

CMaP PROJECT

Project Title: Nature Trail in Spanish Fork

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Project Description	The project will include students gathering data using GPS units to map out the environment and vegetation found along the Nature trail located by our school. The students will use ArcGIS to create maps of the trail and the locations of the vegetation. The students will then do research on the plants and animals found in this environment and along the trail. The students will then choose the different types of vegetation or aspects of the environment they want to focus on and they will do intensive research and create an information paragraph discussing that specific aspect. Then we will create plaques along the trail educating the community about that particular environment and the vegetation and wildlife found along the way.
Community Issue or Problem Selected -How project evolved?	Lack of information on the local Nature Trail. After hiking on nature trail we thought it would be beneficial to provide informational plaques about the environment and vegetation along the trail.
Community Partner(s)	-Parks and Recreation -4H - Paul Carpenter, American Leadership Academy school board
Project Objectives	-Students will learn how to use GPS units -Students will learn how to create maps using ArcGIS -Students will research plants and animals found in Riparian and Deciduous environments. -Students will be able to use a digital camera -Students will be able to contribute to the community by helping to educate those that travel along the Nature Trail.
Utah Core Standards/Objectives	Science Standard 5: Students will understand the physical characteristics of Utah's wetlands, forests, and deserts and identify common organisms for each environment. Objective 1 Describe the physical characteristics of Utah's wetlands, forests, and deserts. Objective 2 Describe the common plants and animals found in Utah environments and how these organisms have adapted to the environment in which they live. Objective 3 Use a simple scheme to classify Utah plants and

	animals.
Essential Question(s) -Spatial Issue	<ul style="list-style-type: none"> -Is there a relationship between the location of the plants and animals found by the river? -What types of plants and animals would you find by the river? - Does the river affect the habitat of the plants and animals found by it?
Assessments (rubrics, scoring guides)	<ul style="list-style-type: none"> -Each group will present their maps to the class and they will also present information on the different vegetation that we find along the trail. - They will also be evaluated on their active participation.
Project Products	<ul style="list-style-type: none"> -Informational maps of the nature trail -Educational plaques about the vegetation growing around the Nature trail -Pamphlets describing the vegetation along the Nature trail.
Project Timeline (include a step by step Procedures)	<ul style="list-style-type: none"> -Arrangements will be made with community partners to complete the project. -Teachers will teach the students how to use the GPS units and ArcGIS. -Teachers will let students practice their new skills by doing a treasure hunt or something similar. -Students will study Utah Biomes and become familiar with some of the plants and animals found in each one. -Teachers will take student on nature trail and use GPS units to map trail and specific vegetation along the way. They will also take notes and photos of things that they observe along the way. -Students will create maps using GIS and enter their information. -Student will do research to find more info about the plants and animals we found on the trail and more on the environment. -Students will then pick a specific plant, animal, or aspect of the environment and write a paragraph about it. - Teachers will edit and check paragraphs for accuracy and then we will present them to our community -The plaques with the paragraphs on them will be put in place. -Teachers will then take the students to see their final work.
Resources Needed	15 GPS units, Digital cameras, data sheets, internet, ArcGIS software, plaques, etc.
Skills Required	-Students should have skills to classify many things.

	<p>-Students should be able to obtain knowledge based on observable evidence</p> <p>-Students should be able to sort and sequence data</p> <p>-Students should be able to record data accurately when given the appropriate form and format (e.g., table, graph, chart).</p> <p>-Students should be able to report observation with pictures, sentences, and models.</p> <p>-Students should be able to identify common plants and animals that inhabit Utah's forests, wetlands, and deserts.</p> <p>-Students should be able to cite examples of physical features that allow particular plants and animals to live in specific environments (e.g., duck has webbed feet, cactus has waxy coating).</p>
Project Team Member Roles	<p>Teacher(s): Provide resources and will teach how to use GPS and GIS systems. Teachers will also guide students in their research and will approve the accuracy of the information before put on plaques.</p> <p>Students: Gather all data using GPS systems. They will record information based on observations of plants and some animals. They will make maps using GIS software and they will present their work.</p> <p>Partner(s): Help to provide us with GPS units. They will be available to see our presentations. Help us to get the materials and the funding we need to put the plaques in place.</p>
Celebration/Presentation	<p>We will do presentations in class and will include our community partners.</p> <p>We will go and see the plaques that we put in.</p>
Project Evaluation	<p>Other 4th grade classes can hike on the trail and be educated about the environment and habitat along the trail.</p>
Project Bibliography	<p>Utah State Core standards were used.</p>
Plans for Future CMAP Activities	<p>-Clean up around the school – garbage can placement</p> <p>-Naturescape project</p>