

Interactive Activity Puzzling Together Solutions

Objectives:

- Focus student thinking about climate change to be not only about climate challenges but ways in which these challenges are being or can be solved
- Problem-solving done as teamwork – stressing the collaborative nature of solving climate change
- Sets the stage for longer term study of climate change and provides opportunity for engaging with other disciplines, especially arts and design.



Preparation:

- A powerful, hopeful image needs to be selected (or better yet created by students) and then reproduced in a large 4'x4' (at least) format. This could be done on hard-board (as was used in the Collaborative), cardboard, heavy posterboard, or maybe something more enduring like canvas or tiles. [A great opportunity for collaborating with an arts class]
- Once created, puzzle pieces (at least 40) need to be either drawn and cut out on the back of the image, unless using something already of a “piece” format like tiles.

Overview:

Students will work together in small groups (max 5 people per table) to identify climate change problems, and then identify solutions to the challenges identified by classmates. If there are challenges identified that no one immediately has a solution for, excellent. These can be used as an opportunity for students over the course of the week/term/year to find a solution. In the end, with problems and solutions identified for each piece of the puzzle, the students will have to work together as an entire class to solve the puzzle.

Action Steps: Total time: 50 minutes not including prep time. [Can be extended into multi-week project depending on how you wish to handle the creation of the image and/or if you want to turn this into a research project or solution-design project.]

- **Step 1** - Each Table is given 6-8 puzzle pieces (turned upside down – can't see the image) and a red sharpie and a green sharpie. Students brainstorm challenges (must be specific – ie. Fossil fuel burning cars) and in red write down one climate change problem on each of the puzzle pieces using no more than half the space available. Do NOT turn the pieces over. **[Time 15 minutes]**
- **Step 2** – The group hands the puzzle pieces (still upside down) to the next table. They then look at the pieces they have received. They work together to brainstorm at least one innovation / solution to each puzzle piece problem. They write the solution(s) on the corresponding puzzle piece in green. If they receive a challenge they can't think of a solution for, they leave it blank and put it aside. **[Time 15 minutes]**

- **Step 3** – Each table will share any challenges they don't have a solution for and the entire class will brainstorm to see if they can think of any solutions. [**Time 10 minutes**]

- **Step 4** – All pieces that have a solution on them can now be turned over. Working as an entire class (up to the teacher whether the need to work collectively is shared at first) they solve the puzzle. [**Time 10 minutes**]

- **Step 5** – The completed puzzle could be glued together and form an information piece somewhere in the school to raise awareness and continue the message of hope.

Alternative/Extension:

One quick start alternative could be to set up two large bulletin boards, one of each side of the classroom. In a first exercise, students would use index cards to write as many challenges /problems as they can that cause or contribute to climate change (one challenge per index card) and post these on one of the bulletin boards. As a second exercise, or over the course of the climate change unit, students would be assigned the task of finding solution(s) for the posted challenges. This could be done as a quick exercise to simply write down a solution on the corresponding index card and then move the card to the opposite bulletin board. This could be hope inspiring as the problems physically move to the solutions board. It can also serve as the beginning of a deeper learning and inquiry projects where students could also be given a project assignment using one of the challenges as their topic of inquiry. Their learning could be communicated through a research paper, design project, science-fair exhibit, mixed media communications piece, etc. Through their inquiry they could learn about companies, policies, and individual/collective actions that are working to mitigate the problem, or if none seem to exist, develop their own ideas for solving the issue.