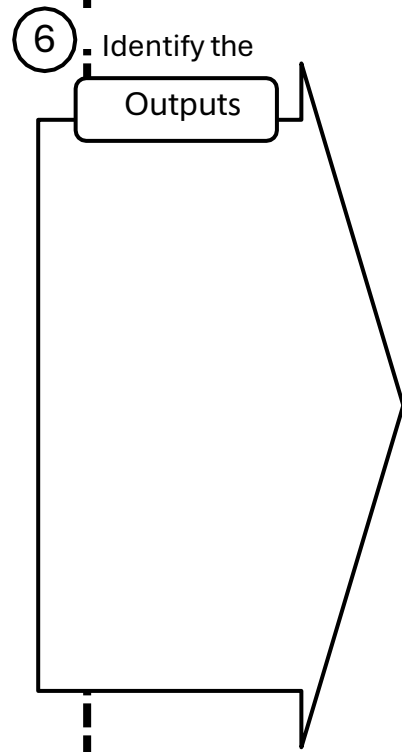
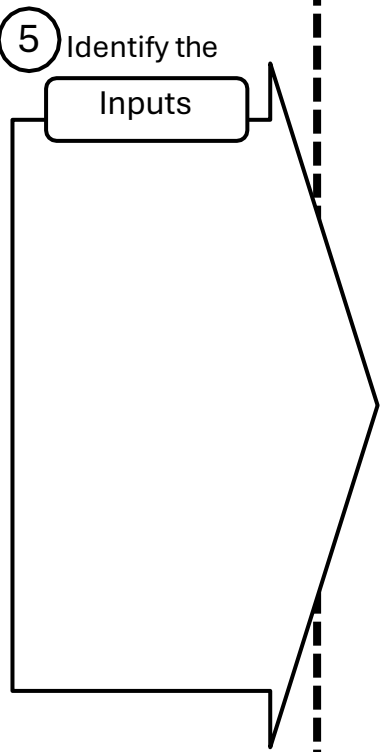
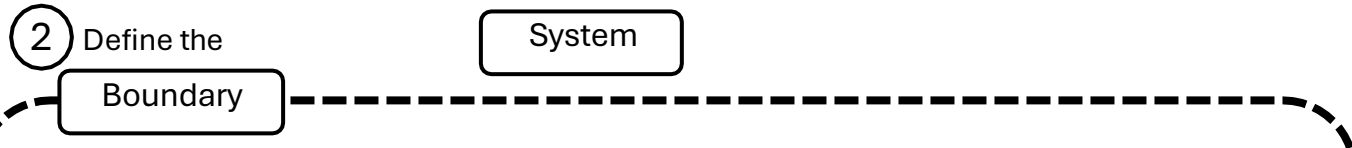


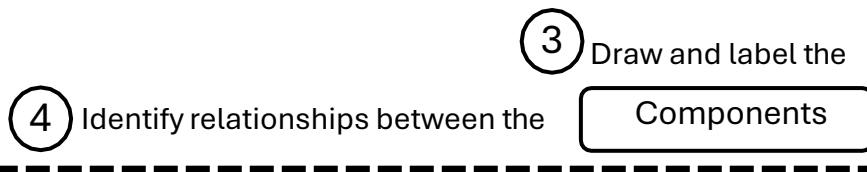
Systems and System

Name Teacher Version



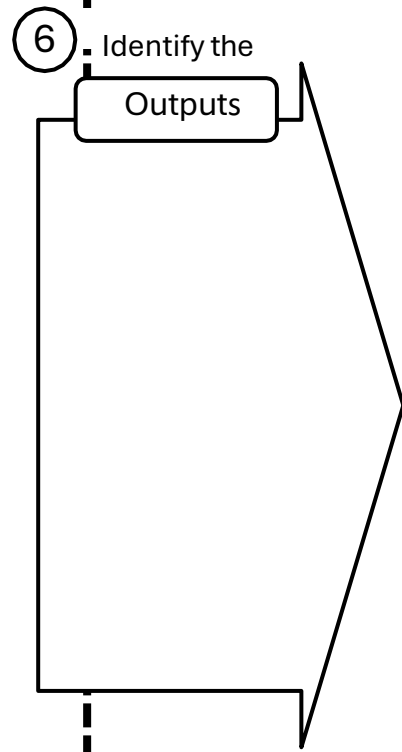
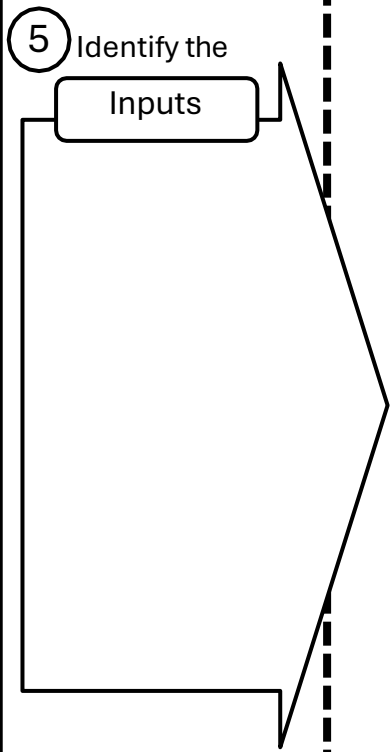
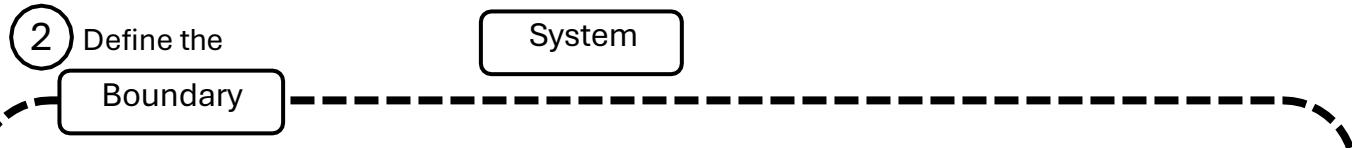
In grades 6-8 students recognize that:

- Systems may interact with other systems; they may have sub-systems and be a part of larger complex systems.
- Models can be used to represent systems and their interactions—such as inputs, processes and outputs—and energy, matter, and information flows within systems.
- *Models are limited in that they only represent certain aspects of the system under study.



Systems and System

Name Teacher Version



In grades 9-12 students recognize that:

- Systems can be designed to do specific tasks or cause a desired effect.
- When investigating or describing a system, the boundaries and initial conditions of the system need to be defined and their inputs and outputs analyzed and described using models.
- Models (e.g., physical, mathematical, computer models) can be used to simulate systems and interactions—including energy, matter, and information flows—within and between systems at different scales.
- Models can be used to predict the behavior of a system, but these predictions have limited precision and reliability due to the assumptions and approximations inherent in models.

