

City Classroom CAP - Series

PBL support for using your City Climate Action Plan as a Living Textbook for local relevance, student agency, and community impact.



Credit: Kevin Lisota

What You Can Do - Our City Needs Our Help

Students analyze the three big areas of need for driving down greenhouse gas emissions in their city including transportation, energy, and waste. These are outlined in the City's two different greenhouse gas inventories, one for direct emissions within city limits, and the other for indirect emissions from the stuff we buy. The city maintains a portal with neighborhood scale, map-based data to help students visualize what's working and what's needed right where they live. From this exploration and analysis students build the motivation to take action.

Our City is Serious

The city of Seattle is not messing around with the language they use in talking about climate change. Check out the word choice in the introduction to the City's [Climate Change landing page](#). (See box below.) Notice also that our City calls out **transportation, buildings and energy** as the biggest sources of greenhouse gas emissions. Waste from consumption choices (the stuff we buy) is another big category that is the focus of Seattle's **consumption-based emissions inventory** linked below.

“From **sweltering heatwaves** and wildfires that **choke our air**, to **rising seas** and **extreme floods** washing out roads, **every day** we are feeling the **impacts** of climate change. Seattle's most recent greenhouse gas (GHG) inventory shows that to meet our climate goals, we need to **urgently** transition away from fossil fuels and to a more sustainable, clean energy future. The City is working to **drastically** reduce climate pollution from our two largest sources, the transportation and buildings sectors, as well as accelerate efforts to build **resiliency** in the communities **disproportionately** impacted by the climate **crisis**.”

From Seattle's [Climate Change landing page](#).

When you review what the city is doing in these two categories, [transportation](#) and [buildings and energy](#), you'll find lots of big scale solutions like policy changes and infrastructure. These are actions that the city can pursue. **But what can we do as students?**

In the [Transportation sector](#) what do you think of the Mayor's call to establish three [Low Pollution Neighborhoods](#) by 2028? Can our school neighborhood be part of this movement? What would you recommend? How can we help?

In the [Buildings and Energy sector](#) what do you think of the [City's Clean Heat Program](#)? Is this something we can act on? What would you recommend? How can we help?

Ranking Sustainable Solutions *(review and refine from the entry event)*

[Lesson Resources for Ranking Solutions](#): Students revisit a set of 4x5 cards of [36 Sustainable Solutions](#) based on their new knowledge of what's needed most to drive down GHG emissions in our city.

Some inquiries we might pursue...

- Which solutions are you and your family already acting on?
- Which actions would be easiest to add, increase, or expand on?
- What are a few actions we might take on as a class to measure the collective impact of lots of people doing the same small action?
- Will our impact data show up in our cities' GHG emissions inventory?

Seattle's Greenhouse Gas Data Visualizations

Every two years, [Seattle releases an analysis](#) of our City's climate pollution, called a greenhouse gas inventory. These are direct emissions from known sources within Seattle. Check out our city's handy dashboard, [Greenhouse Gas Data Visualizations](#), with graphs and pie charts to help you visualize Seattle's GHG emissions across five sectors including **Transportation, Buildings, Industry, Waste, and Offsets**.

Seattle's Consumption-Based Emissions Inventory *(stuff we buy)*

In addition to establishing an inventory of direct emission sources, the City of Seattle has also developed a [consumption-based emissions inventory](#). It's based on the stuff we buy, how it's made, where it's made, and how much of it we end up throwing away. Everything has a carbon footprint. This unique inventory estimates the greenhouse emissions associated with all the goods and services consumed within the community, no matter where they are produced including the extraction of raw materials, manufacturing supply chains, and global transportation. The website includes a **neighborhood map** that shows local differences between income, consumption, and GHG emissions.

One Seattle Climate Portal - Data Dashboard

The City of Seattle tracks quarterly neighborhood-level emissions data to measure progress towards healthy, sustainable, and equitable communities. The [One Seattle Climate Portal](#) is a map-based website that houses data indicators of emissions in Seattle's neighborhoods.

See Abby's Tutorial [3:00] **To be developed**

Powerful Word Choice... again

From the [One Seattle Climate Portal landing page](#)

“To prevent the **worst effects** of climate change, Seattle **must eliminate** climate pollution by 2030 while creating green jobs and **investing** in frontline communities. This is a huge job that requires innovation and investment from all sectors and communities. Seattle's climate work is firmly rooted in the [Green New Deal](#) and the [One Seattle Climate Justice Agenda](#), which invests in building an equitable clean energy economy, ensuring a **just transition** away from fossil fuels, and building healthy, resilient communities. This portal primarily tracks progress towards the just transition priorities.”

Next steps...

Student Agency - Impact Project Design

NOTE: This lesson is best if built in small elements over multiple units.

Lesson Resources: Students practice the [IP3 Strategy](#) to develop individual, team, and school-wide projects with metrics that measurably advance the City's Climate Action Plan and other policies, plans or programs. It's best to practice a few simple Impact Projects **as a whole class** to study the **IP3 Strategy** as a model of effective project management. Classroom spreadsheets are provided so that students can see the power of data-driven collection action. The IP3 Strategy emphasizes creative and personalized **impact storytelling** so that students can find their voice connected to measurable impact directed at priority stakeholders. The lesson also provides a model for how to establish a **Classroom Climate Action Plan (CAP)** by aggregating individual and team Impact Projects in one spreadsheet. Even if you just have a few actions, your class will be empowered by organizing and reporting their collective impact directly aligned with your City's CAP. Engaging students in managing a Classroom Climate Action Plan becomes a legacy learning opportunity for next year