

# Google Earth and Google Maps - Learning Activity Examples

Color Coding for Teacher Comfort level with Google Earth:	Introductory Level	Intermediate Level	Advanced level
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<u>Examples</u>	<u>Featured Tool in this Example</u>	<u>Tips Learned</u>	<u>Guiding Questions/ Concepts demonstrated</u>
<p><b>NEW</b> Geographic Autobiography</p> <ul style="list-style-type: none"> <li>• <a href="#">KMZ Google Earth file</a> with narrated tour of important locations in my life</li> <li>• <a href="#">Same autobiography with just the placemarks</a></li> </ul>	Recorder and placemarks	Placemarks and recording must be part of the same KMZ file must	How can we use geography to reveal information about ourselves?
<p><b>New</b> The Westford Farms - sharing location specific videos</p>	Uploading videos to a host site, adding video	SchoolTube may be the best host for schools at this time	How can we share our work with the world?

<a href="#">KMZ file for Google Earth - Westford Farm Videos</a>	embed code to a placemark		What is the best way to deliver different kinds of content?
1. Google Earth Challenge <ul style="list-style-type: none"> <li>• <a href="#">Google Earth Challenge Worksheet - PDF Version</a></li> <li>• <a href="#">* Google Earth Challenge Worksheet - Word Version</a></li> <li>• <a href="#">Some Possible Answers</a></li> </ul>	<ul style="list-style-type: none"> <li>• Fly To...</li> <li>• Copy Image</li> </ul>	Kids need practice exploring <ul style="list-style-type: none"> <li>- guided play time - have kids share search strategies - some will need more time practicing</li> <li>• An extension of the most common initial Google Earth activity - to find your home.</li> <li>• Can differentiate by having a wide variety of things to find from fairly simple to very complex.</li> <li>• Can be used as formative assessment. (A new way to verify what you</li> </ul>	Can you find a tall mountain ?  Find an artifact (i.e.State of Liberty)  What search strategy did you use?  What other types of things can you find in Google Earth?

		have accomplished - what you have found or learned)	
<p>2. Virtual Community Walk</p> <ul style="list-style-type: none"> <li>• <a href="#">*Google Maps Version of the Community Walk</a></li> <li>• <a href="#">Example Photos Page</a></li> <li>• <a href="#">Google Earth Version of the Community Walk</a></li> <li>• <a href="#">Adding a Photograph to a Map in Google Earth</a></li> <li>• <a href="#">Adding a Photograph to a Map in Google Maps</a></li> </ul>	<p>Google Maps</p> <ul style="list-style-type: none"> <li>• Draw a line</li> <li>• Add text and a photograph to a placemark</li> <li>• Open Google Maps file in Google Earth</li> <li>• Link the map to a Web site or make it, in some other way, accessible</li> </ul>	<p>It is easier to add content to a map in Google Maps than in Google Earth. Maps can be created in Google Maps and then saved as a KMZ file that can be opened in Google Earth. Some understanding of HTML needed to add content to placemarks in Google Earth but not in Google Maps.</p> <p>Before a photograph can be added to a placemark it must have a Web address. You may need to set up a "dummy" Web site to hold your photographs.</p> <p>This map was created to allow</p>	<p>What historic buildings are in your community?</p> <p>In what way are these buildings the same or different from other buildings in your community?</p> <p>Can you see a connection between the design of a building and its purpose?</p> <p>Are the locations of these buildings important? Why were they built in those locations?</p>

		<p>parents to have a window into this activity and for the students to have a follow-up resource that allows them to complete their notes, finish their building sketches, etc. with this virtual walk after the actual walk.</p>	<p>How can we find out?</p>
<p>3. Physiographic Regions</p> <ul style="list-style-type: none"> <li>• Physiographic Regions Worksheet <ul style="list-style-type: none"> <li>◦ <a href="#">*PDF version</a></li> <li>◦ <a href="#">Word version</a></li> </ul> </li> <li>• <a href="#">Google Earth Physiographic Regions Map Overlay</a></li> </ul>	<p>Using latitude and longitude points to fly to a specific location</p> <p>Using navigational tools to "look around" and report what you see</p> <p>Creating placemarks and saving as KMZ files - linking the KMZ file to a Web page - <i>We could have created placemarks for each location, saved this as a KMZ file and attached that</i></p>	<p>It may be difficult to have students find a specific location and stay there long enough to make adequate observations. With a flick of their finger they can fly off to a different county, state or country. By using latitude and longitude coordinates and directing students to only use the rotation ring students can look around without leaving the specified location.</p> <p>The capability/</p>	<p>What are the observable similarities and differences between the six different physiographic regions of Vermont - population density, tree cover, urban vs. rural, physical features, elevation, etc.?</p>

