

## Climate Urban Systems Partnership (CUSP), Climate Change Education Kit Development

**“(It Takes Energy to) Get to the Game”**: A story of local sports identity and transportation, this kit was conceived in a Pittsburgh CUSP kit workshop by a team of partners from the reuse center, parks conservancy, natural history museum and a sustainable engineering network.

*Get to the Game!* was then reviewed by national partners, and tested in a variety of settings in Pittsburgh before being redesigned for NYC. New York City partners tested it further and continued to revise it for their audiences. This brief describes design steps through the kit’s development.

### I. Original Design and Key Inspirations

*Materials as creative starting places*: Inspired by a large collection of trophies available at our local reuse store, the design team connected the game Plinko to Pittsburgh’s avid sports fan culture.

With trophies as pegs, this handsome board was shaped to evoke a baseball field, and the design team turned to the mechanisms of the Plinko game.

#### *The Mechanisms:*



1. *Plinko* (a game where balls bounce through a vertical obstacle course creating a distribution of final placement in slots at the end): A particular transit mode is designated to each player, by spinning a transit wheel. Plastic lids bounce through the Plinko board’s trophies. Low carbon choices, walking or biking, are represented by smaller, quicker lids and high carbon choices, plane or car, by bigger, clunky coffee can lids that take longer to descend. This start was thrilling. Workshop members laughed and cheered the lids on.

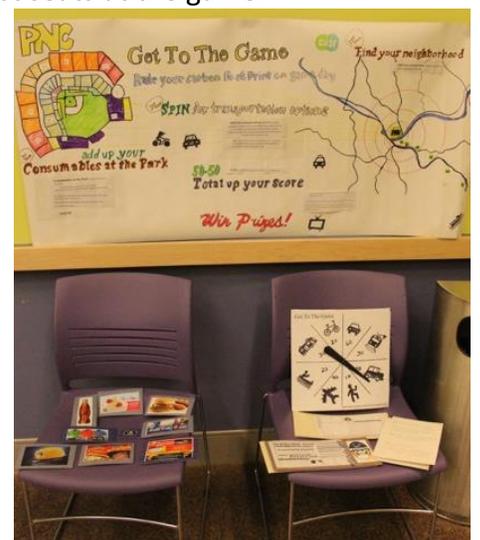
2. *Running the bases*: Players (as baseball fans) travel around a diamond of stations recording at first base their transport type and the distance they traveled from home and then purchasing decisions related to food and souvenirs at second and third bases. They racked up carbon points along the

way for the carbon costs of each choice. The final carbon count led to home base where fans selected their stadium seats, those with the lowest carbon footprint secured the best seats at the game.

Workshop participants were excited about the local connection to sports and the systemic connection to commute distances, public transit options, and the potential to get people thinking about biking, walking, busing and our overall transportation footprint. They felt the physical look, active decision making and humor of the game would be attractive to all kinds of visitors.

### II. Early Iterations

**Development**: CUSP Pittsburgh partners worked on the game further, estimated carbon calculations for a wider array of transportation modes, souvenirs and food types, and painted a large tarp with a regional map and stadium diagram to help players determine their travel footprint and final seats.



(Photo by Maren Cooke)



(Photo by Katy DeMent)

**Testing:** This version was brought to a local network meeting and to CUSP’s national partner meeting. Several critiques were identified.

1. The lids got caught in the complicated trophy bodies or bounced off the board and moving the beautiful board was a lot of work!
2. Carbon calculation was confusing, adding points as you go with pencil and paper.
3. A clearer climate message maybe change title to “It Takes Energy to Get to the Game.”
4. Indication of local public transit options on map might make system resources obvious.
5. Some CUSP national partner cities didn’t connect to the sports theme, demonstrating local relevance of the kit design.
6. Would the Pirates incentivize this, actually help you get a seat at the game for a low carbon footprint?

**Iteration:** The Pittsburgh team changed decided to drop the Plinko board and just use the spinner to select a transportation mode. The commute map and stadium design were attached to a fabric tarp that could be folded up so the whole game fit in a cloth grocery bag solving the logistical critique.

**Testing:** This game was tested with the public at the first Pittsburgh Climate Change Playground and was engaging. People traveled the bases in family or friend groups, usually with a facilitator. Conversations ranged from travel to the Pittsburgh sports stadiums, to transportation and purchasing decisions in daily life. One facilitator brought groups to other kit stations to expand aspects of conversation. It was also used by CUSP partners at a Zip Car event that attracted mainly adult Zip Car users, and at several other climate change playgrounds at festivals. The activity was mainly facilitated by partners who worked on developing the game.

Get to the Game successfully included the three CUSP features for educational activities:

**Relevance:** The activity speaks to local interest; Pittsburgh identifies with its sports teams and people enjoy placing themselves on a map, “we live here!” To make people comfortable, the designers added the randomizer “spinner” so people could test a variety of transportation without revealing their personal choices.

**City Systems:** The game evoked discussions of traffic on game night, parking, and available or ideal public transit options. Many Pittsburghers come to games from suburbs leading to conversations about urban sprawl, urban density, and systems of access to transit choices.

**Collective Behavior Change:** The game also led to thinking about modes and distances for travel to work, school or other more common destinations, what choices are readily available in that daily context, and what city services you can actually rely on.

### III. Cross City Iteration

Quickly, NYC CUSP partners became interested in adopting the game. The Pittsburgh reuse center created a version with some NYC stadium/map adjustments and Get to the Game was sent to NY Hall of Science (NYSCI), which presented it to partners at a kit workshop and facilitation training with a library partner.

