Me & My Watershed: Tap the Sky

Program Overview

In Me and My Watershed: Tap the Sky, students investigate the guiding question: “How does capturing rainwater benefit me and my watershed?” Through exploring watershed models, hands-on activities like watershed mapping, seasonal rainfall graphing and student designed rainwater catchment modeling, students will understand their connection to the Bay, see how water is a precious resource and learn ways to be resourceful with water through catchment systems that already exist in their community.

Program Goals

1. Students will strengthen their relationship with our local watershed through hands-on, place-based activities and personal reflection.
2. Students will understand concepts about the Earth’s water cycle, how water flows through a watershed and the benefits of rainwater harvesting through modeling, mapping and reflection.
3. Students gain an understanding of rainwater catchment systems so they can understand what it does and how it works.
4. Students build a stronger relationship to their environment within their watershed.

Standards Connections

Me & My Watershed: Tap the Sky supports learning and engagement in the following California Next Generation Science Standards Disciplinary Core Ideas:

- LS2.A - Interdependent Relationships in Ecosystems
- LS2.C - Ecosystem Dynamics, Functioning, and Resilience
- ESS2.A - Earth Materials and Systems
- ESS2.C - The Roles of Water in Earth’s Surface Processes
- ESS3.C - Human Impacts on Earth Systems
- ESS2.D: Weather and Climate
- ESS3.B: Natural Hazards
- ETS1.B: Developing Possible Solutions

This program also incorporates concepts from the following 3-6 Common Core English Learning Language and History/Social Studies Standards:

- Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.

The Watershed Project’s mission is to inspire Bay Area communities to understand, appreciate, and protect our local watersheds.

If you have any questions about this program, please contact us at: education@thewatershedproject.org

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- Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacherled) with diverse partners on grade 3-6 topics and texts, building on others’ ideas and expressing their own clearly.
- Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

The program also incorporates concepts from the following elementary school Common Core Health Standards:

- Describe how a healthy environment is essential to personal and community health.
- Discuss how reducing, recycling, and reusing products make for a healthier environment.
- Explain that all individuals have a responsibility to protect and preserve the environment.
- Use a decision-making process to determine personal choices that promote personal, environmental, and community health.

## Program Outline

<table>
<thead>
<tr>
<th>Lesson Name</th>
<th>Guiding Question</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>L1 - All the World’s Water</td>
<td>Where is water found on earth?</td>
<td>In this introductory lesson, students will do introductions, review group agreements, learn of the Indigenous stewards of the land they live on, and wrap up with an activity demonstrating the various stores of water on Earth.</td>
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<tr>
<td>L2 - Getting to Know Our Watershed</td>
<td>What is a watershed? How does water move through a watershed?</td>
<td>Students will make observations and predictions while studying a watershed model of the Bay Area to learn how water travels and what it can pick up along the way. They will gain an understanding of how pollution gets carried into the bay and explore watershed maps.</td>
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<tr>
<td>L3 - Biomimicry and Nature-Based</td>
<td>How can we learn from nature to develop nature-based solutions to solve pollution and health problems?</td>
<td>Students will learn about biomimicry and how cities have developed nature-based solutions to pollution and health problems by copying natural phenomena. Students will learn about the impacts of runoff on cities and start to discuss possible solutions.</td>
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<tr>
<td>Solutions (Field Trip)</td>
<td></td>
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<tr>
<td>L4 - Building a Relationship with</td>
<td>Who do we share our watershed with, and how do we communicate with nature?</td>
<td>Students will learn what a nature journal is, how we use it and why it’s an important tool for observation and connection with one’s environment. Students will venture to a nearby creek in a regional park and participate in nature journaling, field games, nature walks, and creek exploration.</td>
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<tr>
<td>Nature (Field Trip)</td>
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<tr>
<td>L5 - Why Capture Rainwater?</td>
<td>Why is capturing rainwater useful?</td>
<td>Students investigate the importance of capturing rainwater by using evidence and data about rainfall in California and other regions of the US. Based on the evidence, students learn what times of year are best for capturing rainwater and why. Students then reflect on water resourcefulness.</td>
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<tr>
<td>L6 - How do we Capture Rainwater?</td>
<td>How can we design a system to capture rainwater most effectively?</td>
<td>Students will experiment with different materials to build their own rain catchment system on a small model structure. Students will use porous and non porous materials to help understand how water flows over different surfaces in the real world.</td>
</tr>
</tbody>
</table>

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