



# 5-Minute Refresher: RENEWABLE RESOURCES COMPOSTING

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# Composting—Key Ideas

- Composting is the breaking down of discarded organic material.
- Compost is produced commercially and sold as a soil-amendment product.
- Composting also occurs naturally, as when trees lose their leaves in the fall and the leaves slowly decompose.
- Soil is a mix of small particles of weathered rock, decayed organic matter (plants and animals), water, and minerals. Healthy soil also has living things within it, including microorganisms, insects, other invertebrates, and fungi.

# Composting—Learning Objectives for Grades K-3

- Organisms obtain materials they need to grow and survive from the environment.
- All animals need food in order to live and grow.
- Plants need water and light to live and grow.

# Composting—Learning Objectives for Grades 4-6

- Matter cycles between other organisms.
- Organisms obtain gases, water, and minerals from the environment and release waste matter back into the environment.
- Food provides animals with the materials they need for body repair and growth.

# Composting—Prior Knowledge for Grades K-3

- If your students need basic background information on how plants grow and why they rely on soil, you may wish to begin this lesson by teaching the Fun-damental [Getting to Know Plants](#). Though a bit below grade level, this short Fun-damental will help your students see the connections between plants, soil, and living things.
- Students should be able to explain that organisms obtain materials they need to grow and survive from the environment.

# Composting—Prior Knowledge for Grades 4-6

- Students should be able to explain that organisms obtain materials they need to grow and survive from the environment.
- Students will likely have some real-life experience playing with soil. However, students may be unaware of the different components of soil, and may not know that we can amend our soil with compost to add nutrients. Unless students have a home compost bin, it is unlikely that they will be familiar with the idea of composting, but they may have seen decomposers like worms in the soil.

# Composting—Common Misconceptions

- Soil is a living thing.
  - **Reality:** While soil often contains living organisms, such as bacteria or insects, soil itself is weathered rock and the decayed remains of dead plants and animals.
- Once soil (or the nutrients within soil) is used up, it can never be replaced.
  - **Reality:** In reality, nutrients can be added back to the soil. Under natural conditions, this is a slow process that can take several years. Composting can speed up the process and add nutrients back into the soil every year.

# Composting—Additional Information

Foods that have been placed in different environments decompose at different rates. To learn more check out the hands-on activity **Too Rotten For Me** at the following link:

[http://siemensscienceday.discoveryeducation.com/activities/too\\_rotten.cfm](http://siemensscienceday.discoveryeducation.com/activities/too_rotten.cfm)