

UNDERGRADUATE SCHOLAR SHOWCASE

**CODES**  
SOUTHERN ILLINOIS UNIVERSITY  
EDWARDSVILLE

# EMPOWERING CHANGE THROUGH WATER EDUCATION

Photo from Friends of the Mississippi River on Facebook

# Our Mission

Educate the youth about good water practices, ultimately influencing the next generation to incorporate water conservation into their everyday lives

## Research Question

How can we implement education for youth, influencing a new generation to become aware of water conservation issues?

## Audience

- Parents
- Students
- Educators
- Elected Officials

## Products

- JJK Water Fair
- Water Fair Toolkit
- Interviews

# Meet Our Team



**Sonia Sheryr**

Biomedical Sciences  
Pre-Med

Water Fair



**Justin Richerson**

Biological Sciences  
Pre-Dental

Water Fair



**Payton Plummer**

Business Administration  
Data Analytics

Water Fair Toolkit



**Marques Rutlin**

Music Education

Water Fair



**Alexandra Guerrero**

Public Health  
Business Accountant

Water Fair



**Tamiria Dixon**

Social Work

Local Organization  
Interviews

# JJK FAN

Jackie Joyner-Kersee Food, Agriculture, Nutrition Innovation Center

Kurly Taylor  
Strategic Partnership Manager

Zach Stafford  
Jackie Joyner-Kersee Academy  
after school educator



Jackie Joyner-Kersee Academy in East St. Louis, Illinois

# Water Fair



The water fair was something that we came up with as a way to teach kids about the importance of water conservation, with a fun and interactive approach, giving us an opportunity to try out lessons with kids at JJKFAN and see how teachers or educators would teach and how students would take the activities, and see before and after how we can improve teaching on the topic of water conservation.



## Focus activities

- Dirt Detective
- Run off with water knowledge
- The Magic of Water Filtration
- Water Word Wonders
- Toolkit
- Interview



