

# **Exploring PopEd: Supporting Students and Educators for a Sustainable Future**

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OCTOBER 23, 2024

PAM WASSERMAN & CAROL BLIESE

# Population Education

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**MISSION:** Provide quality training and teaching materials for educators to help them teach about population and related topics effectively in the classroom.



# Why We Do This Work

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**VISION:** We want every young person prepared to tackle global problems and to be positively engaged in their communities as the next generation of voters, parents, leaders, and policy makers.



# PopEd is Unique

We are the only national organization focused on educating young people about population.

*Love the idea of making students aware of these topics. I don't think there's enough information or education in schools on this. We need to start when they're young to educate [students] about these ideas.*

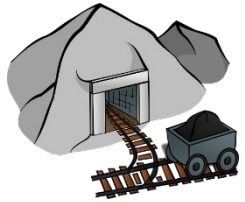
*Teacher, WI Gifted & Talented Conference*



# Resources on Population *AND*...

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## Environmenta



Resource Use



Habitat & Biodiversity



Water



Agriculture



Climate



Energy

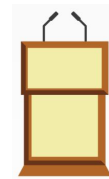
## Societal



Urbanization



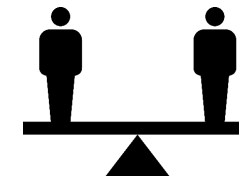
Public Health



Representation



Fertility & Mortality



Human Rights

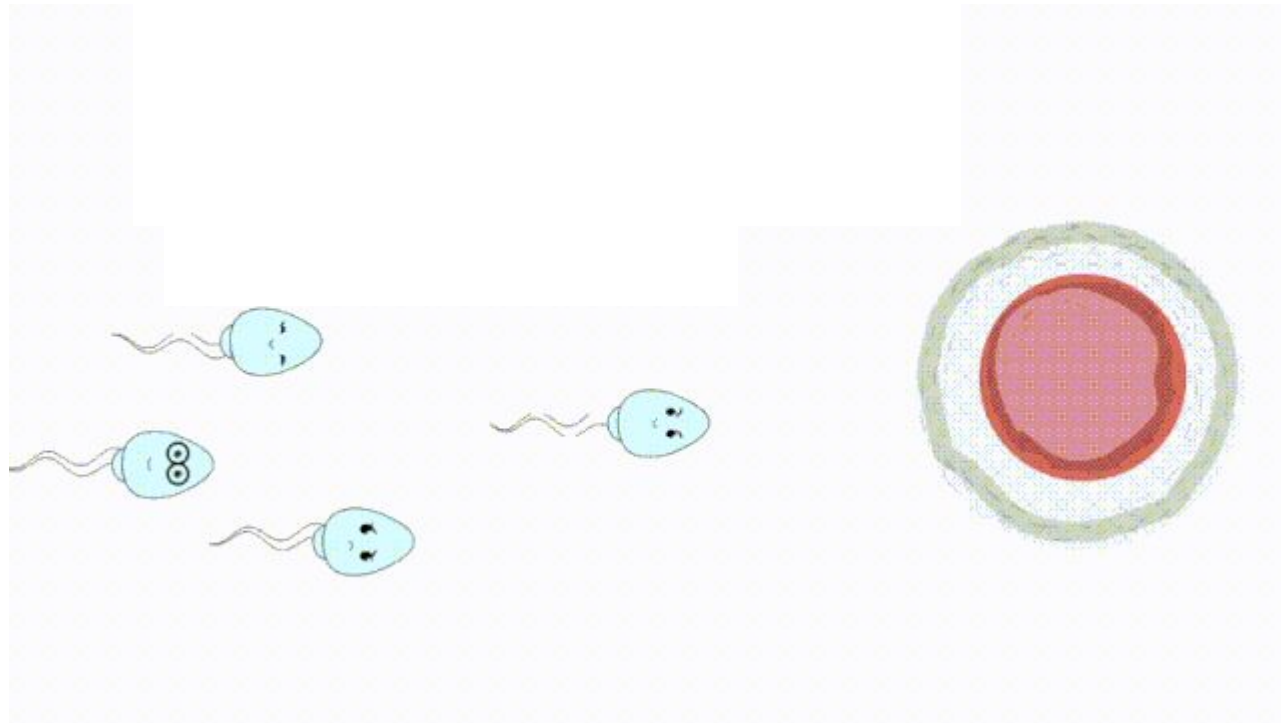


Education

But not this ...

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**Sex Ed**



# Most Common Subjects

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## Science

- Environmental Science
- Earth Science
- Ecology
- Biology/Life Science
- AP Environmental Science

## Social Studies

- Geography
- History
- Civics
- Economics
- AP Human Geography

## Math

- Probability & Statistics
- Real-world connections
- Data literacy

**Family & Consumer Sciences**

**Supplemental ESOL**

**Gifted and Talented Ed.**

**EdTech**

# Grade Levels

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## Early Childhood (K-2)

- ❖ **Topics:** Interdependence in nature, understanding needs and waters, resource and land use, importance of environmental stewardship and conservation
- ❖ **Interdisciplinary** – building skills in science, math, social studies and language arts

## Upper Elementary (3-5)

- ❖ **Topics:** Human population change, carrying capacity, human changes to our environment, including land use patterns and pollution
- ❖ **Interdisciplinary** – building skills in science, math, social studies and language arts



# Grade Levels

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## Middle Grades (6-8)

- ❖ **Topics:** Population growth trends, human-environmental interactions and their impacts on ecosystems, resource consumption, ecological footprints, resource distribution/scarcity, biodiversity, gender issues, wealth distribution, quality of life indicators
- ❖ **Courses:** Usually subject specific (Life Science, Earth Science, Geography)

## High School (9-12)

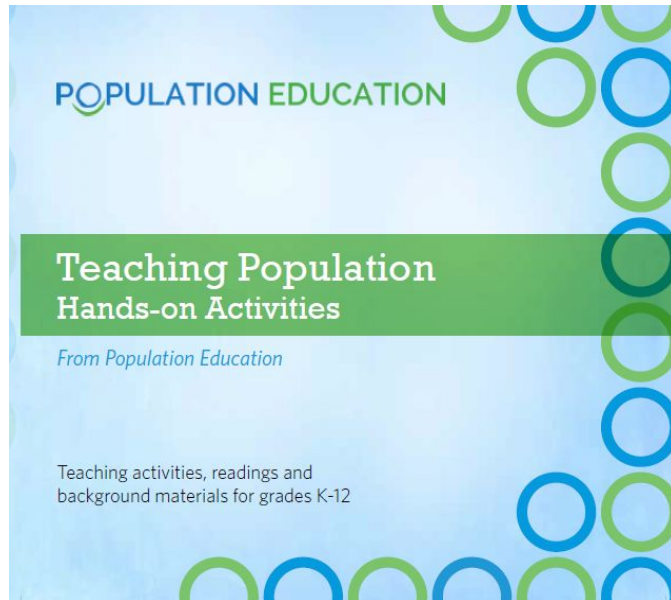
- ❖ **Topics:** Demographic Transition and demographic differences worldwide, poverty and wealth distribution, global public health and education trends, community/societal decision making, family planning program worldwide, climate change, gender equity, social justice, human impacts on specific ecosystems
- ❖ **Courses:** Biology Environmental Science (Honors, AP, IB), World History, Economics, World Geography, AP Human Geography, Global Issues

# Scope of Work – 3 Key Areas

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- Curriculum development & dissemination
- Teacher Workshops and Grad Course
- International Student Video Contest

