

# Climate Education: Ignite Student Learning, Engagement, and Action



Monica Burns, Ed.D.





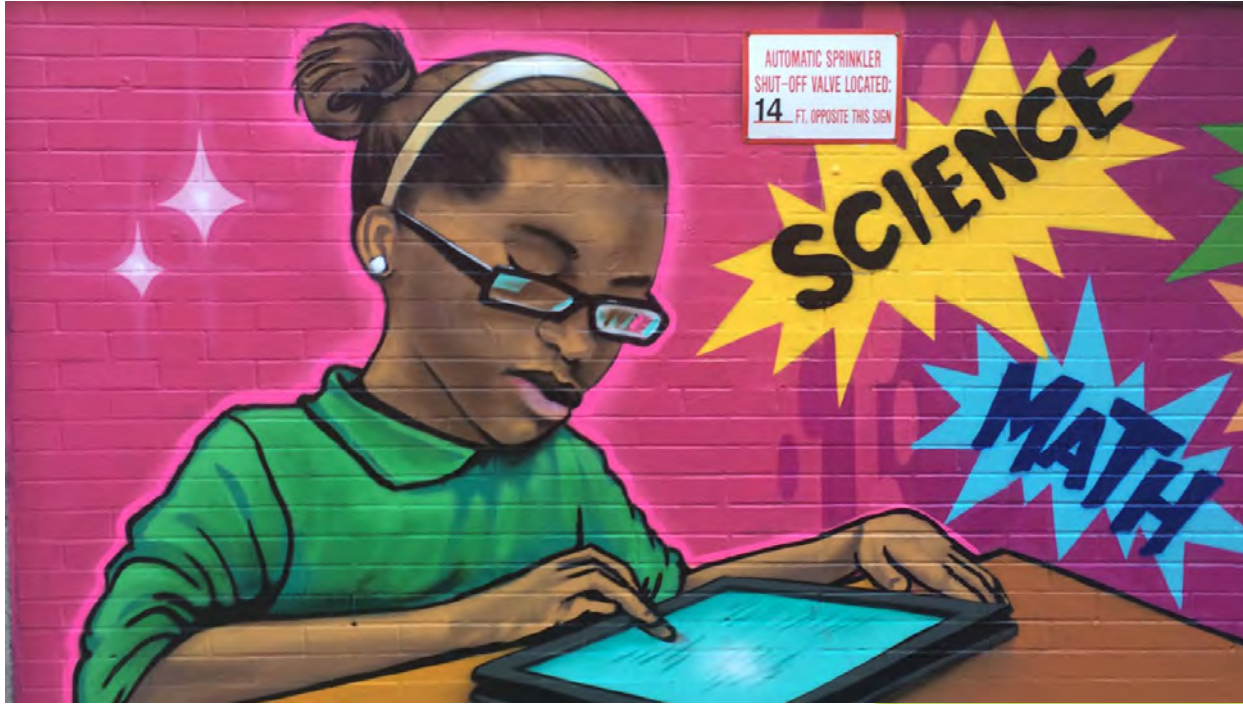
# Meet Your Presenter

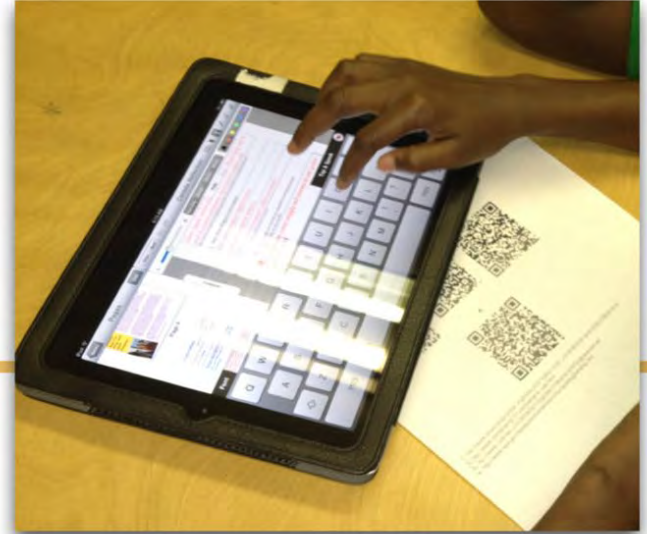


**Monica Burns, Ed.D.**  
Education & EdTech Consultant











# What We'll Discuss Today



- Incorporate climate education in different content areas
- Address student concern about climate change through a solutions-focused approach
- Inspire students by introducing them to climate changemakers from around the world
- Empower students to take action with creative projects that capture their learning and elevate their voices



# 5

## Strategies to Engage & Energize Students Through Climate Education



**Take a solutions  
point of view**

