

Lesson Time:
40 minutes

Composting

Compost Column Building



Objective

Students will construct a compost column.

Standard

N.12.A.5 Students know models and modeling can be used to identify and predict cause-effect relationships.

Materials Needed

30	Handouts or overhead from previous assignment
6	Dry erase markers
1	Whiteboard
1	Support document
7	Prepackaged reusable bags containing materials used to make landfill model.
7	Mixing bowls

Anticipatory Set

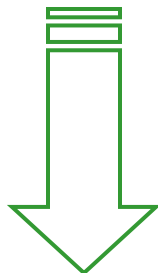
Write the lesson objective and/or standard on the white board.
Discuss with the students what the objective and/or standard of the lessons is.

Objective: You will construct a compost column.

Distribute handouts from previous assignment or prepare overhead.

Introduction:

Transition from first mini-lesson. This lesson will allow the students to put all of the concepts of composting together.



Modeling / Guided Practice

1. Have the students assemble into preselected groups of 5, depending on class size.
2. Pass out the prefilled reusable grocery bags.
3. Pass out the mixing bowls.

Prepare the compost materials.

4. Hold up the bag of kitchen waste. Ask the students if it is “browns” or “greens.” (The correct response is “greens.”)
5. Pour the bag into the mixing bowl.
6. Have the students do the same.
7. Hold up the bag of leaves. Ask the students if it is “browns” or “greens.”
The correct response is “browns.”
8. Pour the leaves into the mixing bowl.
9. Have the students do the same.
10. Mix ingredients with your hands.
11. Have the students do the same.
12. Hold up the bag of paper. Ask the students if it is “browns” or “greens.”
The correct response is “browns.”
13. Pour the paper into the mixing bowl.
14. Have the students do the same.
15. Mix ingredients with your hands.
16. Have the students do the same.
17. Hold up the bag of pencil shavings. Ask the students if it is “browns” or “greens.” The correct response is “browns.”
18. Tell the students that in this model, the pencil shavings represent woody material. Also make the connection with the classroom.
19. Pour the pencil shavings into the mixing bowl.
20. Have the students do the same.
21. Mix ingredients with your hands.
22. Have the students do the same.

23. Select the bag of compost starter. The compost starter contains the bacteria and enzymes that we discussed earlier as “nature’s helpers.”
24. Pour the compost starter into the mixing bowl.
25. Have the students do the same.

26. Mix ingredients with your hands.
27. Have the students do the same.

Assemble the compost column

28. Cut the top off of your compost column.
29. Add 1 cup of soil to the model to represent the ground.
30. Have the students do the same.

31. Carefully scoop the mixture in the mixing bowl into the column.
32. Have the students do the same.

33. Add 1 cup of soil to the model to act as a cover layer.
34. Have the students do the same.

35. Hold up the bag of water.
36. Slowly pour the water into the compost column.
37. Have the students do the same.

DISCUSSION

38. Draw attention to the air that will enter through the top of the bottle.
39. Reinforce the importance of air.
40. Ask if there is organic matter in the column.
41. Reinforce the importance of organic matter.
42. Ask about moisture in the column.
44. Reinforce the importance of moisture.
45. Ask about “nature’s helpers.” (compost starter)
46. Reinforce the importance of bacteria and enzymes.

47. Complete the student handouts or overhead questions.

Closure:

1. Take a few moments to do a quick review of the compost column.
2. Check for understanding.

Independent Practice

Not applicable.