"Seed Saving and Sowing," p. 22-23. **Kids Cook Farm Fresh Food: Seasonal Recipes, Activities, and Farm Profiles that Teach Ecological Responsibility**. Kraus, Sibella. California Dept. of Ed., CDE Press, 2002.

California State Standards:
Science 2nd Grade: 2a, c-f

ACTIVITY

Seed Saving and Sowing

Preparation Time:	10 minutes
Total Lesson Time:	Part 1 – 30 minutes, plus 10 minutes each day for the next three or four days (in the fall) Part 2 – 15 minutes Part 3 – 30 minutes (in late January or early February)

Background

In this activity, students learn about saving seeds and growing tomato plants. Tomatoes are an excellent choice for seed saving because they are self-pollinating and usually grow successfully from seed.

Tomatoes are in season from the late spring to early autumn, but tomato seeds are best planted in late January or early February. This means that they are at their ripest many months before it is time to plant the next crop. In this activity, students dry and store seeds in the fall for later planting.

At each stage of the harvesting, saving, and sowing process, the teacher can facilitate discussions about student observations and inferences, which can then be recorded by the students in their journals. As the tomato plants grow, students can also make illustrations of them, write poems about the life cycle of tomatoes, and measure the stem and leaf growth of tomato plants over time.

It is important to choose *open-pollinated* or *nonhybrid* varieties of tomatoes for this activity. The seeds of hybrid varieties will not grow up to resemble their parents and may not taste good.

Objectives

Students will be able to:

Demonstrate the proper method to save tomato seeds.

Understand the life cycle of the tomato plant.

Materials

For the class:

- wax paper or baking sheet
- paper bag
- 5 pounds potting soil or compost
- 5 1-foot-deep pots or school garden
- 2 quarts water
- paper towels

For each group of 4:

- 2 heirloom or other *open-pollinated* variety tomatoes
- 1 small bowl
- 2 plastic spoons
- 1 knife
- 1 paper bowl
- journals

Preparation

Clear an area near a source of natural light, such as a windowsill, for the bowls.

DOING THE ACTIVITY

Part 1: Harvest and Preparation

1. Lead a discussion to elicit students' knowledge about the life cycle of plants. Write student responses on the board, and ask students to explain where seeds come from.
2. Ask students to explain in their journals their ideas about the life cycle of plants. Encourage them to make drawings with labels and explanations.
3. Demonstrate how to harvest seeds from a tomato. Cut a tomato in half, then use a spoon to scoop out the seeds and pulp. Place the seeds and pulp in a bowl and add enough water to cover them. Explain that this is done to sort out the viable seeds: the viable seeds will sink to the bottom, but nonviable ones will float.
4. Provide materials to student groups and supervise as they harvest and prepare seeds.
5. Set the bowls on a windowsill for three to four days. Each day, a student from each group will skim off the floating seeds and pulp and stir the mixture. Remind students to keep the viable seeds in the bowl (the ones that have sunk).

Part 2: Drying and Saving

1. After three or four days, collect the seeds for drying. Drain the seeds from the bowl and rinse them thoroughly.
2. Lead a discussion about whether it would be a good idea to plant the tomato seeds now. Point out that tomato plants need warm soil and plenty of sunshine to grow and that drying the seeds until a better planting time is a good way of storing them.
3. Spread seeds on wax paper or a baking sheet and let them dry for one week.
4. Remove seeds from the wax paper or baking sheet and store in a labeled paper bag or envelope until ready to sow.

Part 3: Sowing

1. In late January or early February, retrieve the seeds for sowing.
2. Provide potting soil or, if your school has a compost bin, take the class to collect a bucket of compost.
3. Demonstrate sowing seeds in paper bowls filled with soil. In each paper bowl, sow four to five seeds ¼ inch to ½ inch deep. Keep the soil moist but not muddy.
4. Place bowls in a dark area or cover the bowls with damp paper towels because seeds germinate better in darkness.
5. Check daily for sprouts, and water to keep the soil moist. Once seeds have sprouted, select the healthiest sprout in each bowl and pull out the others.
6. When the tomatoes reach six inches high, transplant them into one-foot-deep pots filled with potting soil or in an outdoor garden.
7. Lead a discussion about how tomato seeds get dispersed in nature without the help of people. Ask students for their ideas. Explain that sometimes tomatoes fall to the ground and decompose, leaving on the soil seeds ready to grow when the conditions are right. Other times, animals eat the tomatoes. The seeds pass through their digestive systems and are dropped on the ground. If they are viable and land in some soil, they will grow. Animals depend on plants for food. Plants depend on animals to spread seeds.