

What Problem Do *You* Want to Solve?

Customizable Lesson Plan



Learning Format: Virtual/Remote, Hybrid, and Face-to-Face

Academy Theme: All Academy Themes | **Duration:** 3 of 4 Weeks

LESSON OBJECTIVES

Students will:

- Identify a problem they want to solve (e.g., Climate Change).
- Conduct research on the topic.
- Engage in group conversations to share their knowledge about the topic.
- Create a multimedia presentation to share with the class.

BLENDED LEARNING STRATEGIES

- 5E Model of Instruction
 - [What is the 5E Instructional Model?](#)
 - [How to Use the 5E Model with Blended Learning](#)
 - Templates:
 - [5E's Lesson Plan Template](#)
 - [5E's Instructional Model Outline](#)
- Whole class rotation
 - [Blended Learning: Designing a Whole Group Rotation](#)
 - [Whole Group/Class Lesson Plan Template](#)
- Virtual Breakout Discussions
 - [10 Ideas for Using Virtual Breakout Rooms During Distance Learning](#)
 - [Virtual Group Discussion Roles-Responsibilities Template](#)

WEEK 1

ENGAGE: Whole Group/Class

Icebreaker Discussion & Activity:

- Engage students: watch Jaime Casap's (Google) video [What Problem Do You Want to Solve?](#)
- Review activities: PowerPoint Presentation: [What Problem Do You want to Solve?](#)
- Brainstorm potential problems that need creative and ingenious solutions.

Online Engagement Tools:

- [Padlet](#)
- Google Classroom Question
- [Mentimeter](#)
- [Peardeck](#)

Small-Group Breakout

- Students discuss the following questions:
 - Which of the ideas from the whole class brainstorming resonates with you?
 - How can we breakdown a global problem such as climate change into an actionable solution you can influence?
 - What are some of the ideas you have for designing solutions?

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WEEK 1

EXPLORE: Independent Assignment

- Have students independently research their chosen problem.
- [Student Handout: Engage/Explore Worksheet](#)

Online Exploration Tools:

- Google Search; Custom Google Search Engine
- [YouTube](#)
- [Newsela](#), [Smithsonian Tween Tribune](#)
- [InsertLearning](#)
- Google Classroom Question
- Shared Google Slide Deck

WEEK 2

EXPLAIN: Whole Group/Class

Icebreaker Discussion & Activity:

- Review activities: PowerPoint Presentation: [What Problem Do You Want to Solve?](#) (Slides 10-15).
- Have students react to the meme on Slide 11.
- Brainstorm potential micro-actions that can have a significant impact, so students become empowered. They *can* suggest new ideas to solve what appears to be insurmountable odds.
- Review the sample video (Slide 13) that shows a presentation to the city council to promote awareness and demonstrates a sample solution.
- Brainstorm with students about the possible actions the city council may have taken due to the presentation.

Potential Tools:

- [Padlet](#)
- Google Classroom Question
- [Mentimeter](#)
- [Peardeck](#)

EXPLAIN: Independent Assignment

- Have students create a presentation (2-3 minutes) that explains their research findings.
- [Student Handout: Explain Worksheet](#)

Small-Group Breakout

- Students share their videos in a small group and get feedback.

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WEEK 3

ELABORATE: Whole Group/Class

Icebreaker Discussion & Activity:

- Review activities: PowerPoint Presentation: [What Problem Do You Want to Solve?](#) (Slide 16-21)
- Brainstorm using the prompt:
 - In addition to the examples in the presentation, what are other innovative ways that you can share your problem and solution?
- Encourage students to:
 - Make connections to life outside of school.
 - Connect concepts to other subject areas.
 - Use creative and compelling presentations to share their research.
- Assign students to work independently on their final project.

Potential Tools:

- Video Tools: [iMovie](#) (Mac), [Openshot](#) (Multi), [Adobe Spark](#) (Win)
- Animated Infographic: [PowToon](#)
- Infographic: [Canva](#), [Google Slides](#), MS [PowerPoint](#)
- E-book: [Book Creator](#)

ELABORATE: Independent Assignment

- Have students create a presentation (2 – 3 minutes) that explains their research findings and solution.
- [Student Handout: Elaborate Worksheet](#)

EXTENSION ACTIVITIES: Optional

Paradigm Challenge

- Watch the video: [Students Can Solve Global Problems.](#)
- Team students up to compete in the global [Paradigm Challenge](#) (Due date May 1, 2021).

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Global Problem-Solving Series by Cisco

- Read the article: [5 Reasons Global Problem Solvers: The Series Will Inspire STEM Interest in Your Students](#)
- Have students work through the activities in the [Global Problem Solving \(GPS\)](#) series by Cisco.