



COMMUNITY WATERS SCIENCE UNIT

4TH GRADE

The background of the slide is a light gray gradient. It is decorated with numerous water droplets of various sizes, some of which are in sharp focus while others are blurred, creating a sense of depth. The droplets are scattered across the top and bottom of the slide, framing the central text.

RESEARCHING & EVALUATING SOLUTIONS

Community Waters Science Unit: [Lesson 7](#)

RESEARCHING & EVALUATING SOLUTIONS

Focus Question: Which solution will best meet our criteria and constraints?

Learning Target: I can research and evaluate solutions to identify which solution we should build in our model.



REVIEW PROBLEM-CRITERIA-CONSTRAINTS

Problem-Criteria-Constraints Table for Community Waters Science Unit		
Our Site:		
Problems to Solve	Criteria for Success	Constraints on Possible Solutions
Community-wide problem: Too much stormwater runoff in the city.		

What is our site-specific problem?

What are our criteria for success?
PICK TWO!

What are our constraints?
PICK TWO!

BRAINSTORMING IDEAS

- What solutions might help with our stormwater problem?



GREEN SOLUTIONS TO STORMWATER RUNOFF





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<i>Example:</i>	Criteria 1: amount of stormwater leaving our playground is reduced	Criteria 2: keep play area	Constraint 1: keep costs low	Constraint 2: can't take up a lot of space
<i>Trees - Evergreen trees are best for helping with stormwater</i>	<i>Trees will slow down and soak up some stormwater</i>	<i>Trees don't take up very much space.</i>	<i>Trees are <u>pretty affordable or free</u></i>	<i>Trees are <u>different sizes</u> but we can get small ones.</i>

[illegible]

CHOOSING A SOLUTION TO MODEL & TEST

Each engineering team will:

- Choose **one** solution to test in your model.
- Work together to write out a **solution proposal**. How will the proposal meet the criteria for success and include evidence to support their decision.

Different teams should test different solutions so they can be compared!

Solution proposal

Worksheet Page 2

After evaluating the solutions based on our research, our idea for a **solution** is:

This **solution** would meet the criteria for success because:
