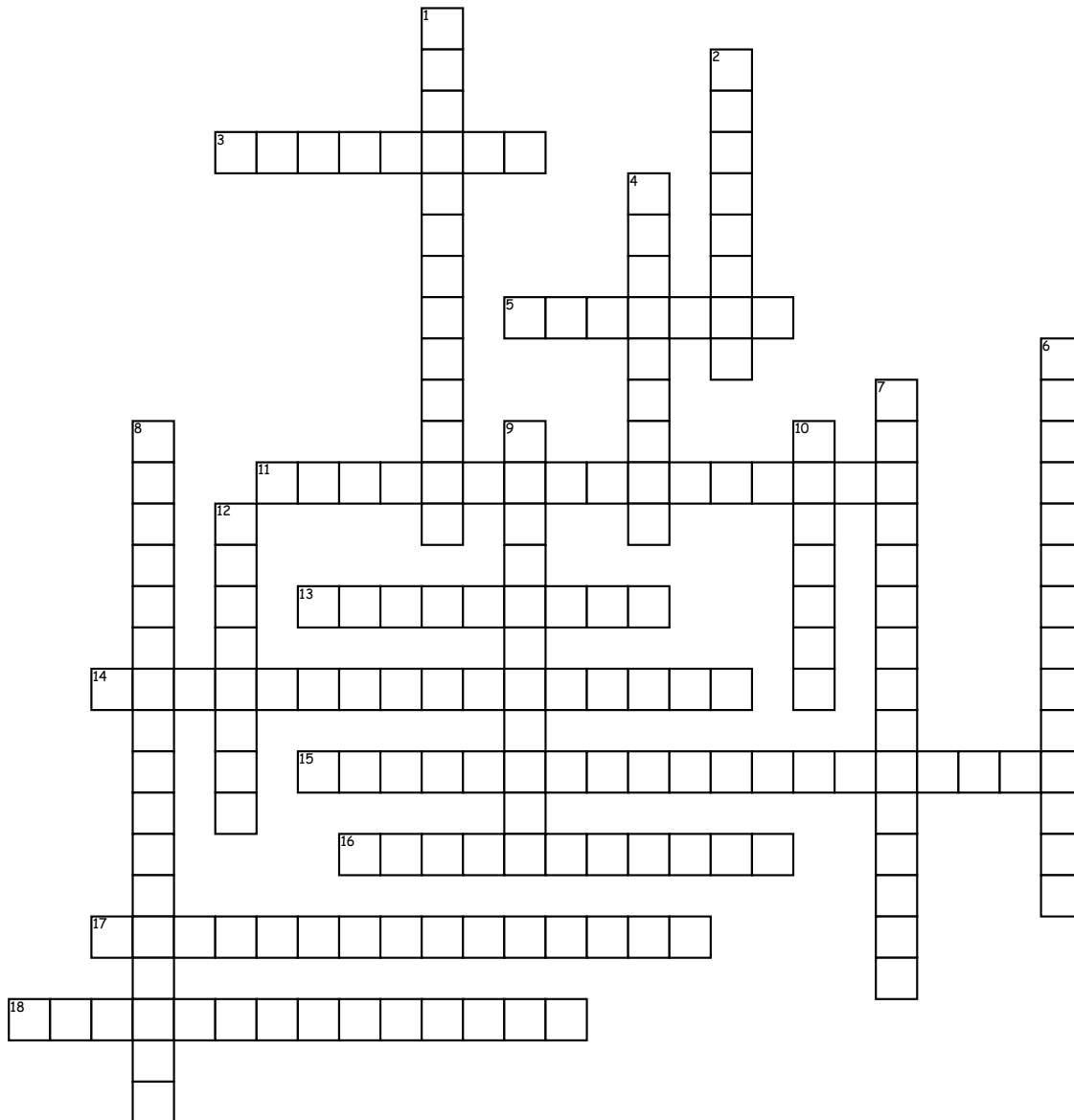


Chapter 4: Ecosystems



Across

- 3. material made up of decaying bits of plant and animal material
- 5. network of complex interactions formed by the feeding relationships among the various organisms in an ecosystem
- 11. process of converting nitrogen gas into nitrogen compounds that plants can absorb and use
- 13. organism that is able to capture energy from sunlight or chemicals and use it to produce its own food from inorganic compounds; also called a producer
- 14. single essential nutrient that limits productivity in an ecosystem
- 15. process in which elements, chemical compounds, and other forms of matter are passed from one organism to another and from one part of the biosphere to another

- 16. each step in a food chain or food web
- 17. first producer of energy-rich compounds that are later used by other organisms
- 18. process in which chemical energy is used to produce carbohydrates

Down

- 1. photosynthetic algae found near the surface of the ocean
- 2. organism that relies on other organisms for its energy and food supply; also called a heterotroph
- 4. a series of steps in an ecosystem in which organisms transfer energy by eating and being eaten

- 6. process used by plants and other autotrophs to capture light energy and use it to power chemical reactions that convert carbon dioxide and water into oxygen and energy-rich carbohydrates such as sugars and starches
- 7. process by which bacteria convert nitrates into nitrogen gas
- 8. illustration of the relative amounts of energy or matter contained within each trophic level in a given food chain or food web
- 9. organism that obtains food by consuming other living things; also called a consumer
- 10. total amount of living tissue within a given trophic level
- 12. chemical substance that an organism needs to sustain life