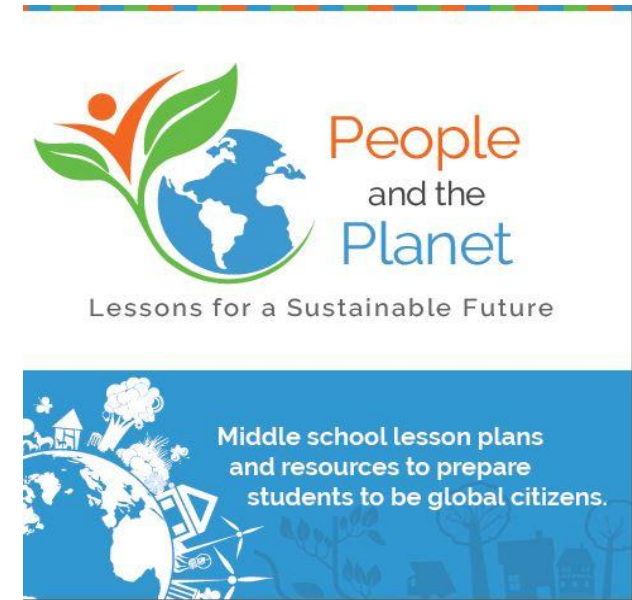
# Curriculum Sets



**Teaching Population**  
Grades K-12



**Counting on People**  
Grades K-5



**People and the Planet**  
Grades 6-8



**Earth Matters**  
Grades 9-12



**330 Million in the USA:**  
14 secondary lessons exploring  
changing population in the US



**Nuestro Mundo, Nuestro Futuro**  
Lesson plans in Spanish and English,  
elementary and secondary lesson packs

<b>1</b> Thematic Unit	<b>Counting Populations</b> <small>Help students understand the meaning of "population." Students discover how we determine population size and if that size is considered large or small.</small>	
<b>2</b> Thematic Unit	<b>How Populations Grow</b> <small>Because many populations grow quickly, students will explore the concept of exponential growth and the impact of family size.</small>	
<b>3</b> Thematic Unit	<b>Meeting People's Basic Needs</b> <small>There are basic necessities, such as food, water, and fuel that every person needs to survive. Students will discover this fact along with the understanding that not everyone in our global family has equal access to these necessities.</small>	
<b>4</b> Thematic Unit	<b>Sharing Spaces</b> <small>Students investigate the idea that population density can impact people's quality of life if there is too much crowding and not enough personal space.</small>	
<b>5</b> Thematic Unit	<b>People and Resource Use</b> <small>People have a unique relationship with both renewable and nonrenewable resources. Students will learn about long-term resource use and explore the importance of conservation.</small>	
<b>6</b> Thematic Unit	<b>People and Waste</b> <small>As people use resources, waste is created in the form of garbage and pollution. We impact the environment every day as we use more and more resources.</small>	
<b>7</b> Thematic Unit	<b>People and Wildlife</b> <small>Our actions affect all living things, not just other humans. Plants and animals also have basic needs that are essential to their survival.</small>	

# 5 Thematic Unit

## PEOPLE AND RESOURCE USE



People have a unique relationship with both renewable and nonrenewable resources. Students will learn about long-term resource use and explore the importance of conservation.

### Counting Carbon

[DOWNLOAD ACTIVITY](#)

Students solve word problems and use packing peanuts to visualize how much CO<sub>2</sub> is produced daily by cars, then participate in a "natural carbon sink" activity to better understand how natural areas can absorb and store carbon dioxide.

**Focus**

**GRADE LEVEL**  
Upper Elementary

**SUBJECT**  
Math, Science

**Skills**

Small group worksheet, whole group demonstration and discussion

**Time**

Prep: 15 minutes  
 Part 1: 20 minutes  
 Part 2: 15 minutes  
 Measuring Learning: 30 minutes

**Related Lessons**

- [A WORLD OF DIFFERENCE: MADAGASCAR »](#)
- [ADDING ARMADILLOS »](#)
- [CATCHING POLLUTION »](#)

This activity has been matched to relevant national and state level standards, including Common Core Math and Language Arts.

[Click here to view standards matches](#)

# World Population “dot” video

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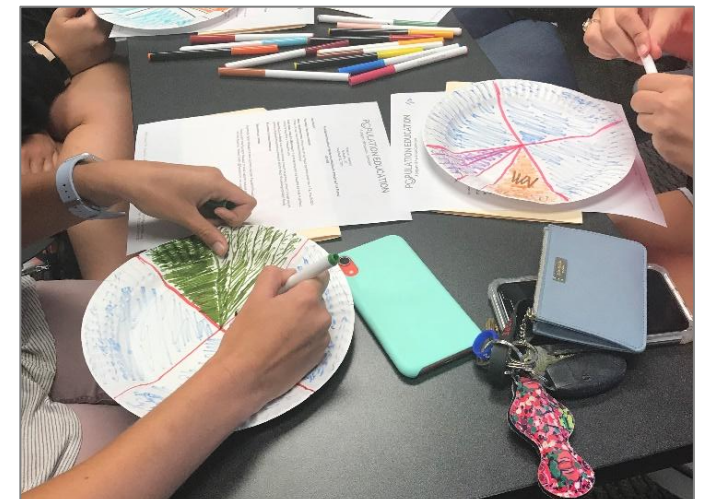
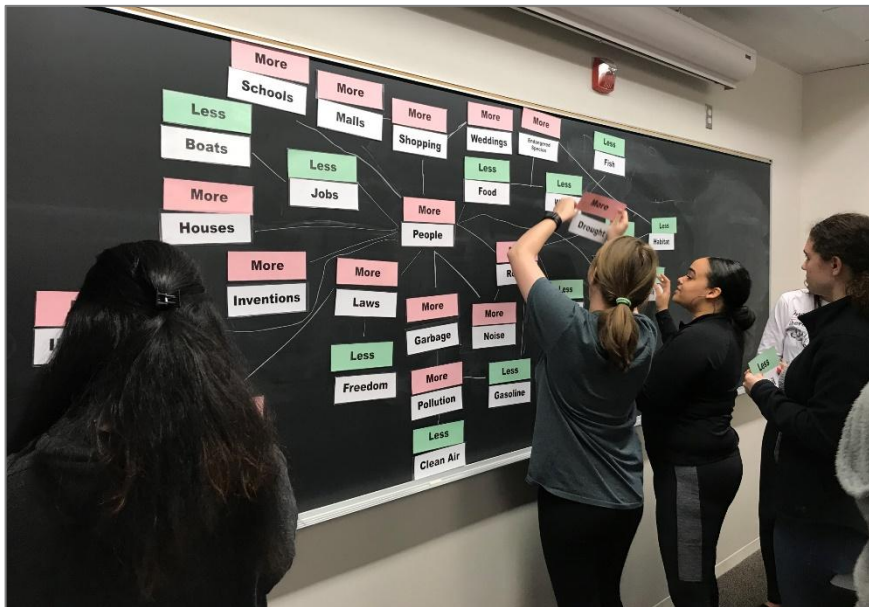


# More Than Just Lesson Plans

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- Topical Background Readings
- Case Studies
- World Population Map
- Posters
- Infographics
- Digital Tools
- Interactive Website





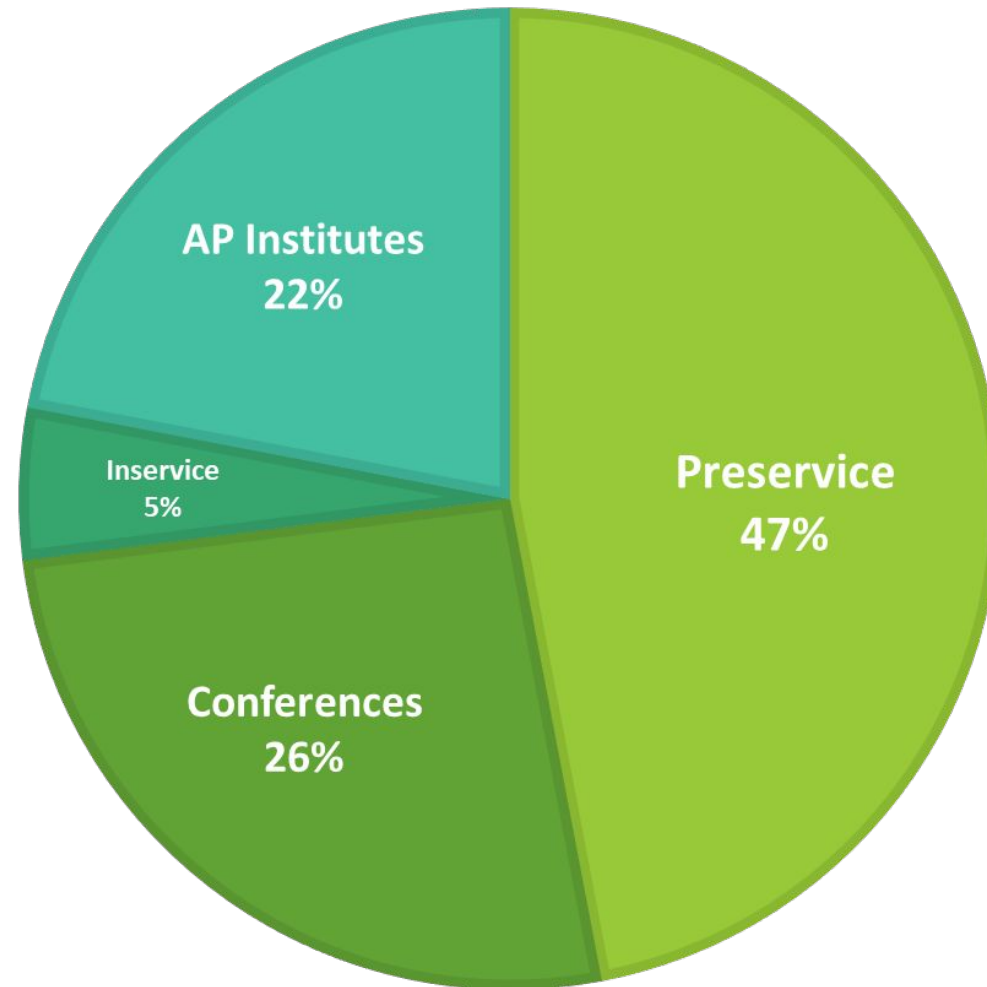


# Teacher Workshops by the Numbers

- 500 – 600 Workshops each year
- 3/4 In-Person; 1/4 Virtual
- 40% Led by Staff; 60% Led by Volunteer Trainers
- Held in most U.S. states (44 in 2023) and Canadian provinces (6 in 2023)
- Preservice Workshops held on 113 campuses in 2023

