overarching QUEStion:

What features and plants are optimum to help cool your community?

Concept

Basins are a simple form of passive rainwater harvesting which can be designed as a solution to redirect rain, grow native vegetation, and help naturally cool our local environment to buffer against the localized impacts of climate change.

activate

Students design a simple one-basin raingarden as a solution to heat impacts from climate change after performing a site investigation and soil jar test, researching native plants, and quantifying basin size.

check

Students use the *DYOB Student Presentation Template* to construct an explanation of how their one-basin raingarden design will meet the objective of reducing heat within their community.

Objectives

* Use basic rainwater harvesting principles to design a localized solution to mitigate heat.

resources

* **Lesson Outline:** [***DYOB Constructing Explanations Lesson Outline.docx***](https://arizona.box.com/s/ks9ykbdou0hgbed718bdf8ejx6ke5mu7)
* **Lesson:** [***Design Your Own Basin Lesson.docx***](https://arizona.app.box.com/file/783524848318?s=2yl85fzbxlrq2o2yqg1ypzss0mwmkjgy)
* **Student Design Template:** [***DYOB Student Presentation Template.pptx***](https://arizona.app.box.com/file/783503647712?s=7b1er3db79wwi3oma9hzsk6ndbmwh33a)
* **Reference Material:** 
  + [***Engineering Design Process Diagram.pdf***](https://arizona.app.box.com/file/783503877300?s=8kt8hzh7skncov4b87ai0elp7f3elxrs)
  + [***Soil Texture Triangle-Permeability Table.docx***](https://arizona.app.box.com/file/783523894150?s=on3has8q68axgcut7qnenq68us92xshb)

Lesson Instructions

Use the ***DYOB Constructing Explanations – Designing Solutions Lesson*** for delivery. The lesson will walk you through the basic steps of basin construction and provide opportunities for students to conduct explanations based upon evidence for their work. Have students use the ***DYOB Student Presentation Template*** as their guide through the design process. The template will also be used by the students to present their one-basin raingarden design to their peers.