overarching QUEStion:

*How do human impacts on the land affect the flow of water within a watershed??*

Concept

Humans have extensively changed the structure of the land that makes up our cities to accomplish certain functions. Many of those same structures cause unintended consequences. For example, paved roads and parking lots improve our ability to drive and keep dust out of the air, but also create impermeable surfaces that increases runoff during storms. Best management practices for stormwater in our cities can lessen these unintended consequences.

activate

Students watch short video clips showing the power of stormwater in action. They engage in an experiment quantifying runoff from two different land surfaces using a stormwater model. They learn about and demonstrate the effects of stormwater Best Management Practices (BMPS) using the model.

check

Student groups report runoff and retention data from their experiment for a class table and compare their data to other student groups. As they change the land surface in their model, they document the benefits of BMPs on their worksheet.

Objectives

* Demonstrate that impermeable surfaces can lead to excessive stormwater flow and flooding.
* Identify Best Management Practices for handling stormwater that lead to beneficial use.

resources

* Lesson: **Storm Water Lesson.docx**
* Reference Material
  + Stormwater Worksheet.pdf
  + Stormwater Best Management Practice Cards.pdf
  + [Stormwater Video clips](https://arizona.hosted.panopto.com/Panopto/Pages/Viewer.aspx?id=bb331dc0-a158-481f-82a8-ace9002e32ac)

Lesson Instructions

Use the **Storm Water Lesson** to introduce students to the issues of storm water runoff in urban environments. Show students one or two of the short video clips. Assign students to small groups to perform the runoff experiment and record the Best Management Practices that they employed. (Additional materials are required for this.) Finish the lesson by tallying the class runoff and retention data on a T-chart and have each group report on a claim based on the evidence that they observed.