# Take a solutions point of view

- Embrace a positive mindset
  - *What is in my control?*
- Identify action items
  - *What can I do this week, this month, or this year?*







# Project Ideas

- Planting a tree

pdf

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**ONE STEP CLASS TALK**  
**PLANT TREES, SAVE LIVES**

#stompoutcarbon for a better tomorrow!

**PLANT TREES, SAVE LIVES**

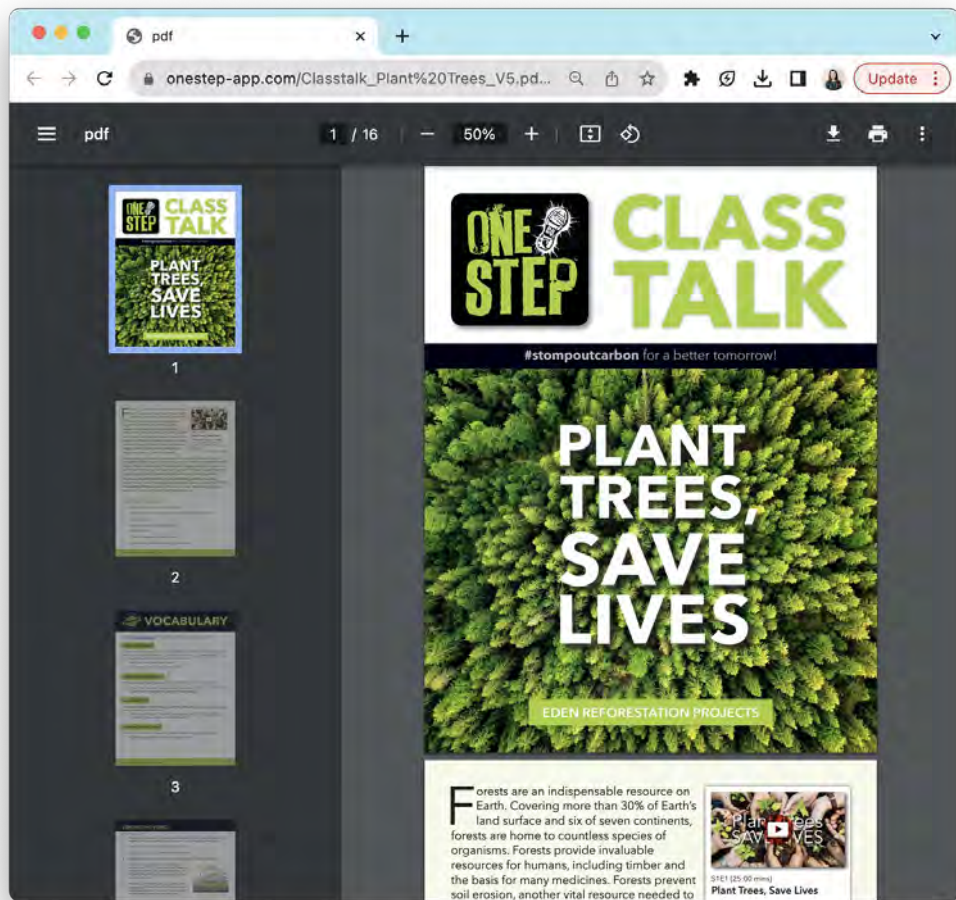
EDEN REFORESTATION PROJECTS

Forests are an indispensable resource on Earth. Covering more than 30% of Earth's land surface and six of seven continents, forests are home to countless species of organisms. Forests provide invaluable resources for humans, including timber and the basis for many medicines. Forests prevent soil erosion, another vital resource needed to

Plant Trees, Save Lives

3:11 (25:00 mins)

Plant Trees, Save Lives





# Project Ideas

- Planting a tree
- Building a community garden
- Start composting in your school

#StompOutCarbon

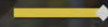
*Lifestyle*

5Rs: Reducing Food Waste



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**Look at the science  
of problem**

# Look at the science of problem

- Determine the cause
  - *Why is this happening?*
- Research the solutions
  - *What innovative ways are we as a society tackling this problem?*





# Project Ideas

- ❑ Showcase research with an infographic

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## ENGAGE

# Methane Fact Sheet



Methane  
 $\text{CH}_4$

- Methane is a molecule with the chemical formula  $\text{CH}_4$ . In each molecule of methane, there is one carbon atom and four hydrogen atoms.
- Methane is a colorless, odorless, and very flammable gas. It is lighter than the surrounding air.
- Methane is a powerful greenhouse gas. It traps 28 times more heat than carbon dioxide.
- Methane lasts approximately 8 years in the atmosphere before it breaks down. NASA estimates that carbon dioxide lasts between 300 and 1,000 years in the atmosphere.
- Methane breaks down into carbon dioxide and water when it oxidizes.
- Natural methane sources include the wetlands, termites, and the ocean.
- Human methane sources include landfills (particularly food decomposition), fossil fuels, agriculture, and wastewater treatment.

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science infographic

URBAN WATER JOURNEY

Where does the water in your sink come from?

- 1 Source Water  
Collect water from reservoirs, rivers, lakes.
- 2 Coagulation  
Woods adds chemicals to clump up unwanted particles.
- 3 Flocculation  
Spin cycle clumps up particles.
- 4 Clarification/Sedimentation  
Water settles in tanks and heavier stuff sinks to the bottom.
- 5 Filtration  
Sand and carbon filters remove small particles.
- 6 Disinfection  
UV light and chlorine remove bacteria.
- 7 Distribution  
Pumps and tanks take water to homes and businesses.

LAYERS OF THE OCEAN

Euphotic Zone (Sunlight Zone)

Mesopelagic Zone (Twilight Zone)

Bathypelagic Zone (Midnight Zone)

ANIMAL CELL ANATOMY

- 1 Cytoplasm
- 2 Nucleus
- 3 Mitochondria
- 4 Golgi Apparatus
- 5 Smooth Endoplasmic Reticulum
- 6 Lysosome
- 7 Small Intestine
- 8 Microvilli
- 9 Vacuole
- 10 Centrioles
- 11 Peroxisome
- 12 Plasma Membrane

Page 1 / 1 - Add title

URBAN WATER JOURNEY

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# Project Ideas

- Showcase research with an infographic
- Watch videos in partners


Videos | One Step x +

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Update

ONE STEP

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# Drink the FOG

S1E3

## Drink the Fog!

Can we drink the fog? How do nets play a part in catching the fog? See how innovative and sustainable technology solves water scarcity problems in rural Morocco.

