

[Link to Video of This Presentation](#)

School to Work Pipeline for Water/Wastewater Industry...or How Do We Grow Our Own Workforce?

Dr. Robin Roberson, East Central University

Dr. Jessica Brumley, East Central University

Dr. Keith Strevett, University of Oklahoma (SME)

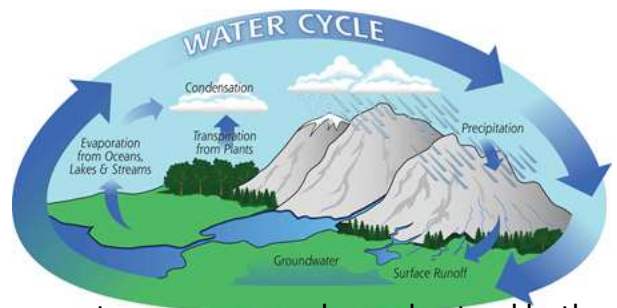
USEPA Innovative Water
Infrastructure Workforce
Development Grant
#84034501



EdPASS-H2O Project

- K12 pre-apprenticeship curriculum framework
- Foundational STEM knowledge and awareness:
 - water/wastewater issues
 - career opportunities/pathways

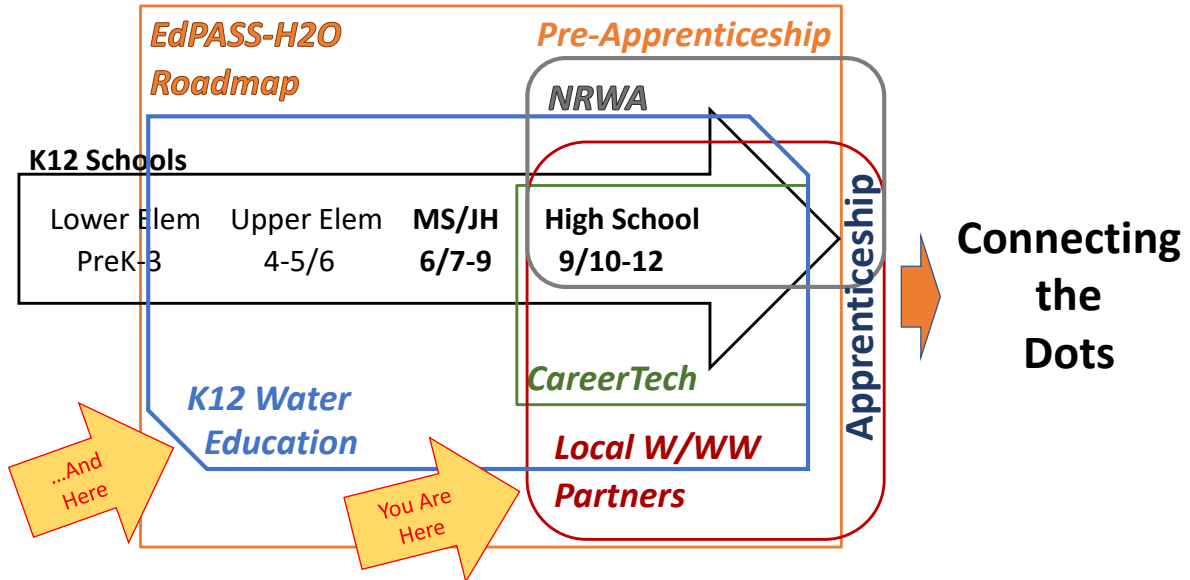
Grant Partnership:



Goals

- 1) Produce water consumers who understand both the natural water cycle and the human water cycle
- 2) Produce water consumers who are aware of and actively work to alleviate current and future water issues
- 3) Produce professionals prepared for this changing and challenging industry. (Pre-Apprenticeship)

