TEMPLATE FOR CMaP PROJECT

Project Title: Town Water System
Author: Jim Wood
Class: Cedar 2009

Project Description	Mapping of the town water systems. This will include mapping of all fire hydrants, shut-off valves, and meter hook-ups for the town culinary system and the town irrigation system. Students and community members will use GPS and GIS and data available through the USGS to locate, mark and map these systems. The final maps will be given to Alton Town and to Alton Irrigation Company.
Community Issue or Problem Selected -How project evolved?	There is currently a lack of knowledge of all of the shut-off valves for the culinary and irrigation systems. There is no mapping of the current fire hydrants and meter bases. This has been a problem for the community in maintenance and repair issues as well as fire suppression.
Community Partner(s)	Alton Town Alton Irrigation Company
Project Objectives	Students will learn practical application of math, science, and language arts as they perform service for the municipality of Alton. They will also learn how water systems work.
Utah Core Standards/Objectives	**Algebra II – Standard I - Objective 4**: Model and solve mathematics in the real world. **Earth Systems – Standard – Objective 1e** Analyze how communities deal with water shortages, distribution, and quality in designing a long-term water use plan. **10th grade Language Arts – ILO 4d**. Develop and deliver individual presentations.
Essential Question(s) -Spatial Issue	What factors are considered in placing fire hydrants, valves, and meter bases?

	How do communities deal with water shortages and distribution in water use plans?
Assessments (rubrics, scoring guides)	Assessments will be made through cooperative group work and final projects.
Project Products	Map of Alton Town culinary water systems with valves, meter bases, and fire hydrants. Map of Alton Irrigation system with valves, streams, and reservoirs.
Project Timeline (include a step by step Procedures)	Week 1: Use of a GPS and basic GIS familiarity. Week 2: Locating and marking all culinary water system features. Week 3: Creation of map of culinary system Week 4: Locating and marking all irrigation water system features. Week 5: Creation of map of irrigation system
Resources Needed	Multiple GPS receivers, Digital cameras, ArcMap software
Skills Required	Basic computer knowledge
Project Team Member Roles	**Teacher(s): Jim Wood** **Students: Advanced Math Students** **Partner(s):Alton Town, Alton Irrigation Company, USU Extension**
Celebration/Presentation	Presentation will be made in the Alton Town Council meeting and the Alton Irrigation Company meeting.
Project Evaluation	The project will be evaluated in conjunction with the entities that will be served to make sure that the objectives are met.

Project Bibliography	None to this point
Plans for Future CMaP Activities	Mapping of Alton Town deer fence with problematic locations marked so that the fence can be kept sound. This project will link Utah DWR, Color-Country Outfitting, Heaton Livestock LLC, and Alton Town.

Optional:
-Lesson Plans
-Student Artifacts
-Publicity