APW-ADWR
Intergovernmental Agreement
Report 2019-20

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Arizona Project WET

Our Vision

• Teacher professional development that evolves instructional practices and deepens content knowledge
• Direct student outreach that delivers or extends in-classroom instruction
• Community engagement
Water Education Program Stats

Teacher Academies
19 PD days
262 - 4th-12th grade teachers

Students
Indirect - 11,226
Direct – 3,687

Water Scene Investigation
800 students
769,968 gpy savings

Groundwater & Riparian Areas
2,762 students
95 classes
94 volunteers

School Water Audit
26 students
76 aerators
2,373,290 gpy savings

Engineering Design
99 students
Rainwater Harvesting Design
II. Teacher Professional Development (PD)

**We offer teachers:**

1. professional development that evolves teachers' instructional practice and water-related content mastery through STEM integration, real-world and relevant application, and collaborative work.

2. the support needed to adopt instructional practices that encourage students to apply their learning to develop ideas, design solutions, and deliver positive change.

Virtual PD

**APW provided:**

- 262 teachers
- 11,226 students
- 2,004 combined hours of virtual PD
Task 1 – Multi-day Academies

Aqua STEM Unit Academies
• Rainwater Harvesting Engineering Design
• Waters of Our World
• Riparian Habitat Exploration
  ❖ 3D Learning and Systems Thinking

APW provided:
✓ 32 teachers
✓ 2,368 students
✓ 448 combined hours of virtual PD
Task 2 – Two-day Academy

Exploring the Colorado STEM Academy

APW provided:

- 22 middle and high school teachers
- 2,410 students
- 308 combined hours of virtual PD
Exploring the Colorado STEM Academy Engineering Design went from this to this
Exploring the Colorado STEM Academy Engineering Design during COVID changed to this home model:
Task 3 – One-day Workshops

Water Festival Teacher Workshops

APW provided:
✓ 208 fourth-grade teachers who report teaching
✓ 6,448 students
✓ 1,248 combined hours of virtual PD
III. Direct Student Outreach

- Water Scene Investigation & School Water Audit
- Rainwater Harvesting Engineering Design
- Wonders of Our World Aqua STEM Unit
  - Groundwater System
  - Riparian Habitat Exploration
Task 4 – Water Scene Investigation Program

Students change aerators at home

Students change aerators on school faucets
Water Scene Investigation

APW provided:
- 30 sixth-grade classes
- 800 students
- 60 combined instructional hours
- 769,968 estimated GPY savings
APW provided:
- 1 sixth-grade class
- 27 students
- 78 aerators changed
- 2,373,290 estimated GPY savings
- $4,500
Task 5 – Engineering Design

Rainwater Harvesting

APW provided:

- 99 students
- 17.5 hours direct instructional hours
Task 6 – Groundwater System & Riparian Areas

Groundwater System

APW provided:
✓ 85 classes
✓ 2,455 students
✓ 85 direct instructional hours
Groundwater Concepts

- Arizona’s unique hydrological cycle and its impact on groundwater
- The components and composition of the groundwater system
- How water moves through diverse substrates within the ground
- Key terms: overdraft, subsidence, safe-yield, recharge, discharge
- The importance of groundwater and impacts of human use
Active Engagement!
Groundwater Program

- Excellent assessment results!
- Knowledge gains increased in 2019-2020 School Year

<table>
<thead>
<tr>
<th>Concept</th>
<th>2018-19 Knowledge Gain</th>
<th>2019-20 Knowledge Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>GW is between grains of sand and gravel</td>
<td>16%</td>
<td>63%</td>
</tr>
<tr>
<td>GW moves through sand due to gravity</td>
<td>44%</td>
<td>62%</td>
</tr>
<tr>
<td>GW is connected to surface water</td>
<td>83%</td>
<td>80%</td>
</tr>
<tr>
<td>GW is part of the water cycle</td>
<td>34%</td>
<td>54%</td>
</tr>
<tr>
<td>We use GW</td>
<td>40%</td>
<td>42%</td>
</tr>
<tr>
<td>Average</td>
<td>39%</td>
<td>58%</td>
</tr>
</tbody>
</table>
Riparian Habitat Exploration

APW provided:
✓ 10 classes
✓ 307 students
✓ 94 volunteer mentor scientists
✓ 187% knowledge gain about riparian area biodiversity
Still Meeting Students Needs

Arizona Water Festival Program [https://arizonawet.arizona.edu/awf/arizona-water-festival/awf-virtual-event](https://arizonawet.arizona.edu/awf/arizona-water-festival/awf-virtual-event)

Water Scene Investigation Program [https://arizonawet.arizona.edu/awf/wsi/start-here](https://arizonawet.arizona.edu/awf/wsi/start-here)

Leak Detection Program [https://arizonawet.arizona.edu/awf/water-scene-investigation-program/make-every-drop-count](https://arizonawet.arizona.edu/awf/water-scene-investigation-program/make-every-drop-count)

These interactive videos are just one tool that APW will use as we continue to evolve lesson plans to align with current social distancing guidelines. We already moved our summer teacher professional development online using Canvas as the learning management platform and Zoom for live sessions. We will continue to develop meaningful interactive approaches to assist teachers in their instruction, whether it be direct, hybrid, or fully online.
COVID Contingencies

We can teach remotely!
✓ Webinar Availability
✓ Online self-paced resources
✓ More under development

COVID Contingencies

Programmatic adaptations for online delivery:
✓ WSI
✓ AWF
✓ Where’s Our Water

The Water Scene Investigation inspires families to adopt home water conservation practices in order to protect Arizona’s precious resource.

Arizona Project WET is offering families the opportunity to stay healthy and save water by investigating the water usage in their homes. Be a water detective and begin your investigation today!

START YOUR WATER INVESTIGATION

REQUEST YOUR FREE KIT
Why support the APW?

✓ Students don’t get exposed to these subjects in their regular curriculum.

✓ It provides them real world and relevant activities to support them now and, in the future.

✓ Our units are STEM and Project Based which drives a deeper level of learning and understanding.

✓ It saves schools water and real money!

✓ It saves groundwater!
Thank you for your continuing support!
Any Questions?
Contact Information

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