	<p><i>file to the teacher's Web site for easy access. Our approach gave students additional experience working with latitude and longitude coordinates.</i></p>	<p>temptation to fly around is one of the benefits/problems with Google Earth that Google Maps doesn't have.</p>	
<p>4. Tectonic Plates</p> <ul style="list-style-type: none"> <li>• <a href="#">* Plotting the Evidence - from AIMS</a></li> <li>• <a href="#">USGS Web site with links to Tectonic Plate Boundaries and other KMZ files</a></li> <li>• <a href="#">Web Site with links to Volcano Placemark</a></li> <li>• <a href="#">Volcano KMZ</a></li> <li>• <a href="#">Tectonic Plates KMZ</a></li> <li>• <a href="#">World Population Density KMZ</a></li> </ul>	<p>Turning latitude and longitude lines on and off</p> <p>Creating placemarks and changing the placemark icon</p> <p>Adding text to a placemark</p> <p>Locating an appropriate KMZ file with Google</p>	<p>The "traditional" method for doing this activity would be to use overhead transparencies</p> <p>This is an approach that will enhance the "Aha Moment" when student can see the connection between these sets of data. Additional overlays, such as population centers, can be added to extend the lesson.</p>	<p>Plot the latitude and longitude coordinates of earthquakes and volcanoes</p> <p>Use evidence from the map you have created to infer the location of the Earth's tectonic plate boundaries</p>
<p>5. <a href="#">Create a Country Student Project Example.kmz</a></p>	<p>Organizing</p>	<p>Level 2-3 Working on shared computers requires</p>	<p>What laws of nature does</p>

	<p>Placemarks in Folders  Drawing Polygons  Editing Placemarks</p>	<p>understanding of saving and retrieving placemarks for future editing.  Tutorials Included</p>	<p>your country follow?  Longitude and Latitude  Geography  Climate</p>
<p>6. Creating a Trail Map with Google Earth and a GPS Unit</p> <ul style="list-style-type: none"> <li>• <a href="#">* Creating a Trail Map with Google Earth and GPS Handout</a></li> <li>• <a href="#">Westford Trails.kmz</a></li> <li>• <a href="#">Google Earth KMZ of trail map with Multimedia Added to the Waypoints</a></li> </ul>	<p>Using a hand held GPS to record waypoints and trackpoints</p> <p>Importing those GPS waypoint and trackpoints into Google Earth as a trail</p> <p>Adding text and photographs to the specific waypoints</p>	<p>Images(or videos) that will be included in placemarks must be online somewhere -may need to upload them to a "dummy" Web page so they will have a URL</p> <p>Matching trackpoints to photographs can be done by matching their time stamps IF both are set to the correct time.</p> <p>You no longer need Google Earth Plus to upload data from a GPS device the free version of Google Earth (version 5) has the capability.</p>	<p>What does GPS mean?  How does it work?</p> <p>How can we use latitude and longitude to find exact locations?</p> <p>In what ways are maps helpful tools for understanding our world?</p>

<p>7. The Global Grocery List Project</p> <ul style="list-style-type: none"> <li>• <a href="#">CCSU Global Grocery List Project</a></li> <li>• <a href="#">Global Grocery List KMZ Files</a></li> <li>• <a href="#">The Global Grocery List Home Page</a></li> <li>• <a href="#">Global Grocery List Spreadsheet</a></li> <li>• <a href="#">Saving KMZ files in Google Earth - Lucie's PowerPoint</a></li> </ul>	<p>Finding Locations</p> <p>Adding information to placemarks</p> <p>Changing placemark icons</p> <p>Using "Copy Image" to create a presentation</p>	<p>The Global Grocery List Online Database data will need to be cleaned up for your students to use - it is not being monitored and there are a number of incorrect entries</p> <p>The most difficult part of the process was getting students to save their work correctly. Have them create a folder with an appropriate name, drag each new placemark into that folder after it has been created and right click on the folder at the end of each work session, choose "Save Places as..." and save the folder to the student's network folder or a flash drive.</p>	<p>What impact does geographic location have on the price of consumer goods?</p> <p>What predictions can you make about the price of consumer goods where you live based on the cost of goods in other parts of the world?</p>
<p>8. <a href="#">Google Lit Trips</a></p>		<p>Using Pre-made Trips is VERY</p>	<p>Integrate geography</p>

