

Project Title: Community Bike Path
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Class: St. George CMAP 2011

Project Description	<p>We will map out the Hurricane bike path. This path has been designated by the city of Hurricane to travel approximately 23 miles through the city. About one and a half miles of this route is in our school boundaries. We will create a map using ArcMap that shows the bike path, the 'share the road' signs and areas that don't have sidewalks or shoulders. Students will identify these areas and write letters to the city council asking for support and maintenance of these hazardous areas. In particular, there is a ¼ mile section that has no shoulders or sidewalks for pedestrians or bikes. Students will measure, analyze, and make suggestions for improving this area with sidewalks or an asphalt bike path. We will take our findings to the city council to see if they will fund these improvements or identify hazardous areas.</p>
Community Issue or Problem Selected -How project evolved?	<p>Hurricane city has identified a designated bike trail through the city. There are certain areas of this trail that need improvement and at this time the city does not have plans to make any improvements. We want to identify areas that are within our school boundaries that will impact and benefit the children that come to our school.</p>
Community Partner(s)	<p>City of Hurricane: the streets department and trail committee. Hurricane Police Department (Safe School Routes)</p>
Project Objectives	<p>We will map, measure, and assess the ¼ mile area of the bike trail that directly impacts our students. We will take our findings to the city council for review and consideration of improving the shoulder and possible asphalt path or cement sidewalk.</p>
Utah Core Standards/Objectives	<p>Technology Standard 9 Determine when technology is useful and select the appropriate tool(s) and technology resources to address a variety of tasks and problems. Math Standard 4</p>

	<p>Students will determine area of polygons and surface area and volume of three-dimensional shapes.</p> <p>Objective 1 Determine the area of polygons and apply to real-world problems.</p> <p>a. Compare areas of polygons using different units of measure within the same measurement system (e.g., square feet, square yards)</p> <p>Language Arts Standard 8 Writing-Students write daily to communicate effectively for a variety of purposes and audiences.</p> <p>Objective 2 Compose a written draft.</p> <p>a. Draft ideas on paper in an organized manner utilizing words, sentences, and multiple paragraphs (e.g., beginning, middle, end; main idea; details; characterization; setting; plot).</p> <p>b. Use voice to fit the purpose and audience.</p> <p>c. Use strong verbs and precise and vivid language to convey meaning.</p> <p>d. Identify and use effective leads and strong endings</p>
<p>Essential Question(s) -Spatial Issue</p>	<p>How can we make a safe route for students to get to school and improve the city bike trail?</p>
<p>Assessments (rubrics, scoring guides)</p>	<ul style="list-style-type: none"> • Map <ol style="list-style-type: none"> 1. Title 2. Compass 3. Scale 4. Legend 5. Photo 6. Names of group members • Persuasive Letter <ol style="list-style-type: none"> 1. State position 2. List pros and cons of position 3. Supporting data 4. Photo
<p>Project Products</p>	<ul style="list-style-type: none"> • Data Map • Persuasive Letter
<p>Project Timeline (include a step by step Procedures)</p>	<ol style="list-style-type: none"> 1. Teachers will create a map of the bike trail loop. 2. Create data collection spreadsheets to accompany GPS marking and data collected. 3. Students will walk the designated portion of the path with a GPS and data log to collect information. 4. Students will photograph areas to accompany the data collected. 5. Students will analyze the data collected to determine specific needs to the portion of the trail within school boundaries.

	<ol style="list-style-type: none"> 6. Students will create data maps in groups. 7. Students will write a persuasive letter to the city of Hurricane with accompanying map and photos.
Resources Needed	<ul style="list-style-type: none"> • Map of the biking trail. • GPS unit for each group • Digital camera for each group • Data collection sheet, clipboard, and pencil for each group • Computers • GIS mapping software
Skills Required	<ul style="list-style-type: none"> • Using the GPS device • Measuring and recording data • Computer skills
Project Team Member Roles	<p>Teacher(s): Darin Thomas and Jenny Leavitt: partnership coordinators, monitor student work</p> <p>Students: Fifth grade students: gather data, create maps, and write a persuasive letter</p> <p>Partner(s): City of Hurricane and Hurricane Police Department</p>
Celebration/Presentation	<ul style="list-style-type: none"> • Persuasive Letters presented at the city council meeting. • Write up an article with photos for The Spectrum and school newsletter.
Project Evaluation	<ul style="list-style-type: none"> • Was the data collected completely and effectively? • Is the data represented effectively on the group maps? • Are the letters persuasive and do they include enough information to be informative and represent the data collected?
Project Bibliography	<p>CMap handouts</p> <p>Three Fall school boundaries map</p>
Plans for Future CMap Activities	<p>Mapping historical or interesting points in Hurricane.</p>