Alexandra and Tamiria working with kids in the Water Word Wonders Game

# Water Fair

**Justin**



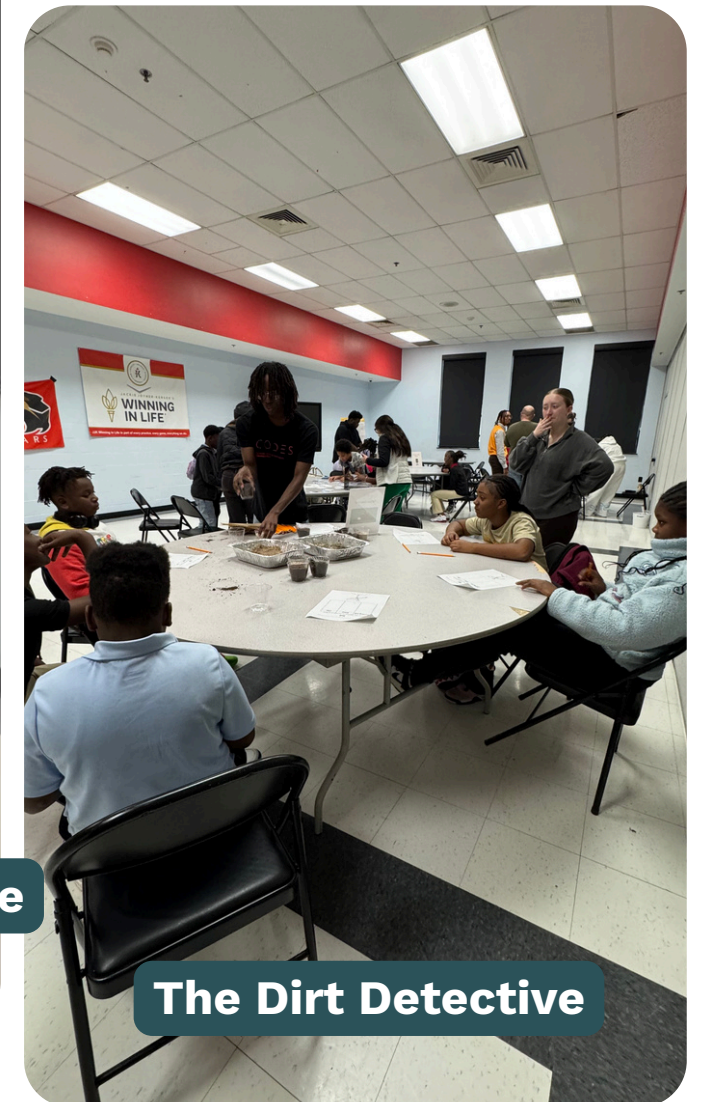
**Alexandra**



**Sonia**



**Marques**



# Water Word Wonders



## Focus

- Matching game
- Interactive educational approach
- Pre and post lesson analysis
- Modification
- Small groups of no more than 3 people
- Low cost
- Effective in making it fun



### HYDROPOWER



Is a renewable energy source that generates electricity from moving water

### NON-POTABLE



Is water that is not safe for drinking and may contain harmful contamination

### RUNOFF



Is when water flows over the ground instead of soaking into the soil

# The Magic of Water Filtration



Justin performing a demonstration with the simple water filter

## Purpose

- Teaching the value of clean water
- Introducing a fun and easy activity
- How to comprehend what is being taught
- Inexpensive education
- Interactivity with the large notepad



# The Dirt Detective

## Purpose

- Students learn about the different types of soil
- Students describe adjectives about the different types of soil
- Students learn how to apply soil knowledge outside the classroom



### Dirt Detective

#### Materials

- Sand
- Clay soil
- potting soil
- Paper towels
- 12 small cups

#### Definitions

-**Soil:** a mixture of minerals, organic matter, air, and water that forms a complex, living ecosystem on the Earth's surface

-**Potting soil:** a specially prepared mix of materials like peat moss, compost, and bark designed for planting in containers

-**Clay soil:** is a type of soil with very fine, plate-shaped particles that feel sticky when wet and can become very hard when dry. Used in construction, pottery, thanks to its ability to be molded, hold water, and support plant roots  
Used for plants like roses and other shrubs

-**Sand:** made of tiny, loose grains of rock and minerals that have been broken down by wind and water over a long time

