

Parts, People, Interactions

A routine for examining systems by identifying their parts, the people involved, and how they interact.

Identify a system and ask the following questions.

- What are the **parts** of the system?
- Who are the **people** connected to the system?
- How do the people in the system **interact** with each other and with the parts of the system?
- How does a change in one element of the system affect the various parts and people connected to the system?

PURPOSE

What kind of thinking does this routine encourage?

This routine supports students to look closely at a system, identify its parts, recognize who participates in it, either directly or indirectly, and consider the consequences of changes in the system.

APPLICATION

When and where can I use it?

This thinking routine can be used to explore any system and helps stimulate curiosity, raise questions, surface areas for further inquiry, and introduce systems thinking. Students have the opportunity to notice that a change in one aspect of the system may have both intended and unintended effects on another aspect of the system. When considering the parts, people, and interactions within a system, students begin to notice the multitude of subsystems within systems.

LAUNCH

What are some tips for starting and using this routine?

Before beginning this routine, it may be helpful to introduce students to what a system is and develop criteria for what defines a system. Definitions are helpful, but we've found that concrete examples work best. In order to engage in this thinking routine, your students will have to identify a system to explore. One way to do this is to have your students situate an object within a broader system. Encourage your students to name the systems they would like to explore. You can then ask your students if their system meets the criteria for a system you identified. Systems are made up of subsystems and are themselves parts of broader systems. In order to avoid going down the rabbit hole of "everything is connected to everything," it may be helpful for you to encourage your students to define the boundaries of their system. Working in groups, it is helpful for students to first make a list of all of the parts and people involved in a system, and then to map out their system on chart paper to make the interactions between all of the parts and people in their system visible.

FACILITATION

This activity is recommended for the following learner age ranges:

- **Preschool**
 - 15-30 minutes
 - Heavily facilitated by peer/teacher/caregiver
- **Elementary School**
 - 15-30 minutes
 - Lightly facilitated by peer/teacher/caregiver
- **Middle School**
 - 15-30 minutes
 - Lightly facilitated by peer/teacher/caregiver
- **High School**
 - 15-30 minutes
 - Lightly facilitated by peer/teacher/caregiver

This thinking routine was developed as part of the *Agency by Design* project at Project Zero at the Harvard Graduate School of Education. Explore the full PZ Thinking Routine Toolbox at pz.harvard.edu/thinking-routines.

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