

Systems is one of the strands in the Forest Tour.

- A system is something that is comprised of subsystems
- We define what the system is and what the subsystems are
- Systems can be part of a larger encompassing system
- A system is a model that helps us organize and understand something that is complicated
- An everyday example of a system is a person riding a bicycle
  - The subsystems could be defined as the rider, frame, wheels, brakes, and gears
  - If the gear mechanism were the system, then we could define the subsystems as the front gear, rear gear, cranks, pedals, and chains. In this case the rider and bicycle would become the larger encompassing system.
- An open system allow matter and energy move in and out, therefore a forest is an open system
- A closed allows energy moves in and out, but matter does not
  - A closed system is an artificial construct, but a can of food is a closed system once it is sealed and remains so until it is opened
- These ideas relate to the forest, because it is an ecosystem
  - We can think of parts of the forest ecosystems as subsystems, such as the trees, water in streams, animals, and soil
  - We can think of the forest as part of a larger encompassing system of the regional ecosystem
  - The forest ecosystem is an open system

Writing prompts

- What are some of the subsystems of the forest ecosystem? How could you organize them?
- Is the forest ecosystem an open or closed system? Explain.
- What other systems do you know about? How can you organize this system into subsystems? What larger encompassing system is it a part of?