Project Title: Radon Levels in Sevier County
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Class: CMaP Richfield 2011

Project Description	Students (7th grade science) will research indoor air quality and how radon affects the health of people living in those homes. After gaining some background knowledge, students will go out in the community and place radon test kits in several homes. Students will collect data on the amount of radon recorded and the GPS coordinates for each, as well as collecting data about the household size, occupancy, and type of soil. Students will use this data to increase public awareness and testing and advocate for radon-resistant construction and building codes by creating a PowerPoint Presentation and information sheet.
Community Issue or Problem Selected -How project evolved?	Sevier county has been identified as having moderate to high radon hazard potential, yet very few people know what that means and how they might be affected.
Community Partner(s)	Department of Environmental Quality Department of Health Local Newspapers
Project Objectives	To measure and map radon levels in several locations around our community. Increase public awareness of issues related to health. Improve science skills related to data collection and analysis.
Utah Core Standards/Objectives	USOE 7th Grade Science STANDARD I: Students will understand the structure of matter. Objective 1: Describe the structure of matter in terms of atoms and molecules. STANDARD III: Students will understand that the organs in an organism are made of cells that have structures and perform specific life functions. Objective 2: Identify and describe the function and interdependence of various organs and tissues. STANDARD V: Students will understand that structure is used to develop classification systems. Objective 1: Classify based on observable properties.

Essential Question(s) -Spatial Issue	What is indoor air pollution? How does air quality affect us? How much do we know about indoor air quality and how it affects our health? How can we improve indoor air quality?
Assessments (rubrics, scoring guides)	Students will create a PowerPoint Presentation and information sheet to be graded with a rubric.
Project Products	GIS Map of Radon Levels in Community PowerPoint Presentation Information Sheet
Project Timeline (include a step by step Procedures)	At the start of the school year, decide how you will obtain funding for the test kits and secure funds. Take 2 weeks during the year to complete the background research, decide on the testing locations, distribute the kits and collect waypoints and data, and map the data after it is collected. This may also take a few extra days to include data analysis and putting together the display. 1 Week before the science fair, be sure to get copies of the information sheet and finalize the display for public viewing.
Resources Needed	GPS Units Radon Test Kits (possibly through grant or community council funding) Computers with Google Earth
Skills Required	Basic GPS Skills- UTM, Waypoint Marking Google Earth Mapping Skills
Project Team Member Roles	**Teacher(s): Connect with community partners, gather funding for testing materials,** **Students: 7th Grade Science Students gather data and create maps. Create documents to share information with community.** **Partner(s): Use data to inform the public of environmental issues that may affect health.**
Celebration/Presentation	Present findings to the community during our school's annual science fair. As a school, students will create an information

	booth where the PowerPoint Presentation can be played, data and maps will be displayed, and people can pick up information sheets to take home.
Project Evaluation	Students will create a PowerPoint Presentation and information sheet to share with peers, school staff, and community members. Create a press release to inform the public and submit it to the local papers.
Project Bibliography	Solomon, Barry J. *Radon Hazard Potential in the Central Sevier Valley, Sevier County, Utah*. Rep. September ed. Salt Lake City, UT: Utah Geological Survey, 1996. Print. Ser. 47. http://geology.utah.gov/maps/geohazmap/sevier.htm
Plans for Future CMaP Activities	Mapping Invasive Species with the Department of Natural Resources and USU Extension (Lee Woolsey, NRCS) Stream Science Unit along Salina Creek with USU Extension Collect microorganisms from various locations around the valley and map the locations and number/type of organisms found in each sample. Build a scale model solar system in our town and map the locations of each planet.