## AUDIENCE/TYPE OF WORKSHOP

■ Preservice ■ Conferences ■ Inservice ■ AP Institutes



# Preservice Workshops at Colleges of Education

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## Why is this a good audience?

- Future teachers have yet to formulate their lesson plans.
- They will teach in a variety of settings throughout the country (urban, rural, suburban, private, public, parochial).
- We can make lasting contacts with university faculty who host us.
- Guaranteed audiences, unlike conferences.





**Dr. Kate Silvis**  
La Roche College, PA



**Anita Lewis**  
Westbrooke Intermediate, TX



**Dr. Jesse Haight**  
Clarion University, PA



**Sandra Vargas-Gutierrez**  
Flora Ridge Elementary, FL

## Our PETNet expands our outreach



**Holli Gonzalez**  
CSU Bakersfield, CA



**Dr. Khodi Kaviani**  
Central Washington University, WA

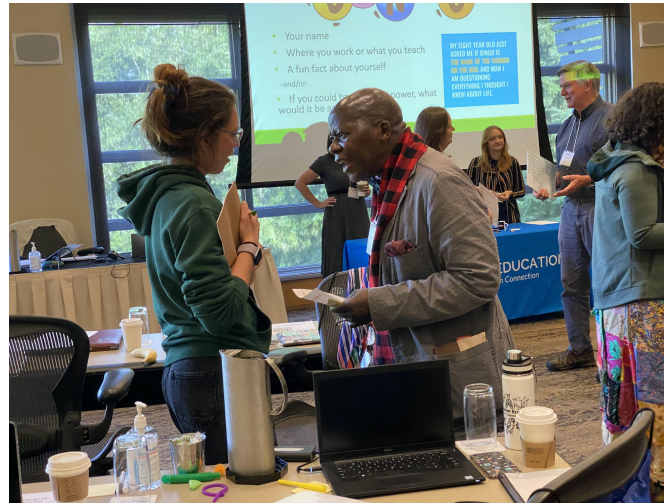
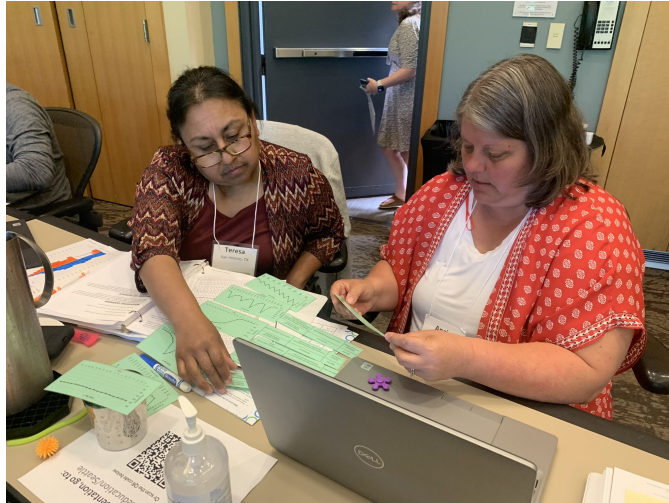


**Dr. Jim Lane**  
Columbia College, SC



**Lauren Johnson**  
Oxbow Meadows Environmental  
Learning Center, GA

# PopEd Leadership Institutes



2-3 Weekend Training Events each year in different regions of the U.S.



Additional Training/Support

- Bi-monthly newsletter
- Reimbursement of expenses
- Regular contact with staff
- Topical webinars

# Measuring Our Impact



Effectively engaged my students



Increased my students' awareness of population issues



Improved critical thinking and/or problem solving skills



How frequently do you use Population Education materials?



