MAPPING SYSTEMS

A PRACTICE FOR FOSTERING THE MAKER CAPACITIES:
LOOKING CLOSELY, EXPLORING COMPLEXITY & FINDING OPPORTUNITY

Before you begin to explore a specific system, consider:

- What is a system? What words, metaphors, or phrases do you associate with the word system? What are some definitions of systems and how would you phrase those in your own words?

Look at/consider the system you are going to examine.

- What are some initial questions you have about the system?
- *Using large paper and markers in different colors, create a visual map that helps to explain your system. Provide the name of the system you are mapping prominently on the page. As you respond to each question below, add the information to your map in a different color.*

Mapping your system:
- List the various parts of your system on your map.

Draw lines, include text, and show how those various parts interact with each other.

- Add the various individuals, groups, or organizations that are involved with your system to your map.

Decide how to visually represent the variety of interactions of the individuals within your system?

Finding Opportunity:
- Now that you have a first draft of your map, ask: What do you know about your system? What *more* do you need to know?
- What new questions do you have about the system and the individuals in it now that you have mapped it?
- What are some ideas you have for how to improve the system?

Mapping Systems

The practice of mapping allows learners to build and demonstrate their understanding of the parts, people, and interactions that comprise a given system. "To think about systems means we pay attention to interrelationships, patterns, and dynamics as well as to the parts." *Linda Booth Sweeney*

When and How Can This Practice Be Used?
This practice can be used with any study of simple to very complex systems. The mapping process can be used to document what students learn over time about a specific system, using the maps as a reflection space to add new information as they uncover new details.

The practice can be used on its own or along with other AbD thinking routines or practices. Here are some considerations for implementing this practice:

- This practice was developed as a means to document the thinking routine, *Parts, People, Interactions*. Depending on the learning goals, educators may spend more time in any of these three areas. For example, in a study of causality a substantial amount of time may be spent focusing on interactions and the questions raised by mapping these. Social systems maps can zoom in on the various stakeholders engaged with a system.
- A valuable part of any map is the questions that are raised as a part of the mapping process, so encourage learners to document their questions on their maps.
- A gallery walk can provide the chance for peers to provide feedback and push one another's thinking further by asking questions of the map designers.
- Educators have had students map systems they are familiar with like the school lunch system, grading system, or bussing system. These familiar systems can be expanded upon moving from the known to more complex systems and issues like food equity, supply chain economics, global transportation, etc.
- Images sometimes evoke ideas about systems better than words. Educators often use visual prompts, like the picture of a container ship on the previous page, to help learners begin to consider systems, subsystems, and components for mapping. Images for systems you are studying can be sourced from creative commons sites.
- The thinking routine, *Think, Feel, Care* can be used to further consider the perspective of particular stakeholders who are connected to a system. The thinking routine, *Imagine if…* can be used to help learners explore system redesigns, or hacks, to improve a system.