

Choices and Impacts Game

Game description

This game builds upon the awareness of threats from climate change-related problems, carbon footprints, and climate refugees while emphasizing the cause and effect of personal actions, the potential effect of one's individual energy use on others, and the collective impact of energy use decisions.

The game board is divided, with the top half representing positive or beneficial impacts and the bottom half representing negative or detrimental impacts. An extreme result of the negative impacts would make the location uninhabitable making the population "climate refugees". On a local and global scale, the world faces diverse climate disruptions. We have intentionally left the game generic so that you can use whatever climate problem you and your students find most relevant to your lives or your communities. Below are some possible options you might consider. More suggestions can be found by exploring the [UN Sustainable Development Goals](#).

****Middle schoolers who have play-tested this game, recommended to use it over two days: one to learn how it works, and one to actually play and then debrief. There are many things to pay attention to at once, and to have a deep understanding of what the implications are requires familiarity with the game before being able to participate in discussion.

Climate refugee:(noun) a person who has been forced to leave their home as a result of the effects of climate change on their environment. - *Definition from Oxford English Dictionary*

Beneficial	Detrimental
Above sea level	Below sea level
Clean air	Air pollution
Consistent weather and climate patterns	Extreme weather events
Food security	drought
Stable ecosystems	Increased animal extinction
Fresh water access	Only salt water/polluted water
Natural resources protections	Environmental degradation due to mining

Sea Level Rise: Game board represents elevation. Negatives are countries that are below sea level or have gone underwater due to rising sea levels.

Drought: Game board represents precipitation. Negatives are countries in drought, who may also have problems with things like wildfires and food scarcity.

Extreme weather events: Game board represents weather patterns. Negatives are countries with unstable weather, including frequent extreme events like tornadoes/hurricanes, flooding, extreme heat.

Food Insecurity: Game board represents availability of food. Negatives are countries who are experiencing food scarcity due to drought, increased pest problems, lack of farmable land, ocean acidification, etc.

Teacher's note: This game has a large list of positive choices (things that help combat or lessen the effects of climate change by lowering emissions or changing behavior) and negative choices (things that contribute to the effects of climate change by creating or increasing emissions). Discussions about the choices can become intense, especially if students feel that their choices are in some way under attack. We encourage you to preview the cards before playing and work with students to create an atmosphere that is open for questioning and understanding the impacts of our actions. The key takeaway from this game/activity is that **all** choices have impacts. You may choose to remove some cards from play, or scaffold the discussion in a way that is appropriate for your students. It's important to recognize that we are all limited by the choices we are able to make; not everyone can make all the positive choices on this list, but we do the best we can with what's available to us. Ask students to keep that in mind as they look through the action cards. If you choose, this can be a good starting point to a discussion on equity and access to various choices. We recommend helping students recognize what positive actions they are already taking, as well as identifying action steps.

Game Materials

- World map (6), or you can project [this image](#)
- [Location cards](#) (18)
- Game board (6)
- Home icons (6)
- Refugee icons (6)
- [Action cards](#) (6 sets of 54 ea)
- 6 dice

- Paper and scissors for making action cards (provided by teacher)

Game Set up

1. Split the students into 4-6 teams (ideally 2-4 students each).
2. Each team picks a location card, and receives a game board, a home icon, and a refugee icon.
3. Post/project the world map so students can see where their location is.
4. Discuss and choose the climate change challenge and roll a die to determine each team's 'vulnerability number.' This is where the team will start on the game board.

Roll: Vulnerability #	Board Placement
1	+1
2	+2
3	+3
4	+4
5	0
6	0

Teacher note: The values of the action cards are based on people living in the United States. It is important to note for your students that choices made by people living in other countries will have different climate impacts due to their way of life, industry, food choices, etc. If you want to explore more, here are some resources.

- [Disproportionate Impacts of Climate Change on Socially Vulnerable Populations in the United States](#)
- [Human Footprint Movie](#)

Card symbol key:

	Electricity	Food waste	
	Public transportation	Vital communities	
	Personal transportation	Activity/leisure	
	Thermal	Agriculture	
	Industrial processes		

Teacher note: These icons make it possible for students to sort actions by sectors. This may be a good starting point for a conversation about which sectors students have more agency in, and may help them recognize an area where their school can make an improvement.