Find more highlights of the PopEd Workshop Evaluation Report, plus the entire, detailed report of survey findings at:

<https://populationconnection.org/population-education/k-12-students/>

# Online Graduate Course

## Earn Credit:

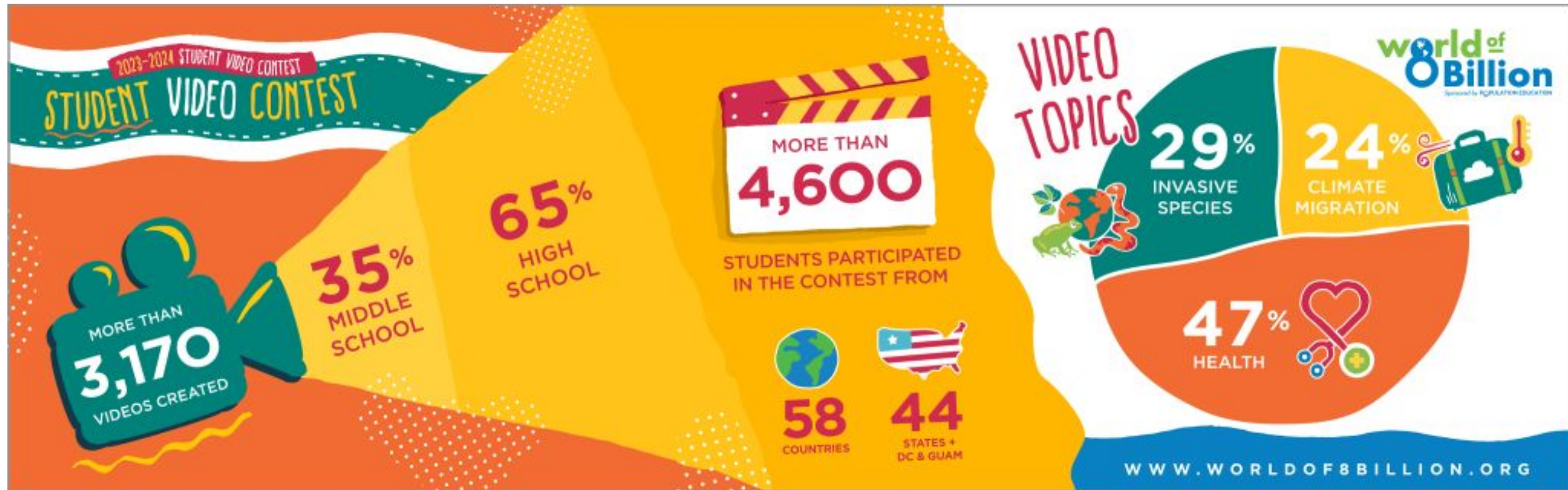
- 45 professional development clock hours (4.5 CEUs)
- 3 graduate credits from Adams State University (Colorado)
  - Either Science Education (SCED) or Education (ED) credits may be earned

## Course Length:

- 8 weeks (Fall semester)
- 4 weeks, accelerated (Summer semester)



# World of 8 Billion Student Video Contest 2023-2024 Contest Recap



# The global, growing network of *World of 8 Billion* filmmakers





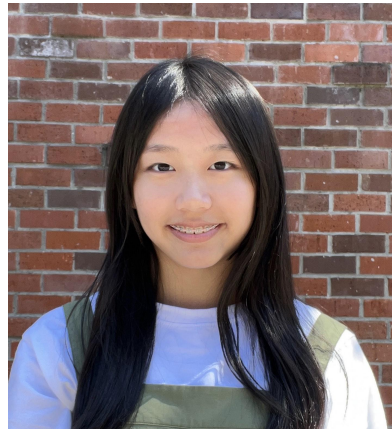
# 2023-2024 Contest Winners (1<sup>st</sup> & 2<sup>nd</sup> Place)



