

TEMPLATE FOR CMap PROJECT

Project Title: Urban Heat Island

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Class: Davis 2009

Project Description	Students will be asked to map out urban heat island in Downtown Salt Lake City. Students will take GPS coordinates at 10 different spots around Salt Lake City. These locations will vary by the amount of vegetation and asphalt. Students will return to these locations and take temperature reading for two weeks. The temperature and location data will then be compiled and mapped out using GIS.
Community Issue or Problem Selected -How project evolved?	With the reconstruction of Downtown Salt Lake City the questions of roof top gardens and open space continue to be issues for city planners. The data collected will show how local air temperature is affected by these choices.
Community Partner(s)	National Energy Foundation
Project Objectives	To demonstrate urban heat islands in Downtown Salt Lake City.
Utah Core Standards/Objectives	IB Chemistry Standard: <ol style="list-style-type: none"> 1) Temperature and change of temperature 2) Chemistry in the Environment 3) Using technology
Essential Question(s) -Spatial Issue	Where are the urban heat islands in Downtown Salt Lake City? What are the temperature differences between different locations?
Assessments (rubrics, scoring guides)	IB portfolio grading rubric
Project Products	GIS map Power point presentation
Project Timeline (include a step by step Procedures)	First: Instruct students in using GPS and Vernier technology. Have students go out to their locations and take waypoint and temperature data. Next 2 weeks: Have students take temperature data at their

	<p>assigned location.</p> <p>Third: Help students upload GPS data and create a map using GIS.</p> <p>Last: Have students present findings to class. Have students connect with community partners and present findings.</p>
Resources Needed	<p>GPS</p> <p>Vernier temperature probs</p> <p>Computer lab time</p> <p>ArcGIS software installed and working</p> <p>SLC Aerial Image</p>
Skills Required	<p>Waypoint marking</p> <p>Vernier</p> <p>Basic GIS map making skills</p>
Project Team Member Roles	<p>Teacher(s): Make connection with community partner. Gather and teach necessary technology to students.</p> <p>Students: Gather data and create maps. Continue connection with community partner.</p> <p>Partner(s): Use data to inspire city planners to continue to implement appropriate open spaces and roof top gardens</p>
Celebration/Presentation	Students will present map and finding to the class
Project Evaluation	IB portfolio rubric
Project Bibliography	
Plans for Future CMAP Activities	Water quality project along the Jordan River with USU extension

Optional:

- Lesson Plans
- Student Artifacts
- Publicity