair.
Paideia	We will have one seminar on biochemistry and its relation to food we eat	We will have a seminar on biotechnology and its benefits and costs, appropriate use and questionable uses	We will have a seminar on the evolution of the concept of evolution looking at Lamarck, Darwin and other early evolutionary thinkers	Seminar will cover use of factory farming and its environmental impact	Seminar will be on the effects of legal drugs such as caffeine and tobacco on health and the nervous system, how our health affects our whole state of mind and attitude
Technology	<a href="http://moodle.sandi.net/course/view.php?id=16614">http://moodle.sandi.net/course/view.php?id=16614</a> Students will use sensors to understand respiration and metabolism and their relation to CO2 and O2	<a href="http://moodle.sandi.net/course/view.php?id=16614">http://moodle.sandi.net/course/view.php?id=16614</a> <a href="http://learn.genetics.utah.edu/">http://learn.genetics.utah.edu/</a> Gel electrophoresis equipment for DNA study	<a href="http://moodle.sandi.net/course/view.php?id=16614">http://moodle.sandi.net/course/view.php?id=16614</a> <a href="http://www.pbs.org/wgbh/evolution/">http://www.pbs.org/wgbh/evolution/</a>	<a href="http://moodle.sandi.net/course/view.php?id=16614">http://moodle.sandi.net/course/view.php?id=16614</a>  microscope to study mini-ecosystem  sensors to study Tecolote Canyon Sensors to study ecosystems and share information with other schools	<a href="http://moodle.sandi.net/course/view.php?id=16614">http://moodle.sandi.net/course/view.php?id=16614</a>  Website with our brochures posted will be set up for global audience.

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