Jack Barkhurst  
Albuquerque, NM



Grace Lee  
Chula Vista, CA



Ruike Pan  
Kirkland, WA



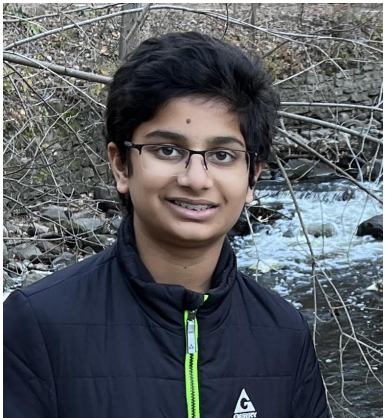
Imani Laird  
Newton, MA



Nila Arunkumar  
Austin, TX



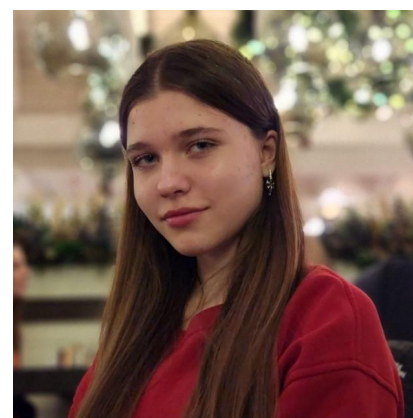
Ranye Ezenekwe  
Lafayette, CO



Sahil Parasharami  
Eden Prairie, MN



Astrid Winterstein  
Santa Fe, NM



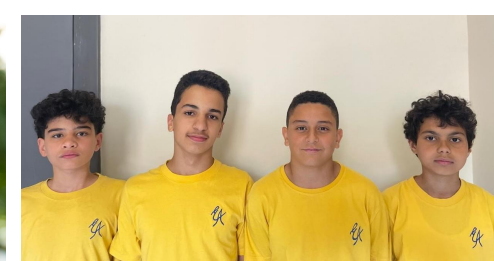
Darya Maksimov  
Prior Lake, MN



Benjamin Kurian  
Powell, OH



Daniel Taich  
Lyndhurst, OH



Hussain Rashad, Hassan El  
Hadidi, Omar Shenoufy &  
Mahmoud Shalaby  
Giza, Egypt

# Feedback from Teacher Survey

“I loved that it was a project based learning opportunity that allowed my students to learn about a topic and generate a solution using critical thinking and creativity.”

“Thank you, education continues to be challenging !! More real world activities to trick them into THINKING and not wanting to just jump through a hoop and ask AI.”

“I love this. I share it with my teaching colleagues for them to use in their Units. I am planning on doing this again next year, but I'm going to spend more time on the format, so your resources and activities are a huge help.”

“It helped my students have a better understanding of current world problems that we're facing as our population grows.”

“Fantastic. There is so much they learn from the entire process, including time management, how to delegate roles, and work with other students.”

# Feedback from Student Survey

“I really liked this contest. The concept of it is very interesting and I think it’s very cool what this organization is doing. Thank you!”

“A super cool opportunity to learn more about the impacts that population growth has on our planet. It’s also hopeful because people provide solutions for the issues that come up.”

“I’m so happy this contest exists, because I was struggling to find an avenue to connect my deep interest in filmmaking and advocacy for global issues. Thank you to the World of 8 Billion team providing us with the resources we need to succeed, and laying them out in a way that is easy to access and learn from.”

“Thank you for this amazing opportunity. It allowed me to explore my interest in environmental science while learning more about population growth.”

“Out of all of the scholarships I’ve applied to, this has been my favorite.”

In a short video, explain how human population growth impacts one of the following global topics and offer an idea for a sustainable solution.



**Child Wellbeing**



**Rainforest Ecosystems**



**Sanitation**

## PRIZES

### HIGH SCHOOL

FIRST PLACE \$1200

SECOND PLACE \$600

HONORABLE MENTIONS \$300

### MIDDLE SCHOOL

FIRST PLACE \$600

SECOND PLACE \$300

### GLOBAL FINALISTS

Videos that were chosen as global finalists for each topic will be awarded a \$80 prize for high school and \$50 prize for middle school.

### STATE HONOR

50 Prizes

### INTERNATIONAL BY REGION HONOR

7 Prizes

**Submission deadline is March 5, 2025**

 @PopulationEducation

 @PopulationEd

Visit [www.Worldof8Billion.org](http://www.Worldof8Billion.org) for info!

world of  
**8 Billion**

POPULATION EDUCATION

# PopulationEducation.org

Our Sister Websites: **7Billion** 800.119.9288 8:31 AM

POPULATION EDUCATION  
A program of Population Connection

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ABOUT US CLASSROOM RESOURCES TEACHERS WORKSHOPS TRAINERS NETWORK

**TEACHING POPULATION MEANS GLOBAL LEARNING & SUSTAINABILITY**

*It's all about people – how many of us there are, how we shape the world, and how we interact with each other.*

[BROWSE RESOURCES](#)

**FILTER RESOURCES**

by GRADE LEVEL

by SUBJECT

by TOPIC

by RESOURCE TYPE

- Lesson Plan
- Reading
- Lesson Packet
- Curriculum
- Video
- Tool

[APPLY FILTER](#)

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# Demo videos

We currently have 39 Demo Videos on our PopEd website of staff demonstrating teaching activities.

Over the summer, we filmed 12 new videos from our updated K-5 curriculum, *Counting on People*, and those are currently being edited.

