

ACTIVITY SUMMARIES—QUARTER 4

ACTIVITIES 31 & 32—Trash in Your Class

Students explore the problem of overflowing landfills. After determining the average volume of paper waste that their classmates generate on a daily basis, students calculate how long it would take to fill their entire classroom with trash. This exercise shows students just how quickly trash is generated and that there are limits to the amount of space available for dumping it.

ACTIVITY 33—Recycling Paper

Students recycle old newspaper into papier-mâché bowls as they investigate one solution to the waste-paper problem: recycling. Then they brainstorm ideas for recycling other used-paper products. Students discover that some materials are more recyclable than others and that recycling programs work only when there is a market for the recycled materials.

ACTIVITIES 34 & 35—What Do Plants Need?

Students demonstrate that plants require light and water by comparing the growth of seedlings in light and dark and wet and dry environments. The students also observe and discuss phototropism.

ACTIVITIES 36 & 37—Stems: Structure and Function

Students are introduced to two types of vascular tissue in plants: xylem and phloem. They learn the functions of these tissues and then observe the transport of water and dissolved materials in the xylem of celery. They conclude the activity by locating the phloem and xylem in microslide images of plant stems.

ACTIVITIES 38 & 39—Stomata and Transpiration

Students experiment with transpiration. They conclude that water exits a land plant through tiny holes in the leaves called stomata, and they link transpiration to the uptake of water from the soil.