



# WE are innovators

Create innovative solutions  
to a pressing social issue.





## Theme

EDUCATION

## SDG Connection

 RESPONSIBLE CONSUMPTION  
AND PRODUCTION

## Skills

-  CRITICAL THINKING: ANALYZING AND EVALUATING INFORMATION
-  REFLECTION: APPLYING NEW KNOWLEDGE
-  ACTION PLANNING: CREATING A WORKING PLAN
-  SOCIAL AND EMOTIONAL LEARNING: SELF-MANAGEMENT

AN INITIATIVE OF



MADE POSSIBLE BY



*A special thank you to Dow for their commitment to inspiring youth to make a positive impact in the world. Dow, a proud partner of WE, is dedicated to empowering students with the STEM skills to innovate solutions for today's most challenging problems. Through WE Are Innovators, Dow and WE ignite students' passions for science and technology to change the world.*



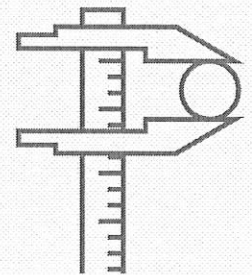
# Awareness + Innovation = Change

Is there a change you want to see in the world? Everyone—including you!—has the power to innovate creative and inclusive solutions to solve the world's most pressing issues, today and tomorrow. Whether you're passionate about food or plastics waste, protecting nature, or conserving energy, you can be part of the solution and make a meaningful impact in the world that benefits everyone, regardless of backgrounds, beliefs, abilities, lifestyles and experiences.

Through WE Are Innovators, you can build and use your STEM skills to address important issues. Become an innovator and advocate for positive change and raise awareness of the causes you care most about. Take action and help build a brighter future for all!

## FACT:

*Between 2017 and 2027, the number of STEM jobs will grow 13 percent, compared to 9 percent for non-STEM jobs—with positions in computing, engineering and advanced manufacturing leading the way.*



## Campaign in Action

When we challenged a group of students at Fleetwood Elementary School to incorporate STEM into their solution to a social issue, we had no idea they would take it so literally! Bringing real stems—the ones that support plants—to life through STEM, this group researched different designs and uses of community gardens. Inspired by the “African keyhole garden” concept, students got to work designing their very own school garden, researching different fruit and vegetable varieties that would flourish in their neighborhood based on scientific concepts such as climate, soil composition, average precipitation, etc. The group took the project one step further by investigating different technological approaches for repurposing any materials. We can't wait to test out the fruits of their labor in the harvest season!



# Ways to Take Action

**Rally your classmates and design a new product (e.g., bricks, desks, benches) that benefits everyone, using recycled waste to reduce the creation of new materials.**

**Blended Education Idea:** Students work on their own individual new product ideas either in class or remotely. Then everyone comes together for a pitch-off where everyone shares their ideas for a new innovative idea. Choose the most exciting new idea to tackle as a class action plan.



## GRADES 4–6

- ▶ Organize a repurposing expo, where students are invited to showcase the different ways in which they reuse and repurpose everyday items. Award prizes to the most innovative designs and ideas!
- ▶ Host a design challenge, where competitors will build a cooler box using simple household materials. The challenge is to see which design is able to keep an ice cube frozen for the longest period of time. Think about how this might be beneficial for people without access to electricity.

## GRADES 7–8

- ▶ Go for a walk around your school grounds and identify any areas that might be inaccessible or a barrier for individuals with a disability. Brainstorm and develop a prototype that would resolve the issue and host a fundraiser to have it built!
- ▶ Design a system that allows your school to collect biodegradable materials to minimize the amount sent to landfill. Think about innovative ways you can use this organic material (e.g., composting it).

## GRADES 9–12

- ▶ Work with your classmates to research and design a plan for water-efficient landscaping that uses plants native to your geographical location. This plan should not require any permanent irrigation or sprinkler system. Produce a report and appeal to your school administration to put this plan into action.
- ▶ Does your school have a system in place for collecting recyclable materials? If not, create a plan yourself and try to implement it. If there is already a system, see what you can do to expand to include additional materials, such as batteries or old electronics.



## CLASSROOM RESOURCE

**WE Are Innovators**

With our Classroom Resources, educators can integrate service-based learning into their curriculum to broaden students' understanding of issues they are passionate about. Download all the pdfs at [WE.org/weareinnovators](http://WE.org/weareinnovators).

**Grade Levels: 4-12 • Subject Connections: Science, Technology, Engineering and Math**

**Module: Inclusive and Sustainable Innovation**

- Develop a scientific approach to solving problems.
- Explore sustainable solutions.
- Embrace an inclusive mindset.

**Module: Food Waste**

- Understand how food waste contributes to social, economic and environmental issues both locally and globally.
- Recognize how food waste depletes natural resources and adds to global food insecurity.
- Learn how innovative, sustainable ideas can help everyone.

**Module: Energy and Housing**

- Learn how traditional housing designs and building materials deplete resources.
- Explore alternative products and services to address local and global issues.

**Module: Transportation Solutions**

- Find out how conventional transportation options have negative impacts on the environment and society.
- Learn how transportation options are unsustainable because of issues of safety, accessibility, and air and water pollution.
- Develop an understanding of how to create sustainable transportation solutions that benefit society as a whole.

**Module: Circular Economy and Nature**

- Learn about how human behavior and mindsets about consumption contribute to a sustainable planet.
- Determine how science creates opportunities beyond the original "reduce, reuse and recycle" approach.

## Tech for Good Badge

**Become future ready by learning and using digital skills.**

Start a social media campaign to raise awareness of the power of innovation in solving issues in your community. Challenge friends, family and neighbors to contribute an innovative idea and post it online. Don't forget to show us what you're doing using **#WEareInnovators**.

**Go further:** Create a platform or website that showcases all of the solutions you come up with. Make it engaging and educational by creating videos and step-by-step guides to help all viewers apply those solutions in real life and help everyone.



# Get Doing

## STEP 1: Investigate and Learn

What local or global issue are you and your group passionate about? From plastics waste to energy conservation, dig into the issues that you see are affecting your community or the world. Use the Issue Cards to explore and learn about the different issues our world faces today, or research your own!

### CHECKLIST

Check out the Issue Cards or your own research  
Create an Action Plan  
Visit **WE.org/weareinnovators** for resources  
Put up posters or share a digital version  
Print out and distribute the resources

Share on social media with **#WEareInnovators**  
Plan your WE DayX  
Complete your Campaign Impact Survey  
Complete your Tech for Good badge survey



### What did you learn?

What issues are affecting your school or community? What are the causes and effects?

In what ways have you seen STEM used for good in your school or community?

What global issues are affecting the world? What are the causes and effects?

How can you advocate for the causes you care about using STEM?

## STEP 2: Action Plan

With STEM, there are so many possibilities when it comes to making a positive difference in the world! Now that you know more about your chosen issue, it's time to create a plan of action and innovate a solution.

### SET YOUR GOAL

What cause or issue will you take action on?

\_\_\_\_\_

What is your STEM idea to tackle your chosen issue?

\_\_\_\_\_

How many people will you need to help you set off your idea?

\_\_\_\_\_

How will you measure your impact? (E.g., the number of plastic bottles recycled.)

\_\_\_\_\_

### Assign Roles

Think about what you'll need to bring your innovative idea to life. Based on everyone's individual strengths and passions, decide who in your group will be responsible for each task!

Task	Group Member(s) Responsible
Collecting materials	
Building	
Researching	
Project Management	
Public Relations	



## STEP 3: Take Action

It's time to create positive social change! With your innovative idea and STEM skills, you and your group can make waves of difference at school, in the community and in the world.

*Tip: Record a collaborative time-lapse video of the project from start to finish from all members of your group and share using social media to inspire others to do their own STEM challenge for good!*



Share your pictures, progress and success on social media with #WEareInnovators.

### Reflect

What are some things you learned about your chosen issue?

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Did you run into any obstacles when bringing your innovation to life? How did you overcome them?

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What will you do differently next time?

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How will you continue to raise awareness of your issue and make a difference?

