

SCHOOLYARD URBAN HEAT STUDIES IN-CLASS CURRICULUM* & DATA FLOW

MWEE
Elements

▶ PROGRAM INTRODUCTION & ISSUE DEFINITION PRESENTATION

Driving Question: Does your schoolyard demonstrate effects of urban heat?

▶ RESEARCHING THE ISSUE: Guided Student Research

▶ INVENTORY SCHOOLYARD LAND USE\COVER TYPES (Online & Outdoor Site Verification)

Issue Definition

Outdoor Experiences

Synthesis & Conclusions

Stewardship &
Civic Action

Surface Temp Module	Air Temp Module	Water Temp Module
<i>Issue Review</i>		
<ul style="list-style-type: none"> Land Use & Surface Temps 	<ul style="list-style-type: none"> Extreme Air Temps & Atmospheric Urban Heat Islands 	<ul style="list-style-type: none"> Urban Heat, Runoff & its Impact on streams
<p>Supporting Questions: Does your schoolyard act as a Surface Urban Heat Island?</p>	<p>Supporting Questions: Does your schoolyard act as an Atmospheric Urban Heat Island?</p>	<p>Supporting Questions: Does your schoolyard impact local stream temperature?</p>
<i>Investigate</i>		
<ul style="list-style-type: none"> Albedo & Land Cover Temperature Lab 	<ul style="list-style-type: none"> Understanding the Impacts of Extreme Heat – Guided Research 	<ul style="list-style-type: none"> Explore Stream Info – Online Data Tools
<i>Measure/Model</i>		
<ul style="list-style-type: none"> Measure Land Surface Temperatures 	<ul style="list-style-type: none"> Measure Air Temperatures 	<ul style="list-style-type: none"> Water Temp. Mixing Lab Measure Stream Temps
<i>Analyze</i>		
<p>Hood–CCWS Temperature Data Website WWW.CCWSSCIENCE.ORG</p>		
<ul style="list-style-type: none"> Schoolyard Surface Temp Data as Surface UHI 	<ul style="list-style-type: none"> Schoolyard Air Temp Data as an Atmospheric UHI Seasonal Data Lesson 	<ul style="list-style-type: none"> Stream Temperature Data Predicted runoff temps Seasonal Data Lesson
<i>Synthesize</i>		
<ul style="list-style-type: none"> Cause/Effects of Issue Identify Person(s) of Influence 	<ul style="list-style-type: none"> Cause/Effects of Issue Identify Person(s) of Influence 	<ul style="list-style-type: none"> Cause/Effects of Issue Identify Person(s) of Influence
<p>Answering the Driving Question: CALCULATING THE OVERALL SCHOOLYARD URBAN HEAT SCORE</p>		

- ▶ Researching classroom course of actions to address issue(s) identified
- ▶ Define Action Project Criteria and Selection
- ▶ Plan and Implement the Action Project

**Online and Offline Distance Learning options available*