

CMaP PROJECT

Project Title: Pond Location
Created by: Melinda Looman
Class: Heber CMaP 2010

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| <p>Project Description</p> | <p>The 8th graders at Odyssey Charter School have planned a project to locate and describe all of the small ponds in the southern half of the city (closest to the freeway). Although these ponds are generally known to the people who live nearby, schools have not used them because there are no coordinates to find them or descriptions of the habitats and life forms they contain.</p> |
| <p>Community Issue or Problem Selected -How project evolved?</p> | <p>There is a small pond just beyond our school fence. We decided to test it for water quality, life, etc. Then I asked the 8th graders to tell us where other ponds were in American Fork (this is my first year at this school). There are lots of ponds in American Fork, but they don't appear to be listed anywhere. This gave us the idea to document where these ponds are and what they look like, so that other groups can run the kinds of experiments we want to run.</p> |
| <p>Community Partner(s)</p> | <p>BYU Science Department is sending students out to work with our students, and is loaning us needed equipment.</p> |
| <p>Project Objectives</p> | <p>Students will learn practical application of computers, math, science, and language arts as they:</p> <ol style="list-style-type: none">1) locate and map ponds2) test water quality3) identify life forms4) describe environment5) identify plants |

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| Utah Core Standards/Objectives | Science Core Curriculum—8 th Grade Standard II, Objective 2a consumer/decomposer, predator/prey Objective 3a (wetlands) Effects of freeway and road on stormwater runoff |
| Essential Question(s) -Spatial Issue | What man-made factors impact ponds, wetland areas. |
| Assessments (rubrics, scoring guides) | One-on-one assessments of each student's work by BYU science students |
| Project Products | GIS map of ponds |
| Project Timeline (include a step by step Procedures) | Week 1: Use of a GPS and basic GIS familiarity Week 2: Locating and marking all ponds on south side of city of American Fork (near the freeway). Week 3: Meeting with BYU students. Testing water quality, describing habitats Week 4: Creation of map of small ponds. |
| Resources Needed | Multiple GPS receivers, digital cameras, ArcMap software, scientific tools (such as microscopes) |
| Skills Required | Basic computer knowledge. |
| Project Team Member Roles | Teacher(s): Ms. Harrington (science) and Mr. Freeman (computers) Students: All 8th grade students. Partner(s): BYU Science Department and students |

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| Celebration/Presentation | Presented by 8 th grade students in assembly to other middle school students and to parents. |
| Project Evaluation | BYU Science Department students will evaluate 8 th grade project. |
| Project Bibliography | None |
| Plans for Future CMAP Activities | Students will generate more CMAP projects after they have had this first experience. |