

Curriculum Mapping: Integrating Magnet Theme with Ongoing Units

John Muir K-12 Magnet School for Global Citizenship

Subject: Earth Science Grade level: 9 - 12 Teacher: V.Stevens Date: 4/14/09

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?)

Earth Science	<p>UNIT Studying the Earth</p> <ul style="list-style-type: none"> • Scientific Process • Matter and Energy • Earth Systems • Mapping and Earth models 	<p>UNIT Composition and History of the Earth</p> <ul style="list-style-type: none"> • Earth Chemistry • Minerals • Rocks & Rock Cycle • Natural Resources • Earth’s past 	<p>UNIT Plate Tectonics</p> <ul style="list-style-type: none"> • Plate theory • Deformations of crust • Earthquakes • Volcanoes 	<p>UNIT Erosion</p> <ul style="list-style-type: none"> • Weathering • Rivers and groundwater • Glaciers • Wind and Waves • Water Cycle
Resources	<p>Note-taking Rubric Discovery Education, http://streaming.discoveryeducation.com Holt “Earth Science, California Ed.” U.S.Navy Physiographical Ocean Floor Chart Relief Maps and globes Tecolote Canyon Goggle Earth, http://earth.google.com Holt Review workbook</p>	<p>Note-taking Rubric Discovery Education, http://streaming.discoveryeducation.com Holt “Earth Science, California Ed.” Class set of rocks and minerals Mineral testing kits Field Guide to minerals Framed Rock Displays</p>	<p>Note-taking Rubric Discovery Education, http://streaming.discoveryeducation.com Holt “Earth Science, California Ed.” Seismograph model Relief Map of tectonic plates Physiographical Ocean Floor Chart Transform Fault model</p>	<p>Note-taking Rubric Discovery Education Landform models Small-project rubric (erosion) Tecolote Canyon Labquest w/pH probeware Soil samples</p>
PAIDEIA	<p><u>School-wide seminar:</u> Water Prior to seminar classroom lesson on hydration & importance of water. Discuss scarcity of water in many parts of the world. TEXT:Global Issues & Sustainable Solutions www.water.org</p>	<p><u>Class seminar:</u> San Diego County tectonic faults from, “Earthquakes and Faults in San Diego County” by Philip Kern. Text: Page 5 and 6 copied and read pre-seminar.</p>	<p><u>School-wide seminar:</u> Food Prior to seminar classroom lesson on the impact of globalization on our food systems: “The Global Banquet The Politics of Food: (Video) http://www.olddogdocumentaries.com</p>	<p><u>Class seminar:</u> Three Gorges Dam Article from Holt Earth Science text, page 395. Copied and read pre-seminar.</p>
Technology	<p>Google Earth mapping software Portable GPS for mapping canyon Doc-Cam and projector Science room laptop cart</p>	<p>Doc-Cam and Projector Framed Rock Displays Mineral testing kits Fossils</p>	<p>Transform Fault model Seismograph model Doc-Cam and Projector Science room Laptop cart</p>	<p>Landform model Doc-Cam and Projector Science room laptop cart Powerpoint and video projects. LabQuest data collectors pH probeware</p>

Earth Science	UNIT Oceans <ul style="list-style-type: none"> • Ocean floor features and sediments • Ocean chemistry • Marine life • Resources • Currents • Waves • Tides 	UNIT Meteorology <ul style="list-style-type: none"> • Atmospheric structure • Solar heating and circulation • Water vapor • Weather • Climate 	UNIT Astronomy <ul style="list-style-type: none"> • The planets • Moons and minor bodies • The sun • Stars, Galaxies, the Universe 	Final Project Student driven Paideia seminars (group project) generated by student groups on their favorite unit from Earth Science
Resources	Note-taking Rubric Discovery Education, http://streaming.discoveryeducation.com Holt “Earth Science, California Ed.” U.S.Navy Physiographical Ocean Floor Chart Relief Maps and globes Holt Review workbook Project rubric	Note-taking Rubric Discovery Education, http://streaming.discoveryeducation.com Holt “Earth Science, California Ed.”	Note-taking Rubric Discovery Education, http://streaming.discoveryeducation.com Holt “Earth Science, California Ed.” Moon-Earth system model Charts of solar system, planets, universe Telescope	Final project Rubric All previous resources available to student
PAIDEIA	<u>Class seminar:</u>	<u>Class seminar:</u> Conservation of Earth’s Resources. Text: “An Inconvenient Truth” Video	<u>School-wide seminar:</u>	Student driven seminar presentations
Technology	Google Earth mapping software Doc-Cam and projector Science room laptop cart Powerpoint and video projects	Doc-Cam and Projector Science room laptop cart Powerpoint and video projects	Telescope Google Mars mapping Science room laptop cart Powerpoint and video projects	Doc-Cam and Projector Science room laptop cart Powerpoint and video projects. Digital camera