



TAKE CARE OF TEXAS: EDUCATOR MATERIALS

HANDOUT

Anatomy of a Compost Pile



TEKS: 112.15.12A-B | 112.16.12A-C | 112.18.12A | 112.19.12B | 112.20.12C

Compost Pile: An in-depth look

Composting is a way to turn things like leaves, fruit peels, and grass clippings into healthy soil that helps plants grow. Tiny helpers called decomposers—like bacteria, fungi, and even worms—break down this stuff naturally. To make compost, you need four key ingredients: organic matter (like food scraps and yard waste), water, oxygen, and decomposers. Just like people, decomposers need food and water to live. As they munch on organic matter, they give off heat and special nutrients that plants love. They also release carbon dioxide. But if your compost pile doesn't have enough air, it can start to smell bad! That's why it's important to mix your compost and keep it airy.



Green Material

Green materials are the fresh, wet items that give decomposers the energy they need to break things down. These materials are full of nitrogen, which helps your compost heat up and work faster! Good green materials include fruit and veggie scraps, grass clippings, coffee grounds, and plant trimmings. You can even add eggshells. Make sure to crush the eggshells into smaller pieces to help with decomposition.

Brown Material

Brown materials are dry, plant-based items that help keep your compost pile healthy and balanced. They give decomposers the carbon they need to do their job! Some great brown materials to add include dead leaves, twigs, shredded newspaper, cardboard, and sawdust from untreated wood. These items are usually dry and crunchy. Try to break down larger items such as twigs or cardboard. The smaller pieces will decompose quicker than larger items.





Layers of a Compost Pile

Building a compost pile is kind of like making a layered cake! You stack different types of materials to help everything break down properly. Start with a layer of brown materials like sticks, woodchips, or dried leaves. Then add a layer of green materials like fresh leaves or grass clippings. Keep stacking these layers, like a sandwich, and sprinkle in a little water to keep it moist. Make sure there's air too—mixing the pile helps! These layers give decomposers everything they need to turn your pile into rich, healthy soil.

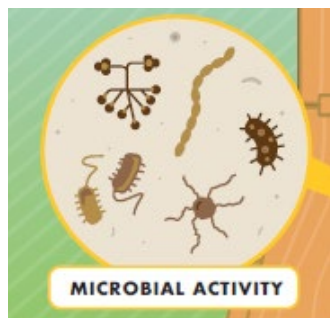
Items to Avoid

Some things don't belong in a compost pile because they can attract pests, smell bad, or mess up the composting process. Avoid adding meat, dairy, oily foods, and pet waste—these can make your pile stinky and unsafe. Also skip plastic, glass, metal, and anything with chemicals like cleaning products or painted wood. These items don't break down and can harm the soil. Stick to natural, plant-based materials to keep your compost clean and healthy!



Finished Compost

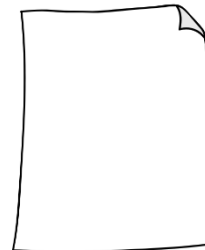
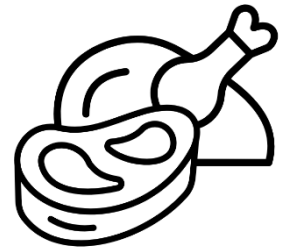
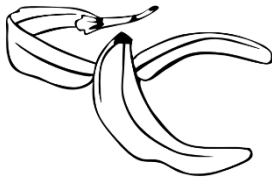
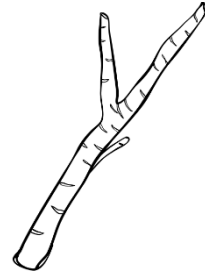
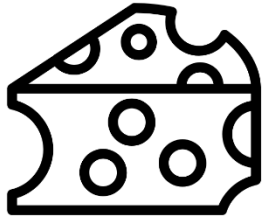
When your compost pile is done “cooking,” it turns into dark, crumbly soil that smells earthy and fresh—like a forest floor! This finished compost is full of tiny living things called



microbes, like bacteria and fungi. Even though you can't see them, they're still busy helping plants by making nutrients easier to absorb. These microbes are nature's secret helpers, keeping soil healthy and strong. You can mix finished compost into garden beds or sprinkle it around trees to give them a natural boost!

Make a Compost Pile

Instructions: Draw a line from the item to the compost pile, if they should go into the pile.



Compost Fill-in-the-Blank

Composting is a way to turn things like leaves, fruit peels, and grass clippings into healthy _____ that helps plants grow. Tiny helpers called _____—like bacteria, fungi, and even worms—break down this stuff naturally. To make _____, you need four key ingredients: organic matter (like food scraps and yard waste), water, oxygen, and decomposers. Just like people, decomposers need food and water to live. As they munch on _____ matter, they give off _____ and special nutrients that plants love. They also release _____. But if your compost pile doesn't have enough _____, it can start to smell bad! That's why it's important to _____ your compost and keep it airy.

Green Material

List 4 items considered green that can be added to a compost pile.

- | | |
|----------|----------|
| 1) _____ | 3) _____ |
| 2) _____ | 4) _____ |

Brown Material

List 4 items considered brown that can be added to a compost pile.

- | | |
|----------|----------|
| 1) _____ | 3) _____ |
| 2) _____ | 4) _____ |

Layers of a Compost Pile

Write in what should be in each layer of the compost pile.

- Top Layer: _____
- Layer 5: _____
- Layer 4: _____
- Layer 3: _____
- Layer 2: _____
- Bottom Layer: _____

Items to Avoid

List 3 items considered brown that can be added to a compost pile.

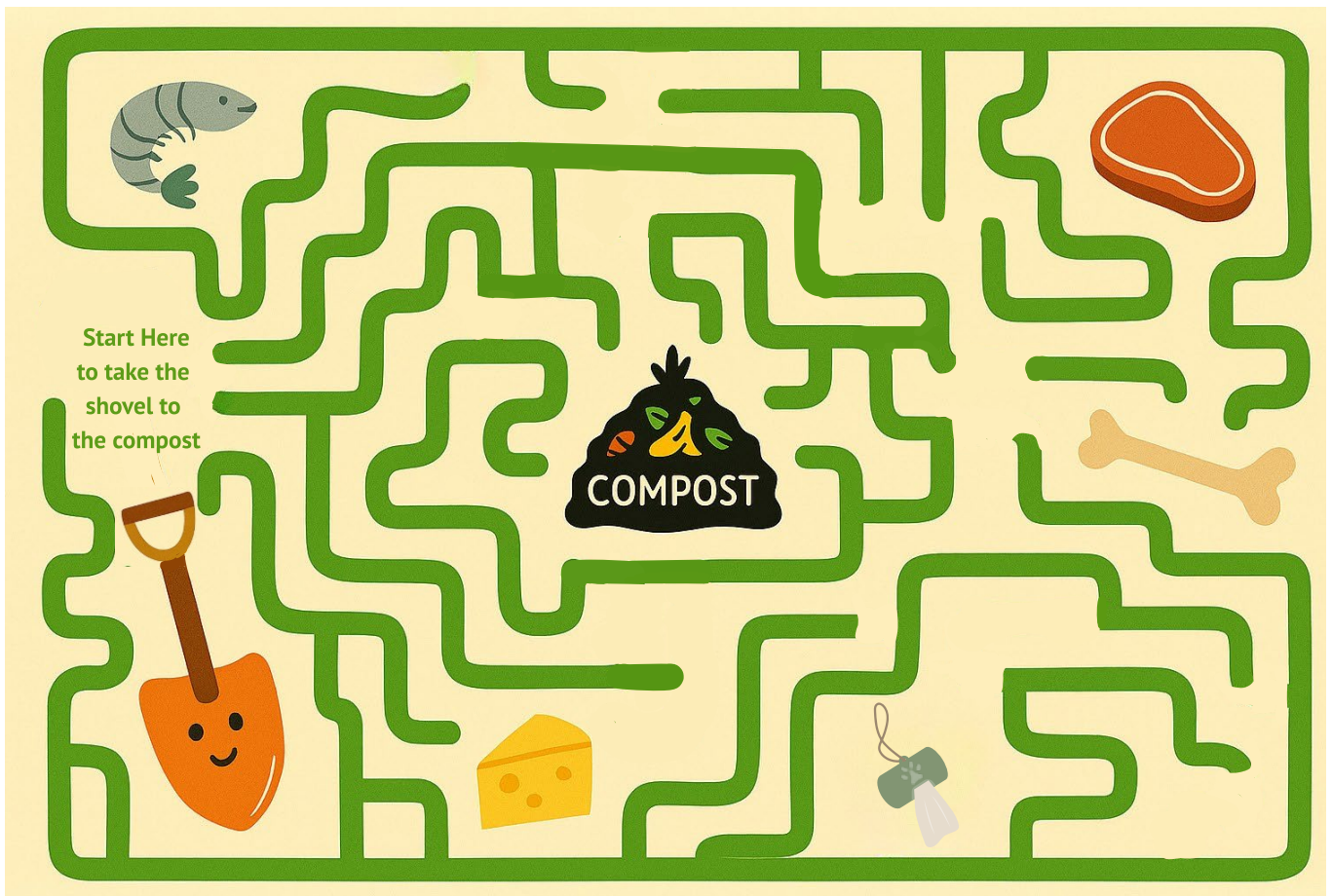
1) _____ 2) _____

3) _____

Finished Compost

When your compost pile is done “_____,” it turns into dark, crumbly soil that smells _____ and fresh—like a forest floor!

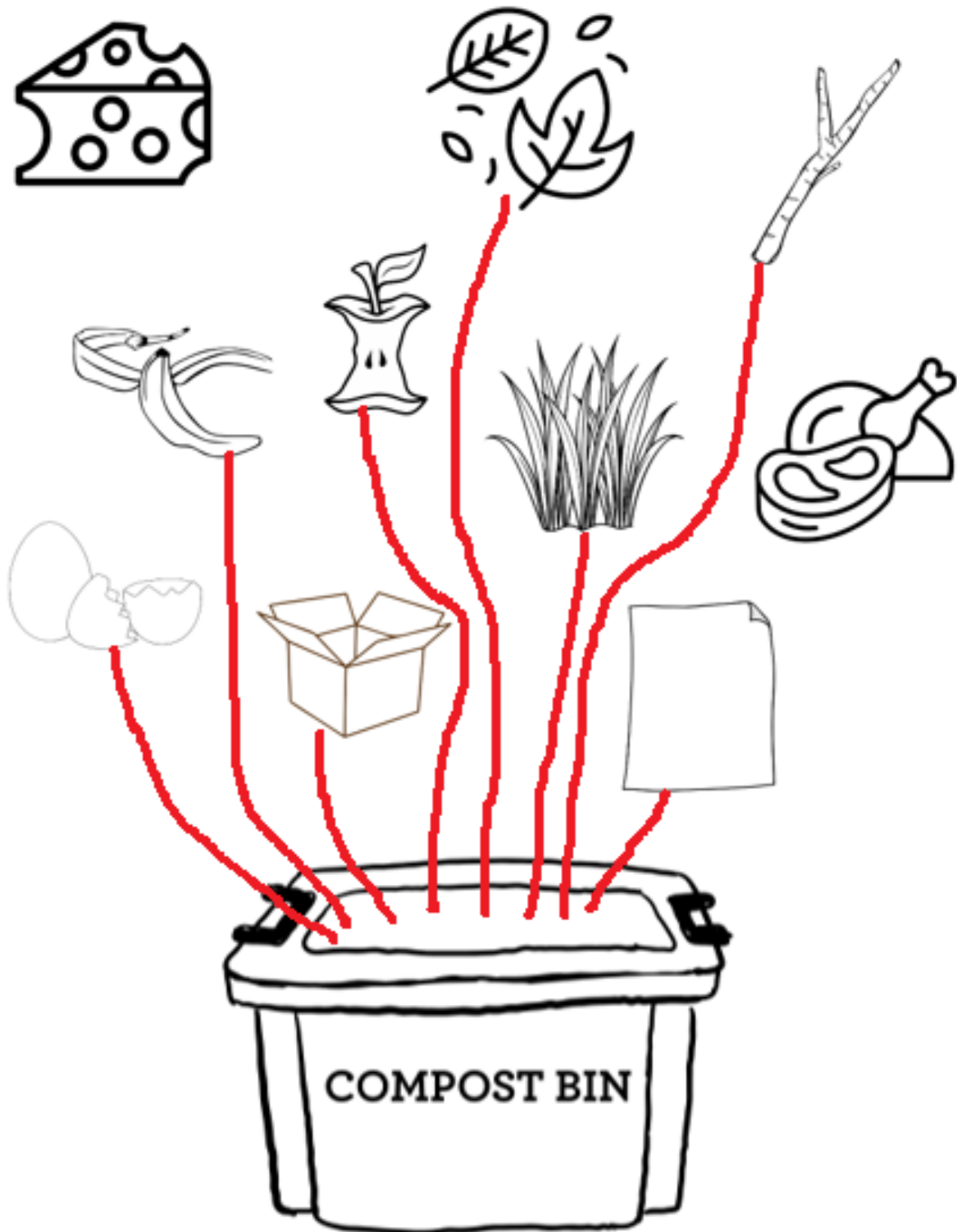
This _____ compost is full of tiny living things called _____, like bacteria and fungi. Even though you can’t see them, they’re still busy helping plants by making _____ easier to absorb. These microbes are nature’s secret helpers, keeping soil healthy and strong. You can mix finished compost into garden beds or sprinkle it around trees to give them a _____ boost