NYC partners were struck with Get to the Game as a playful way to think about the carbon footprint of transportation decisions. However unlike Pittsburghers, the choice of stadium was less than ideal for this NYC group “Yankee stadium?? I’d never go there!” Partners suggested a city map where you could Velcro on any event location, a concert venue, or a professional field, and appeal to each specific audience.

The second critique was with teens at a library partner site. The teens were perplexed by counting up the carbon score, and suggested receiving “carbon bucks” to spend at each base, more like money.

Partners wanted to make sure that the images resonated with NYC audiences and changed the generic images with photos of familiar NYC transit modes, foods and souvenirs. They also included more options that have little or no carbon footprint, for instance, bring your own snack, wear last year’s team shirt, walk to the game.

Because NYC has a stellar public transit system and because people don’t have a lot of economic choice about where to live in NYC, they took out the distance traveled element. In the way Pittsburgh didn’t want to shame anyone for transportation choices, NYC didn’t want to shame people for being from a particular area.

With these revisions to the game, the NYC CUSP team brought Get to the Game to a public festival where it was presented along side two other CUSP kits.

#### IV. A Vignette of the game being facilitated in NYC

**The facilitator stood behind a festival table welcoming new people with a fist full of carbon bucks.**

Facilitator: “Today you are going to a Mets game! You can use this money to pay your way”. Kids hold the carbon bucks, shuffle and count them.



Photo. Carbon Bucks and Transportation choice cards (Mary Ann Steiner)



#### ***First Base: Transportation***

Facilitator: “Here at first base you can choose a way to get to the game”. She gestures to a set of cards on the table. The children look at the cards, considering. One boy’s eyes light up when he sees the helicopter, he reaches for it. Facilitator: “Oh, a helicopter! That would be a fun way to go! Turn it over to see how much that would cost...”

Mom and facilitator: “Oh, 100 carbon bucks!” The boy looks at the other cards, puts the helicopter down and picks up a train, and gives the facilitator 20 Carbon Bucks as his mom watches.

The girl from the other family says: “I chose ‘walk’ because it’s good...”

Boy’s mom: “Good choice! When you walk you don’t burn energy, see son? It’s good we’ve started walking more. Try to keep as much of the money as you can!”

The boy’s mom narrates, compares choices and reiterates the idea that there are relative costs to the choices. The helicopter was disappointing, but the boy’s mom mentions the plus of walking more lately in real life.

### **Second base: Food**

Little brother from first family: (shouts) "I'm bringing water and having potato chips!" He looks at the cards and hands over 20 carbon bucks for the chips.

The first boy goes for the ice cream

The boy's mom: "He wants ice cream..."

Facilitator: "That's expensive, because the milk comes from cows, so we have to raise them to get the milk, once we get the milk it has to be refrigerated and transported- that's why it's higher in carbon bucks. "

Boy's mom: "Honey, you need to start saving your money!" He glumly puts the ice cream back, they move to third base, with the boy holding his money...



Photo: Making Choices (Mary Ann Steiner)

### **Third Base: Souvenirs**

Older sister from second family: "I'm wearing the shirt I already have... "

The boy's mom: "Another good choice to save money! "

Facilitator: "The new shirts take energy to make so they are more expensive."



Photo: Seat selection at "Get to the Game" (Mary Ann Steiner)

### **Home Base: Seats**

All the kids choose and then add up their money to find seats at home base.

Mom and son look at seating chart together crouching down by the map. He selects his desired seat.

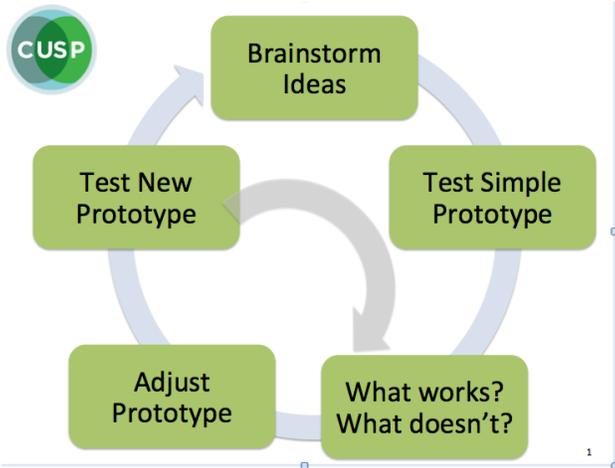
Girl and boy: "We'll sit together because we are brother and sister!" Their money is not the same...80 and 50 carbon bucks left.

Facilitator: "You can add your money together and pick a seat you can afford with your total savings!"

The first boy's mom points to a better seat in the seating chart:

"If you saved \$50 more you could have sat here!"

After the activity I asked the boy's mom, how she would describe this to a friend? She responded, "It was about saving, using less energy to get to the game. I think he enjoyed it, he is a mild mannered boy always, but I could tell he was into it. I think the activity made sense and liked how the seat selection part fit in."



**CUSP approaches kits in a design cycle that includes:**

Idea generation and prototyping, often in a workshop setting

Testing ideas with peers or in public settings

Making changes in design and testing again

Sending kits with new facilitators and seeking feedback

Making changes

At any point facilitators can come up with new additions and changes to kits as we apply them to specific situations.

For a full list of available CUSP kit visit [CUSPproject.org](http://CUSPproject.org)

Under Our Cities, select Pittsburgh. Under Resources select activity kits.