#### Procedure

1. Place all 12 cups on the table and fill them with sand, potting soil, and clay soil.

Name: \_\_\_\_\_

## Soil

p and what these feel like

Write down adjectives for the types of soil below

Potting soil	Sand	Clay

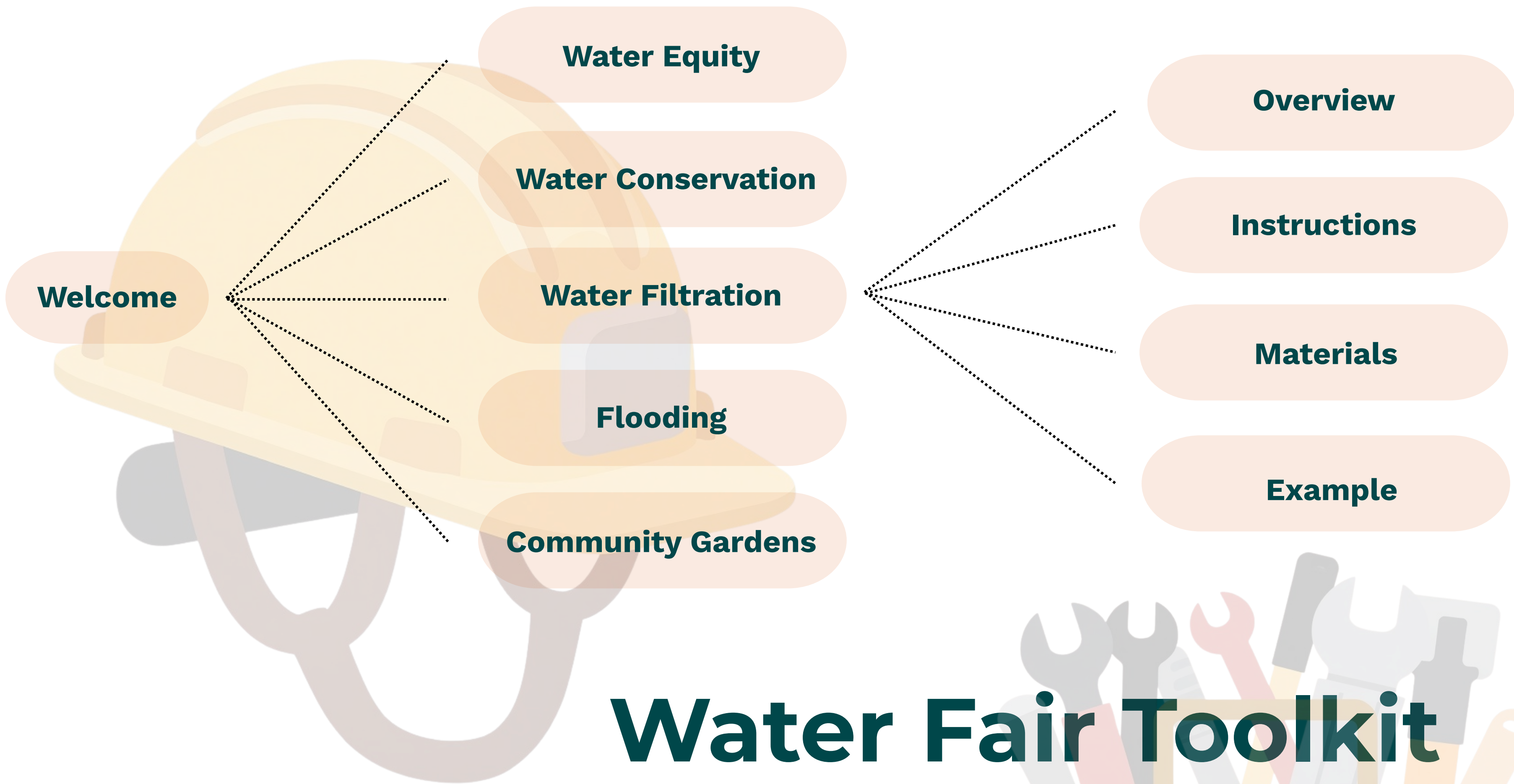


# Run Off with Water Knowledge

## Purpose

- Goals
- Obstacles
- Infiltration and run-off
- Pollutants in the water system can affect the ecosystem
- Key takeaways
- Pros and cons





**Welcome**

**Water Equity**

**Water Conservation**

**Water Filtration**

**Flooding**

**Community Gardens**

**Overview**

**Instructions**

**Materials**

**Example**

# Water Fair Toolkit

# Thematic Analysis

A qualitative research method for identifying, analyzing, and interpreting patterns of meaning, or "themes," within a dataset

## Water Education

Water school  
Teach  
Wetlands  
Environment  
Pollution  
Soil

## Action

Approach  
Connect  
Curiosity  
Adapted  
Erosion  
Education

## Conservation

Activities  
Practices  
Bioindicators  
Filtering  
Runoffs



Investigated methods organizations use to inform the public about water conservation

This process took about a month to interview and decode repeated words

# Local Organization Impact Tamiria Dixon

## LOCAL ORGANIZATION

NATIONAL GREAT RIVER  
CENTER

### BACKGROUND

The organization's mission is to study large rivers and their watersheds (especially the Mississippi, Illinois, Missouri rivers), and to study how those rivers interact with the natural environment and with surrounding human communities

### IMPACT

- Improved river and water-quality research → healthier drinking water, safer recreation, and better floodplain management
- Educational outreach → children and neighbors can learn about watershed stewardship, ecology, and

### WANT TO GET INVOLVED?

- Join Community Science Programs
- Attend or Volunteer at the Annual Water Festival
- Join Local River Cleanups
- Become a Watershed Ambassador

# Why This Matters

## **Raise Awareness for Water Education**

- Not many kids have access to water education
- Better the environment
- Access to water conservation lesson plans
- Learning that is fun and engaging



Even though our research through CODES has come to an end, it's only the beginning of inspiring change in the approach to education in water conservation throughout schools. We hope our research serves as an example to others to pursue our research further, opening the eyes of the public and the education system, improving our way of living to preserve resources, and guaranteeing clean water for future generations to come.



# Further Education for Generations



**THANK YOU**