Current EdPASS-H2O Roadmap to Pre-Apprenticeship



We (You) Need to Raise Public Awareness of the Industry

Reach out to and work with Local Educational Providers

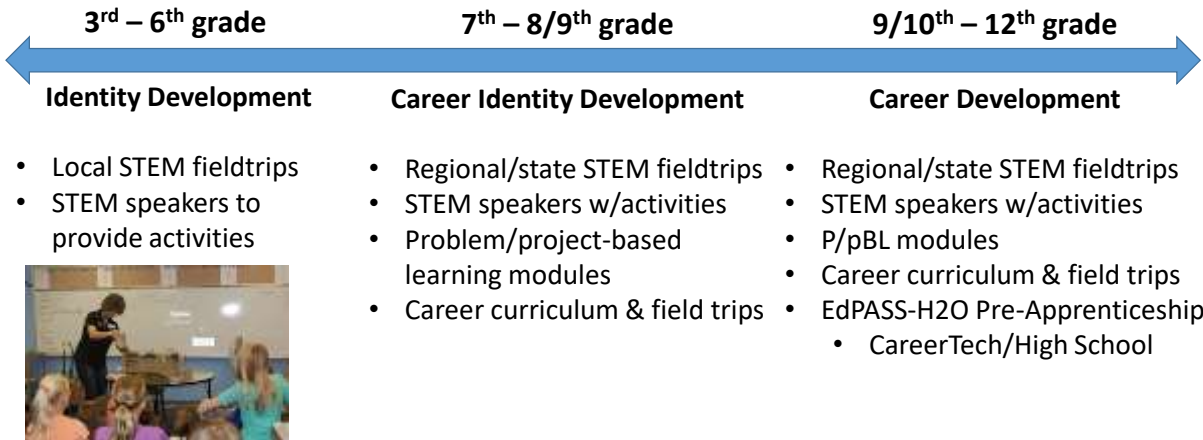
- K12
- Career Tech
- Community College
- University



Even if it is just one teacher

EdPASS-H2O Roadmap

In addition to regular STEM curriculum, industry experts introduce students to water and the water/wastewater industry



Oklahoma State Regents for Higher Education Summer STEM Academies

Students experience campus life and explore STEM career fields

- Summer 2023 - visited 14 academies
- 2-4 hours each visit
- Multiple activities and labs:
 - Treatment plant tours
 - Microscopes
 - Coagulation and flocculation
 - Filtration
 - Water quality testing
 - Engineering challenge
 - Secchi disc build
 - Careers exploration
 - App simulation

Applied to host own Human Water Cycle STEM academy 2024-26

K12: W is for Water

- Partnership with local K12
- Integrate water education
 - Natural and Human Water Cycle
 - Conservation/sustainability
 - Guest speakers
 - Class trips
- This year:
 - Fall: 3rd grade and AP Env Science
 - Spring: approach other local K12s
- Next year:
 - Expand grade levels



What Can You Do?

Partner with a local school or STEM teacher to provide any of the following:

- Public Speaking (including videos)
 - Water cycle
 - Human water cycle
 - Water treatment
 - Wastewater treatment
 - Careers
- Hands-on In-class Activities
- Outdoor STEM Learning Labs
- STEM Resources



What Else Can You Do?

State Entities and Local Municipalities/RWDs

- **Career Day Outreach**
 - Send representative to local School/Career Tech career days
 - Create your own Career Day and invite 8-12 grades
- **Regular Facility Tours**
- **Print your own T-Shirts**
- **Partner on Summer Day Camps for K12**
- **Provide opportunities for:**
 - Pre-Apprenticeship Job Shadowing (HS students)
 - Apprenticeship (HS graduates)

Career Tech Specifically

- **We have identified existing CT programs for *basic industrial and safety training***
 - Mechatronics
 - Welding
 - Industrial & Skilled Trades
- **Partner with local Career Techs**
 - Provide industry experts to help teach courses
 - Student job shadowing/pre-apprenticeship hours
- **Work with CT counselors**
 - Add water to careers discussion with students
 - Implement curriculum framework
 - Notify of state RWA Apprenticeship Program

EdPASS: Developing a Website with Free Hands-On Water Activities and Videos

“Walmart Teacher”

- Low-cost student activities to teach water, water quality, and water treatment



- Coagulation jars
- Table top filters
- Portable microscopes
- Water test stripes
- Secchi disc creation



EdPASS: Document Templates to Manage Facility Tour Risks

Important Utility Tour Information

- Trigger warning
- Recommended attire
- Required Sponsor/Student Ratio
- Instructions on following tour guide
 - What happens if NOT
- Instructions on completing Liability Release form
- *Modify it to fit your needs*

Liability Release Form

- Boiler-plate language
- Template
 - Modify it to fit your needs
- Once modified, have Legal review it



edpass@ecok.edu

stions?