## FILTER RESOURCES

by GRADE LEVEL

All Grade Levels ▾

by SUBJECT

All Subjects ▾

by TOPIC

All Topics ▾

by RESOURCE TYPE

- Lesson Plan ?
- Reading ?
- Lesson Packet ?
- Video ?
- Tool ?

APPLY FILTER

## Classroom Resources

Found 40 Results

### VIDEO:

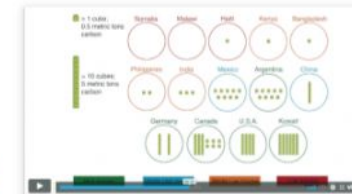


GRADE 9-12

### Cap and Trade Game

Students play a game that simulates a cap and trade system, and analyze its successes...

Video

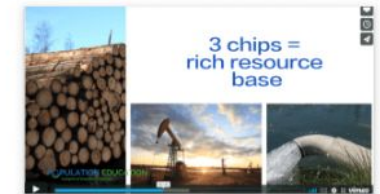


GRADE 9-12

### Carbon Crunch

Students work in small groups to determine the main environmental concerns during given periods of...

Video



GRADE 6-8

### Chips of Trade

Acting as countries in a simulation game, students discuss how resources are inequitably distributed throughout...

Video



GRADE K-2

### Crowding Can Be Seedy

A simulation and gardening lab that gives students hands-on experience with the effects of increasing...

Video



GRADE 9-12

### Demographically Divided World

In small groups, students explore changes in regional fertility rates and life expectancy trends over...

Video



GRADE 3-5, 6-8, 9-12

### Earth: The Apple of Our Eye

A visual demonstration of the limited farmland available on Earth (instructor cuts an apple to...

Video

# Exhibits at Teacher Conventions

- Make contacts with K-12 teachers
- Distribute curriculum materials
- Engage curriculum supervisors to schedule professional development
- Meet with our trainers from around the country





**PopulationEducation.org**



# Something for Everyone

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IN A SIMULATION, STUDENTS DRAW RENEWABLE RESOURCES FROM A COMMON POOL AND DETERMINE SHORT-TERM CONSUMPTION STRATEGIES TO PRESERVE A LONG-TERM SUPPLY.

# How To Play

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- No communicating
- The chips belong to all of you.
- Goal is 10 chips - they can be traded for a gold star.
- While music plays, you may take chips out of the pool. When the music stops, you must stop.
- You may not put a chip back after you've taken it out.
- After each round, I'll distribute gold stars and then double the number of chips in the pool. *However, there will never be more chips than there are right now.*

# Discussion – Recap

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- What happened throughout the simulation?
- Are the chips a renewable or nonrenewable resource? How do you know?
- Was there an ideal number to take out of the pool?

# Discussion – Extension

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- ***Sustainability:*** *using resources in a way so they are available for us today, and available for people in the future.*
- What are examples of renewable resources in your life: In the classroom? In your home? In your community?
- How can we ensure these resources are shared?
- What are examples of renewable resources shared by people all over the world?

# Discussion – Extension

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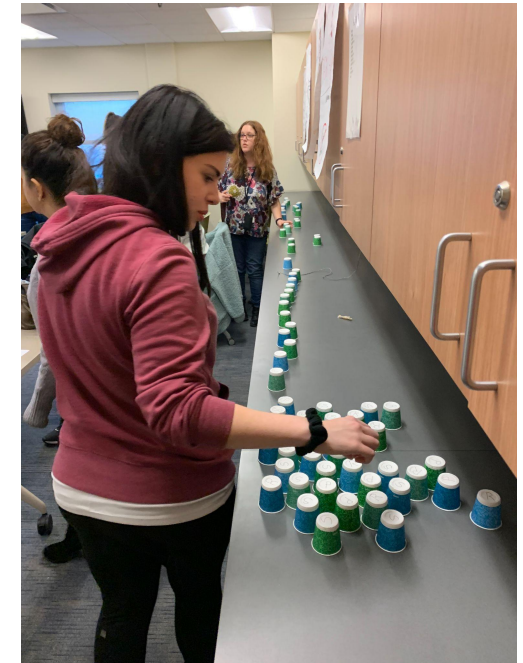
- *Population pressures: stress on resources and systems when population density is too high.*
- What if the population of people/groups/countries using this resource increased? *(Add people to your simulation!)*
- How could we change our strategy to accommodate more people?

# In-Person Simulation Game

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# Questions??



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