	<p>Download KMZ file</p> <p>Navigate preconstucted tours related to literature.</p> <p>Create your Own</p>	<p>VERY easy. Level 1.</p> <p>You can create your own as a teacher.</p> <p>See tutorials on this site. Level 2.</p> <p>Or have class geographer add placemarks as you read new literature.</p>	<p>into literature.</p> <p>Where have we traveled to this year using literature.</p> <p>Imagine creating one that had a placemark for everyplace you visited using literature this semester. (No need to get really detailed)</p>
9. <a href="#">Google Gallery</a>	Constantly Changing Each KMZ file comes with a brief explanation of the content	Items could be chosen for demonstration purposes or as the sources of information for a problem solving activity	It will depend on the item chosen
10. <a href="#">Tour de France</a> Examples: <a href="#">Student Project 1.kmz</a> <a href="#">Student Project 2.kmz</a>	<p>Creating Placemarks</p> <p>Adding picture and links to Placemarks</p> <p>Tour Feature in Google Earth 5</p>	<p>Level 3</p> <p>Saving placemarks in a folder on a shared computers and working on it over time can be challenging. Empty placemark folder</p>	What parts of French culture are associated with the province you're touring?

		before you load your file every day. Understand the different places to "save places to". Create a Tutorial	
<p>11. San Francisco Project</p> <ul style="list-style-type: none"> <li>• <a href="#">San Francisco - Visualizing a Safer City Web Site</a></li> <li>• <a href="#">Project KMZ File</a></li> </ul>	Using Overlays - turning them on and off and changing their level of transparency	<p>Using overlay maps as a tool for problem solving is a real world focus for Google Earth.</p> <p>Overlays and layers built into Google Earth (roads, etc.) can be used in combinations and various levels of transparency to reach a solution.</p> <p>Placemarks might be assigned for each layer in a different color and the location with the most placemarks would be a logical choice.</p>	Use the information in overlay maps (fault lines, population distribution, seismic hazard areas, etc.) to determine the most suitable location for a new hospital in San Francisco
<p>12. New Features in Google Earth 5</p> <ul style="list-style-type: none"> <li>• Time Slider - <a href="#">Change over Time Video</a> -</li> </ul>	There is something new popping up in Gogle Earth all the time. New layers and being	The Record Tour feature can become a great presentation tool for teachers and students	Timeline view Recorder Underwater view

<p><a href="#">Where is This?</a></p> <ul style="list-style-type: none"> <li>Record a tour - <a href="#">Flight 1549.kmz</a></li> <li>Underwater view - <a href="#">Jimmy Buffett Hawaii Tour.kmz</a> - (the future of advertising?)</li> </ul>	<p>added continually and with new versions come new features.</p> <p><a href="#">The Sightseer</a> is a Google Earth Monthly Newsletter that will help you stay current with the latest Google Earth features.</p>		
<p>13. Measuring Tour</p> <ul style="list-style-type: none"> <li><a href="#">Student Worksheet Word Version</a></li> <li><a href="#">Student Worksheet - PDF Version</a></li> <li><a href="#">Measuring Tour KMZ</a></li> </ul>	<p>Navigation Tools</p> <p>Google Earth Ruler</p>	<p>Students could "Copy Image" and paste into their answer sheets to verify their solutions</p>	<p>Problem solving and measurement in a real world application.</p>
<p>14. Mapping Tour</p> <ul style="list-style-type: none"> <li><a href="#">Student Worksheet - Word version</a></li> <li><a href="#">Student Worksheet - PDF Version</a></li> <li><a href="#">Mapping Tour KMZ</a></li> </ul>	<p>Navigation Tools</p> <p>Google Earth Ruler</p>	<p>Students could "Copy Image" and paste into their answer sheets to verify their solutions</p>	<p>Problem solving and measurement in a real world application.</p>
<p>15. Nation Sate Community</p> <ul style="list-style-type: none"> <li><a href="#">Student PowerPoint Worksheet</a></li> </ul>	<p>Copy Image and paste into PowerPoint</p>	<p>Power Point used as a young child friendly method for assessment</p>	<p>What is the difference between a nation, state</p>

<ul style="list-style-type: none"> <li>• <a href="#">Student Worksheet - PDF version</a></li> <li>• <a href="#">Nation State Community KMZ</a></li> </ul>	<p>Create placemark and add text and a link to a Web site with the correct answer</p>		<p>and a community?</p>
<p>16.</p>	<p><a href="#">Place-Based Digital Storytelling Modules</a></p>		