Game Directions

1. Round one: Taking turns in each group, each student draws an action card and reads it out loud to their group. The number on each action card represents the carbon footprint score for each action (negative or positive impacts). The home icon moves up or down depending on the number on the action card. Go around until everyone has drawn 2 cards, and move the home accordingly for each card.

Example: An action card with a +1 moves the home icon one spot in the positive direction.

2. Play 4 more rounds. At the end of 5 rounds, stop and survey the class and discuss the level of each group's vulnerability to climate change. How many group's home icons are in negative spaces on their game board? Ask students to share examples of why this happened. Which homes are more at risk, and why? What choices made the group more vulnerable or less vulnerable? Do you notice any patterns?
3. Have any groups who are in the negative roll a 6-sided die. Any rolls of 3 or higher mean that they can no longer live in their country, and must become a climate refugee. They must swap their home icon for their climate refugee icon and move it onto another country's level card (in the same space as the home in the new country).
4. Play 5 more rounds. Both the home icon and any refugee icons move the same amount at the end of each round, based on actions pulled. *Note: Countries with refugees will have larger groups and therefore need more time to complete rounds.*
5. Stop and survey the class. Once again, have any groups in the negative roll a die. 3 or higher means they must swap their home for the refugee icon and move to a new country.
6. At this point, ask students what patterns they notice. Likely, you will have only a few countries with a fair amount of refugee icons on each. Are some teams becoming more vulnerable? Are some places now uninhabitable?
7. Discuss the following:
 - Do your choices only affect your country? How are others' choices affecting you? How are your choices affecting others?
 - Will rising sea levels/increased drought/extreme weather/food insecurity in one country create international consequences? What might those be?

- What are some possible consequences of people becoming climate refugees?

Discuss the choice cards and sort them:

What are we doing?	What could we be doing?	What choices are out of reach? (cost, age, location etc.)
<i>Ex: Ride the ski lift</i>	<i>Take up cross country skiing</i>	

8. Ask students what can be done to remedy the situation they see. Allow each student to come up with 1-5 actions that will slow climate change (by reducing emissions) and therefore increase their country's level. Write these on small pieces of paper and add them to their action cards. (Students might explore Project Drawdown's [Table of Solutions](#) for ideas).
9. Play 2 more rounds. In addition to the added positive action cards, allow students who pull negative actions to turn the numbers into positives if they can think of a lower emission alternative.

Example: A student pulls "Drive your car everywhere -2" They can turn that into a +2 if they come up with an alternative like "Drive an electric vehicle" or "Carpool" or "Take the bus."

10. Take stock again. Notice if the positive actions have helped bring any home/refugee icons out of the negative. Keep playing as long as you'd like-you can even let refugees back to their own countries if they get to +3 on their game board.
11. Discuss the following:
 - What can we learn from this game? What about it is realistic? What isn't?
 - Action list: Are these actions all available to everyone? What might some barriers be to some of the positive actions?
 - Were there actions or action ratings that you disagreed with? Which ones and why?
 - How much responsibility does the individual bear for these actions? What about the government? Corporations?

- Research actual climate vulnerability risks for their country using [this site](#) and share.
12. Optional: Look at [Project Drawdown](#). Allow students to look at the list of solutions or the table of solutions. In the table, they can sort by actions that are most effective at lowering emissions. Have students discuss, write, or present some of their findings from this site, and solutions they can see happening in their home, school, or community. Students may also examine the [Sustainable Development Goals](#) and see how the actions in the cards relate to these.
 13. Ask students to come up with actions (based on Drawdown, the game, or other research) that would lower emissions that they will try to participate in from now on or will try to do in the future. You may choose to give them a limit (ex. pick 5) to represent cost or other barriers, or limit it to actions they can realistically do, or leave it open. Allow them to share their ideas (discuss, write, present). Keep student choices in mind as you move to the action-focused part of the curriculum.
 14. Ask students to fill out an exit ticket after the game: