

Agriculture in the Classroom Farm Day Lesson Plan

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INTRODUCTION

Nontraditional educational programs have been proclaimed desirable by many teachers, and proven effective through data collection and feedback (Coombs and Ahmed, 1974). Of the more popular unconventional educational programs, outside learning activities are commonly implemented as they are not only advantageous to students, but to teachers as well (Cengelci, 2013; Knoblock, 2008). Though nontraditional, much thought must be put into creating lesson plans for these educational programs.

BACKGROUND

El Dorado County’s Agriculture in the Classroom program utilizes nontraditional outdoor learning activities to conduct “Farm Day.” Farm Day is a hands-on, agricultural field trip geared specifically for third graders. Groups of students and their teachers visit 6-8 learning stations to interact with experts in different agricultural areas (Agriculture in the Classroom, 2018). “El Dorado County Agriculture in the Classroom is a local, grassroots, charitable organization that provides quality agriculture-related educational resources, programs, and training opportunities to increase awareness and understanding of the importance of agriculture in our lives,” (El Dorado County Ag in the Classroom, 2018).

Each year, when Farm Day takes place, community members including Farm Bureau, business owners and educators develop lesson plans to guide students through an interactive approach to learning agriculture. The hands-on approach is known as Expeditionary Learning.

Expeditionary learning encourages students to engage in in-depth study topics impacting their schools and communities (Teach.com, 2017). Teachers will be provided with generalized topics to introduce in the classroom prior to Farm Day, then a specific lesson plan will be used to delve deeper into agricultural topics relevant to third graders from various parts of El Dorado County. Through research, planning, and preparation, a lesson plan on composting will be created to be developed and presented at Agriculture in the Classroom’s El Dorado County Farm Day. This lesson plan can be kept on file for future presenters to utilize.

METHODS

The goal of this lesson plan is to teach third graders the importance of composting through a hands-on lesson. The lesson plan will be modified from Wake County Environmental Services, Solid Waste Management Division, Raleigh, North Carolina’s Soils and Composting Explorations Unit. Lesson details and steps were gathered from Agriculture in the Classroom’s existing lesson plans on Composting for Better Soil, and the author ensured the created lesson plan is in accordance with the guidelines from the California Department of Education’s Complete Third Grade Curriculum.

References

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RESULTS

This lesson plan and activity developed by the author, titled “Composting for Healthy Soil,” will be completed in 20-minutes and delivered to individual groups of 25 to 30 students. One teacher and 2-3 parent volunteers are needed to successfully complete this lesson. At the end of the lesson, students will be able to identify compostable materials vs. non-compostable materials. Students will also understand the importance of compositing and how it contributes to nutrient-rich soil.

Picnic tables and benches will be provided for students, teachers, and parent volunteers. Three groups with one teacher or parent, and up to 10 students, will be made and assigned to a picnic table. On each table will be a compost pail, a trash pail, and a pile of materials that are either compostable, or non-compostable. Before splitting into small groups, the presenter will discuss the decomposition process of matter (food) and how nutrients are recycled to create healthy soil. A sample of soil with compost should be compared to a sample of soil that does not have compost.

After this 5-minute discussion, students will be asked what can or cannot be composted. Once this conversation has been completed, and clarification reached (5 minutes), students will be guided into small groups and instructed to sort the materials (news paper, twigs, leaves, fruits and veggies, plastic baggies, granola bar wrappers, meat, bread, tennis ball, etc.) as either compostable or non-compostable (5 minutes). The final 5 minutes will be used to review the students’ sorting, and to discuss how composting can be implemented in their homes.

CONCLUSION & RECOMMENDATIONS

It is recommended the presenter deliver the lesson to a small group of 1-3 third graders before delivering it to students at Farm Day, to ensure grade-level appropriateness and to check for complete understanding. It is suggested the presenter provide teachers with a grade-appropriate book on composting to read to students before attending Farm Day. When delivering this lesson to a small group and at Farm Day, it is suggested the presenter asks a volunteer to document the class experience through pictures or video recording. Permission to record must be obtained through the organization or school hosting the lesson. After initial and subsequent deliveries, the presenter will make appropriate changes to keep students engaged and enhance understanding. This lesson can be continued in the classroom by building a classroom compost system, and comparing nutrient levels of soil with compost vs. soil without compost.

COMPOSTING FOR HEALTHY SOIL

<p>GRADE LEVEL:</p> <p>3rd Grade</p> <p>CONCEPTS TAUGHT:</p> <p>Composting, sorting, identification</p> <p>ACTIVITY TIME:</p> <p>20 minutes</p> <p>ESSENTAIL QUESTIONS:</p> <p>What is compost made of? What can be composted? Why is it important to compost? What makes soil healthy?</p> <p>MATEIRALS:</p> <p>News paper, twigs, leaves, fruits and veggies, plastic baggies, granola bar wrappers, meat, bread, tennis ball, etc.</p> <p>Composting bin & garbage bin</p> <p>OBJECTIVES:</p> <p>Students will understand the importance of composting.</p> <p>Students will be able to sort and identify items that can and cannot be composted.</p>	<p>PROCEDURE:</p> <ol style="list-style-type: none">1. Discuss the decomposition process of matter (food) and how nutrients are recycled to create healthy soil. Show students soil with compost added, and compare to soil that does not have compost added. (5 minutes)2. Discuss what students think can and cannot be composted. Reach clarification and understanding through discussion.(5 minutes)3. Break students up into small groups with parent volunteers. Each small group will have a compost pail, a trash pail, and a pile of materials that are either compostable, or non-compostable. Ask students to sort the materials as either compostable or non-compostable. (5 minutes)4. Review students' sorting, and discuss how composting can be implemented in their homes. (5 minutes) <p>KEY:</p> <p>Can be composted: News paper, twigs, leaves, fruits and veggies, bread, etc.</p> <p>Cannot be composted: Plastic baggies, granola bar wrappers, meat, tennis ball, etc.</p> <p>EXTENSIONS/ MDIFICATIONS:</p> <p>This lesson can be continued in the classroom by building a classroom compost system, and comparing nutrient levels of soil with compost vs. soil without compost.</p>
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