5-Minute Refresher: Ecosystems
Ecosystems – Key Ideas

• Ecosystems consist of biological communities and physical components
• Abiotic components are non-living
• Biotic components are living
• Organisms grow and reproduce by obtaining resources through their relationships between abiotic and biotic factors
• Aquatic ecosystems are rich in nutrients and support more life. Their temperatures change slowly and they have a stable source of water surrounding the organisms.
• Terrestrial ecosystems must acquire water and their temperatures can vary widely and drastically in a short amount of time.
Aquatic Ecosystems – Key Ideas

• “Aquatic Ecosystems” refers to ecosystems in bodies of water
• Aquatic ecosystems can be marine, freshwater, or a combination
• 71% of Earth is comprised of aquatic ecosystems, although only .80% of them are freshwater
• Aquatic ecosystems Provide habitats for wildlife
Terrestrial Ecosystems – Key Ideas

• Terrestrial ecosystems are found only on land masses.
• Terrestrial ecosystems include the tundra, taiga, temperature deciduous forest, tropical rain forest, grassland, and desert.
• In terrestrial ecosystems there is greater availability of light and gases.
• Organisms in terrestrial ecosystems have adaptations to obtain water.
Ecosystems – Prior Knowledge

- Students will likely be familiar with habitats of animals.
- They will know that animals eat other animals and/or plants.
- They may know examples of different biomes or ecosystems, such as the desert or tundra.
Animals depend on their surroundings to get what they need to survive.

Plants are producers. They make their own food using energy from the sun.

Animals are consumers. They eat plants or other animals.

Plants and animals depend on each other and their environment.
Ecosystems are dependent on their interactions with living and nonliving things.

Food can be traced back to plants.

Competitive, predatory, and mutually beneficial interactions exist and vary among ecosystems.
Ecosystems – Common Misconceptions

• Plants are dependent on humans.
  – **Reality:** Humans and all other animals are dependent on plants. They are the foundation of every food web. Energy from plants is passed from one link to another in a food chain.

• Organisms in a food chain can eat everything below it.
  – **Reality:** Organisms in a food chain eat some, but not necessarily all, other components in the food web.
Ecosystems – Additional Information

Food chains follow a simple path while food webs are the interconnection of several food chains. To learn more about this, watch the video at the following link:

Food Chains and Food Webs
http://www.siemensscienceday.com/activities/hands-on-science-activities.cfm#/life-science