# Visualizing Boston

SUMMARY

The Map Center has created several different versions of *Visualizing Boston*. In these lessons, students go through the process of closely reading two individual maps that show some kind of information about Boston and then look at the maps side by side to think about how they inform or complicate one another.

These lessons ask students to slow down their examination of each map and consider how the map is showing information and what it can tell them and NOT tell them about some aspect of Boston, from demographics to the climate crisis.
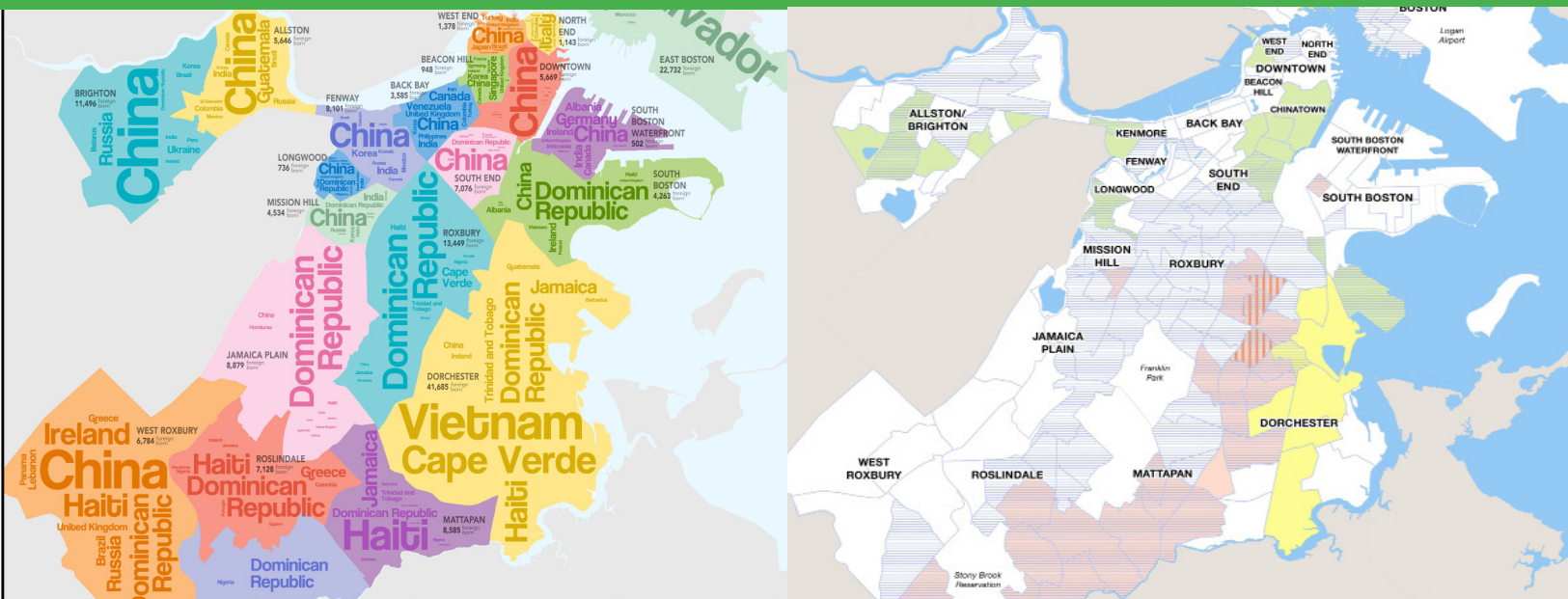
ESSENTIAL QUESTIONS

What tools and approaches do cartographers use to show information?

In what ways can a map tell an incomplete story of our city?

In what ways can exploring multiple maps of our city help us form good questions?

What are the advantages and cautions related to using maps to understand our city?

OBJECTIVES

Students practice map analysis, from identiying basic map elements to considering purpose and audience.

Students compare two maps to explore the ways they may inform each other.

Students use maps of information about their city to raise questions about what the maps show and don't show.

TIME COMMITMENT : 2 class periods of 45 to 60 minutes or one 90 minute class

MATERIALS

LESSON PLAN MATERIALS

Students must have computers for this activity, laptops are preferable so they can sit in groups.

Introductory Google Slides: These are best projected for the whole class, though students may want to follow along on their own screens so they can access zoomed in versions of the maps in the introduction.

Different versions of Visualizing Boston

Each version of the activity has a number of sections that can be completed by pairs or small groups of students, with one or more students scribing for the group right onto the slides. There are thumbnail images of the maps in the upper right corner of the slides that link out to more close-up versions of the maps and/or to see them in context.

Visualizing Change in Boston includes four case studies using maps and other resources that show how community action created change in Boston. Case studies are: Southwest Corridor, Urban Farming Institute, Tent City and Dudley Triangle. This version requires students to read or watch a supplemental source before finishing up.

Visualizing Boston: Segregation & Integration includes map pairings used in our elective course and asks students to consider the question: "How do racial ideas become spatial practice?" Students consider aspects of segregation and integration through maps showing income and race, immigration and schools in Boston.

Visualizing Boston includes map comparisons that ask students to explore issues of health, immigration, housing, income, education and climate resiliency.

Visualizing Climate in Boston includes multiple maps compared against a 2019 map showing the heat index compared against maps of immigrant communities, housing, health, income, work, schools, sea level rise and tree canopy.

PROCESS

1) Walk students through the Introductory Slides. This introduction can be used with any of the Visualizing Boston versions and can be edited to suit the focus of your class exploration.

Show the slide with the two wi-fi maps side by side. Each map image is a link to our collections page with a zoomable version of the map. Ask students to spend a minute just looking silently at the two maps. Ask them what they notice (colors, labels, legends/keys, titles, etc.) At some point a student should raise the fact that the maps seem to say opposite things. At that point, explain that each map was created by the same cartographer using the same data set, the same statistical information, and that's why it's important to be a critical map reader and be able to ask good questions about what maps are saying. In this case, the data is the same but the maps are designed to tell different stories. One may be more truthful than the other or the truth may be found when both stories exist side by side. More sources are necessary to come to a more complete picture.

You may also expand this part of the introduction by beginning with this lesson.

Go through the next few slides posing the task. Explain that students will complete a process of analysis on two maps, with additional questions to answer when considering the maps together. Leave the slide titled "Directions" projected so students can see it as they work.

2) Students can get to work. Let them know that they can use the Google Map link to a map of Boston on Slide 3 if they need help identifying neighborhoods, streets, parks, etc. Circulate as students work.

3) When all groups are finished and ready to present, we suggest that the only slide they are allowed to show is the slide from their section with the images of the two maps side by side to discourage too much reading of notes and encourage reengaging with the maps as they explain to their classmates what they learned about each map, how they relate to each other, and what questions they raise about the topic. Allow other groups to ask questions of the presenters and make connections to their own sections.

4) When all groups have finished, allow time for a debrief on the advantages and cautions related to using maps to understand the city as a whole or some aspect of it. What are maps good for and what are they not so good for? What are some characteristics of better, or worse, maps? What should we look for when trying to determine how reliable a map is?

Tips:

We suggest 2 days to complete this lesson: Day 1 is student work with the map pairings in small groups. Day 2 is reporting out to the class.

You can make a copy of any version of this activity and edit it to meet your needs. You may substitute maps of another city. You may add or eliminate questions. You may narrow the focus to a topic like housing or health.

You might choose to start this activity with the Same Data, Different Stories mini-lesson that uses the wi-fi maps to expand on the introduction used here. It introduces students to the ideas behind maps made with data and the questions they should be asking.