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## STEP 4: Report and Celebrate

### Report

How many people were involved creating your solution? \_\_\_\_\_

Depending on how you chose to measure your impact, what were your results? \_\_\_\_\_

Has your educator filled out an Impact Survey from the WE Schools Teachers Hub? \_\_\_\_\_

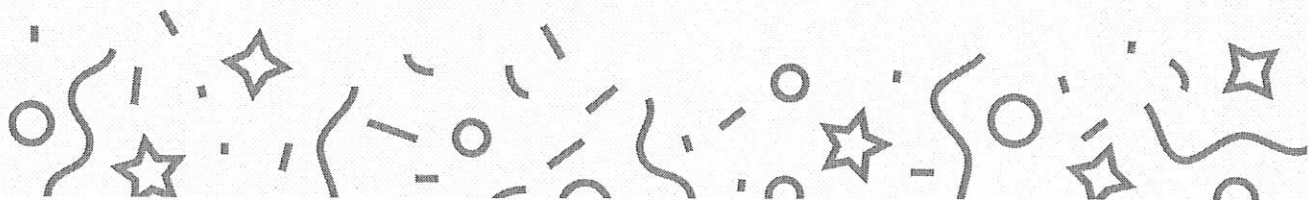
### Celebrate

Make sure you celebrate and share the success of your campaign, and reward yourselves for all your hard work.

- ☐ Share photos of your actions with your school, community and on social media.
- ☐ Record the highlights of your event day and create a video.
- ☐ Celebrate impacts through a class party, online assembly or WE DayX.

## THANK EVERYONE WHO SUPPORTED YOUR CAMPAIGN!

Use this space to brainstorm fun ways to acknowledge everyone who supported your campaign. (E.g., send thank you cards, give a shoutout on social media.)





# Finding Solutions Worksheet

Pick a social issue you care about in your community, (e.g., food insecurity) then explore it through the lens of STEM. You can do this exercise all together, separate into four groups or individually on your own.



## Science

**Issue:**

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**Method:**

E.g., Research GMO foods

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## Technology

**Issue:**

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**Method:**

E.g., Look into food sharing apps

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## Engineering

**Issue:**

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**Method:**

E.g., Design a system to improve food preservation

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## Math

**Issue:**

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**Method:**

E.g., Track data on food transfer from point A to B

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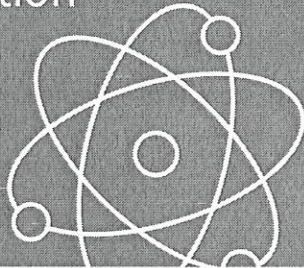
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## Social Media Graphics

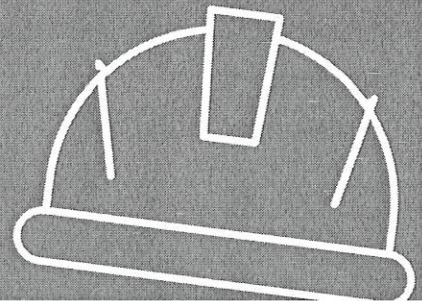
In November 2019, the US Department of Education announced that it invested almost \$540 million to support science, technology, engineering, and math (STEM) education

WEareone



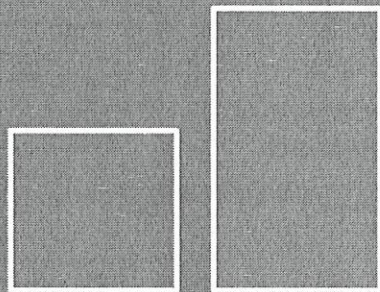
People in STEM fields can expect to earn 26% more money on average and be less likely to experience job loss

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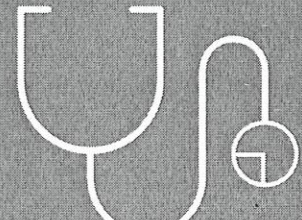
STEM occupations increased by 79% between 1990 and 2016, from 9.7 million to 17.3 million

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At 6.7 million, women make up three-quarters of all health care practitioners and technicians—the largest occupational cluster classified as STEM in a study of 9.0 million workers

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### Find More Online

Visit [WE.org/weareinnovators](https://www.weareinnovators.org) for more stats, information and downloadable posters and infographics to help you make a difference. Plus, don't forget to share on social media with [#WEareInnovators](https://twitter.com/WEareInnovators).