

# PROJECT DESIGN: OVERVIEW

Name: Up the Hill and Through the Stream: Topographical Maps		Duration: Trimester 1
Grade Level: 4	Teachers:	Grade Level: 4
Other subject areas to be included, if any: Math, Science, Art, Writing		
Common Core Standards	Math: Generalized place value understanding for multi digit numbers.	Science: 4-ESS2-2 Analyze and interpret data from maps to describe patterns of Earth's features.
Project Summary	Gather data and information on various regions of California landforms and ocean depths. In a group, put together a	
Driving Question	How does the elevation/ topography change throughout different regions of California?	
Final Activities	Individual: Take notes (See infographic) and do Topographical Activity worksheets	Assessment: Teacher note and worksheet activity check.
	Group: Each member of the group takes one area of CA (mountains, coast, desert, valley.) Each student will research the specific geographical feature collecting data. Each group will be given a large map of CA or the group will draw a map and each group member will draw topographical features researched.	Assessment: Final map. See rubric.
Resources Needed:	Facilities:	
	Materials: Colored pencils, Chromebooks, Power Point presentation, Topography Activity Sheets, Scavenger Hunt Activity, Real Topography maps	

Notes: Other resources to extend Topo map of SP Valley: <http://www.topoquest.com/map.php?lat=33.08893&lon=-116.98031&datum=nad27&zoom=32&map=auto&coord=d&mode=zoomin&size=m> <http://www.efgh.com/maps/mulehillsanpasqualtrail.gif>  
 Firefighter Math: [http://www.firefightermath.org/index.php?option=com\\_content&view=article&id=49&Itemid=63](http://www.firefightermath.org/index.php?option=com_content&view=article&id=49&Itemid=63) Everest: <http://images.nationalgeographic.com/wpf/media-content/file/wildest-edu-exploring-everest-topography-cb1278528607.pdf> USGS: <http://education.usgs.gov/lessons/teachingtopomaps.html> Treasure Hunt: <http://science-mattersblog.blogspot.com/2010/05/topographic-maps-treasure-hunt.html> High level Topo Lesson: [http://www.teachengineering.org/view\\_lesson.php?url=collection/cub\\_/lessons/cub\\_navigation/cub\\_navigation\\_lesson05.xml](http://www.teachengineering.org/view_lesson.php?url=collection/cub_/lessons/cub_navigation/cub_navigation_lesson05.xml)

**PROJECT DESIGN: STUDENT LEARNING GUIDE**

Activities	Week	Learning Outcomes / Targets	Checkpoints / Formative Assessments	Resources for the week
<p>Introduction: See youtube videos to introduce topographical maps.</p> <p>Note taking: See infographic for notetaking ideas</p>	1	<p>geography includes features like a desert, mountains, coast, and valley.</p> <p>Notes in journal using colored pencils.</p>	Write a summary of the video and discussion in journal. Teacher check	<p>See map of CA at <a href="http://www.conservation.ca.gov/cgs/geotour/pages/index.aspx">http://www.conservation.ca.gov/cgs/geotour/pages/index.aspx</a> Infographic on Google Drive Notes: <a href="http://www.msnucleus.org/membership/html/k-6/uc/geography/5/ucg5_1a.html">http://www.msnucleus.org/membership/html/k-6/uc/geography/5/ucg5_1a.html</a></p>
<p>Topography Power Point</p> <p>Vocabulary</p> <p>Demo and notes: How to Read a Contour Map</p>	2	<p>Take quiz at the end of the Power</p> <p>Topography, topographic map, contour lines</p> <p>How to read a contour map</p>	Teacher check	<p>How to read a contour map: <a href="https://www.classzone.com/books/earth_science/terc/content/investigations/es0307/es0307page04.cfm">https://www.classzone.com/books/earth_science/terc/content/investigations/es0307/es0307page04.cfm</a> Power Point &amp; Ideas on Google Drive Vocab.: topography, contour, sea level, elevation</p>
Topographical Activity worksheets beginning with the matching.	3	Do worksheets.	Teacher check	Topographical activities on Google Drive
Topography Research-Scavenger hunt	4	Scavenger Hunt worksheet	Teacher grade	Scavenger hunt on Google Drive
Research	5	<p>Students are in groups of 4 and research the specific feature chosen. Each student in the group is researching different features (desert, mountain, valley, coast.)</p> <p>Record data in journal including the source.</p>	Data sheet with source information	

Rough draft of topographical map	6	Students do a rough draft of their topographical sketch.	Sketch completion- create a simple rubric that includes elevation numbered in contour intervals with a key	
Final draft of topographical map	7	Students complete final draft of group	Rubric- not created yet	