2.1

* Groups of living things interact within ecosystems
	+ Organisms occupy specific living areas
		- **Species** – groups of organisms that are so similar that they can produce offspring that can also produce offspring
		- Population – a group of organisms of the same species that live in a particular area
		- **Habitat** – the physical location where specific species live
		- **Niche** – the role an organism plays in its particular habitat
		- **Community** – a group of populations that live in a particular area and interact with one another
	+ The environment can be organized into 5 levels
		- **Biome** – describes the climate and types of plants that are found in similar places around the world
		- **Ecosystem** – living and nonliving factors interact to form a stable system, includes only organisms and their local environment
		- **Community** – made up of the living components of the ecosystem
		- **Population** – group of organisms of the same species that live in the same area
		- **Organism** – a single individual animal, plant, fungus, or other living thing
	+ Patterns exist in populations
		- Distribution in their living space
			* How they are spread around in a specific area

2.2

* Organisms can interact in different ways
	+ Organisms interact in different ways
		- **Predator** – an animal that eats another
		- **Prey** – an animal that is eaten by a predator
		- **Competition** – the struggle between individuals or different populations for a limited resource
		- **Cooperation** – an interaction in which organisms work in a way that benefits them all
	+ The survival of one species might depend on another species
		- **Symbiosis** – relationship between individuals of two different species who live together in close relationship
		- **Mutualism** – an interaction between two species that benefits both
		- **Commensalism** – a relationship between two species in which one species benefits while the other is not affected
		- **Parasitism** – a relationship between two species in which one species benefits while the other species (the host) is harmed
	+ Interactions in an ecosystem are complex

2.3

* Ecosystems are always changing
	+ Populations change over time
		- Populations grow and decline at different rates
			* **Limiting factor** – any factor or condition that limits the growth of a population in an ecosystem
			* **Carrying capacity** – the maximum number of individuals that an ecosystem can support
	+ Ecosystems change over time
		- **Succession** – the gradual change in an ecosystem in which one biological community is replaced by another
	+ **Primary succession** – the establishment of a new biological community
		- **Pioneer species** – the first living things to move into a barren environment
	+ **Secondary succession** – takes place after a major disturbance to the biological community in a stable ecosystem