ANSWER KEY

Make a Compost Pile

Instructions: Draw a line from the item to the compost pile, if they should go into the pile.



Compost Fill-in-the-Blank

Composting is a way to turn things like leaves, fruit peels, and grass clippings into healthy **soil** that helps plants grow. Tiny helpers called **decomposers**—like bacteria, fungi, and even worms—break down this stuff naturally. To make **compost**, you need four key ingredients: organic matter (like food scraps and yard waste), water, oxygen, and decomposers. Just like people, decomposers need food and water to live. As they munch on **organic** matter, they give off **heat** and special nutrients that plants love. They also release **carbon dioxide**. But if your compost pile doesn't have enough **air**, it can start to smell bad! That's why it's important to **mix** your compost and keep it airy.

Green Material

List 4 items considered green that can be added to a compost pile.

- | | |
|----------------------------|------------------------|
| 1) GREEN LEAVES | 3) FRUIT SCRAPS |
| 2) VEGETABLE SCRAPS | 4) EGGSHELLS |

Brown Material

List 4 items considered brown that can be added to a compost pile.

- | | |
|----------------------|---------------------|
| 1) PAPER | 3) CARDBOARD |
| 2) DRY LEAVES | 4) TWIGS |

Layers of a Compost Pile

Write in what should be in each layer of the compost pile.

Top Layer: **DRIED LEAVES**

Layer 5: **FOOD SCRAPS**

Layer 4: **TWIGS, DRY LEAVES**

Layer 3: **FRESH LEAVES, GRASS CLIPPINGS**

Layer 2: **DRIED LEAVES**

Bottom Layer: **STICKS, WOOD CHIPS**

Items to Avoid

List 3 items considered brown that can be added to a compost pile.

1) **MEAT SCRAPS**

2) **BONES**

3) **DAIRY PRODUCTS**

Finished Compost

When your compost pile is done “**cooking**,” it turns into dark, crumbly soil that smells **earthy** and fresh—like a forest floor! This **finished** compost is full of tiny living things called **microbes**, like bacteria and fungi. Even though you can’t see them, they’re still busy helping plants by making **nutrients** easier to absorb. These microbes are nature’s secret helpers, keeping soil healthy and strong. You can mix finished compost into garden beds or sprinkle it around trees to give them a **natural** boost!