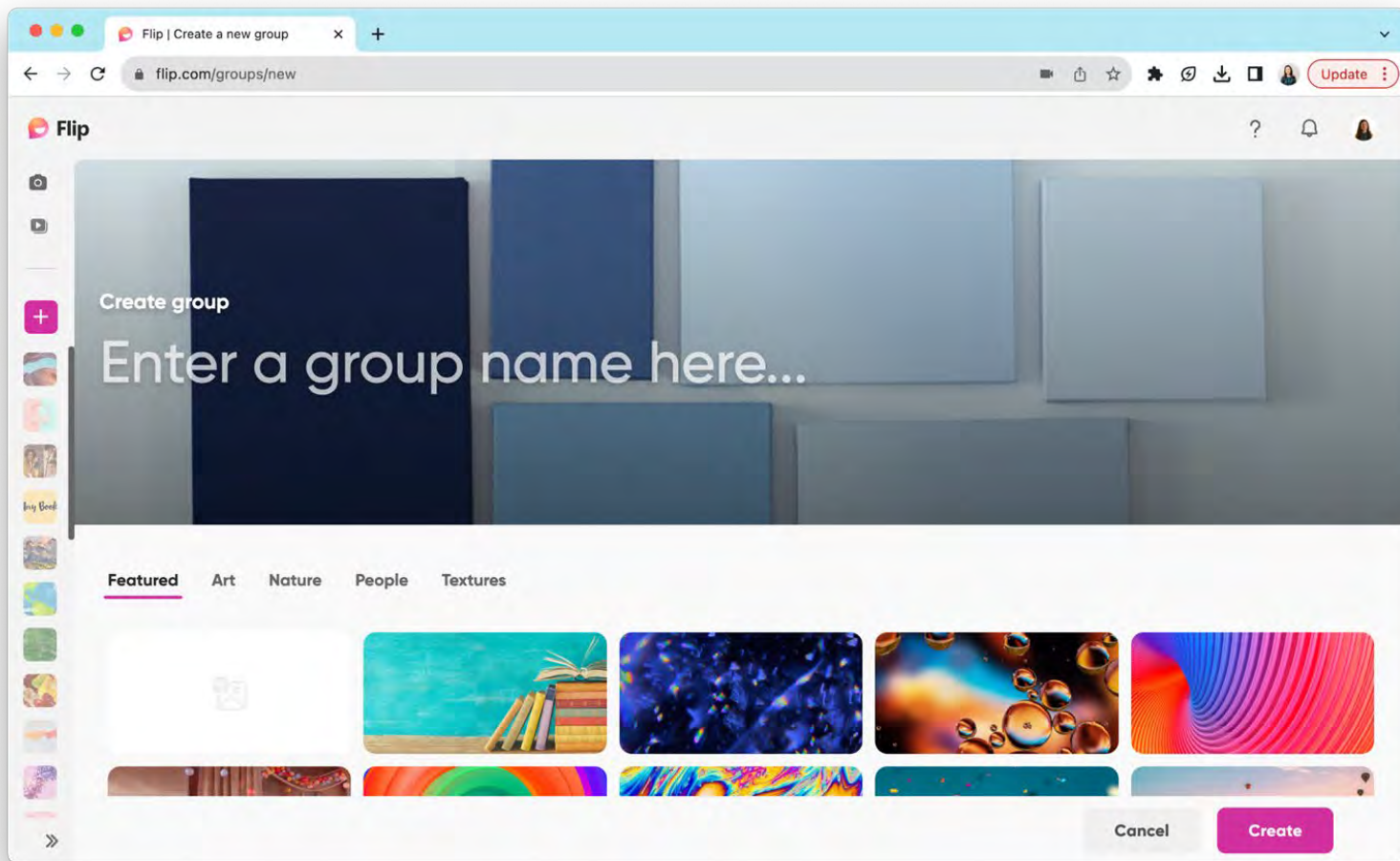




# Project Ideas

- Showcase research with an infographic
- Watch videos in partners
- Respond to a viewing on video







**Share innovative  
changemakers**

# Share innovative changemakers

- Find inspirational features
  - *Who is at the forefront?*
- Research their background
  - *What have they done/are they doing, and how did they get there?*





# Project Ideas

- Research and share a changemaker




Videos | One Step

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Update

ONE STEP

Home, Video, Hashtag, Share, Menu, Search, Notifications




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1x

C1E1

### Ecoboats: The Solution that Floats

Learn how one person solved two different problems at the same time! Could you solve a pollution crisis and a food shortage at the same time? That's what Ismael Essome is doing in Cameroon, Africa!





# Project Ideas

- ❑ Research and share a changemaker
- ❑ Create a changemaker profile






Changemaker - Presentation x +

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### Colorful Character Strengths S...

Apply all 25 pages

CHARACTER STRENGTHS	I AM HONEST	
I AM LOVING		I AM CURIOUS
I AM GRATEFUL		I AM KIND
I SHOW JUDGMENT	I AM FAIR	
I AM LEADER	I LOVE LEARNING	

# CHANGEMAKER PROFILE

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# Project Ideas

- Research and share a changemaker
- Create a changemaker profile
- Interview a local changemaker



**Make connections  
across the curriculum**



# Make connections across the curriculum

- Review your standards
  - *What am I teaching this month?*
- Connect to student interest
  - *What examples can I share, or projects can I develop that connect to high-interest topics?*





# Project Ideas

- ❑ Persuasive letter writing

#StompOutCarbon

*Lifestyle*



5Rs: Energy Pledge



# Project Ideas

- ❑ Persuasive letter writing
- ❑ Collecting and analyzing data

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**OCEAN GYRES**

19

20

21

### Grades 6-8



**MS-LS2-5:** Evaluate competing design solutions for maintaining biodiversity and ecosystem services.

**MS-ESS3-3:** Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
Engaging in Argument from Evidence	LS2.C: Ecosystem Dynamics, Functioning, and Resilience	Stability and Change
Constructing Explanations and Designing Solutions	LS4.D: Biodiversity and Humans	Cause and Effect
	ETS1.B: Developing Possible Solutions	Connections to Engineering, Technology, and Applications of Science
	ESS3.C: Human Impacts on Earth Systems	Influence of Science, Engineering, and Technology on Society and the Natural World
		Connections to Nature of Science
		Science Addresses Questions About the Natural and Material World





# Project Ideas

- Persuasive letter writing
- Collecting and analyzing data
- Public service announcement



**Help students see  
themselves as leaders  
& changemakers**

# Help students see themselves as leaders & changemakers

- Set short- and long-term goals
  - *What can we accomplish together?*
- Celebrate big and small moments
  - *When can we carve out time to spotlight student and class accomplishments?*





# Project Ideas

- Take and create pledges

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#stompcarbon ENERGY PLEDGE

**ONE STEP** #stompcarbon  
for a better tomorrow!

## ENERGY PLEDGE

I pledge to save energy daily by doing these things:

- Turn off lights, appliances, and devices I am not using.
- Unplug devices and appliances I am not using.
- Use machines like ovens, washing machines, and dryers in the evening, especially in the summer.
- Keep doors and windows closed to save on heating and cooling.
- Walk, bike, or carpool whenever possible.
- Go energy free for one hour a day.
- Encourage my friends and family to conserve energy.

**Other ways I can conserve energy:**





# Project Ideas

- Take and create pledges
- Incorporate family and community

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**ONE STEP**



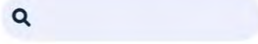






**START A GREEN CLUB**

#stompoutcarbon for a better tomorrow!

Projects | One Step


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Update



### My Plastic Journey

Track your use of plastics for a week and start making changes.

 View Project





# Project Ideas

- Take and create pledges
- Incorporate family and community
- Take time for reflection



# 5

## Strategies to Engage & Energize Students Through Climate Education



**Take a solutions point of view**

**Look at the science of problem**

**Share innovative changemakers**

**Make connections across the curriculum**

**Help students see themselves as leaders & changemakers**





# Taking Action After Today

This week...

This month...

This year...



# ENGAGEMENT = ACTION

Try One Step FREE for 30 days!

Schedule a call to sign up!

→ [bit.ly/3sLa1Gu](https://bit.ly/3sLa1Gu)





# FREE Playbook

Simple Steps to Launch a  
Climate Education Program  
in Your Classroom, School,  
or District

Download Your Playbook Now!



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**WHAT  
QUESTIONS  
DO YOU  
HAVE?**



**ONE  
STEP**

***Thanks for joining  
us today!***