



Lesson Delivery Date: ___/___/___
Lesson Delivered By: _____
Initial when complete:
Supplies Bought: _____
Materials Prepped: _____
Feedback Complete: _____

SCALED LEARNING™ LESSON PLAN - SACC

Review this lesson plan at least 3 days prior to leading.

LESSON NAME: (What is the name of the activity?) Fall Leaf Fiasco	TIME REQUIRED:	AGES: 3 rd +
SCALED LEARNING FRAMEWORK ELEMENTS: (STEM, Career Connected Learning, Arts, Literacy, Education, Diversity and Global Learning, etc.)		
<ul style="list-style-type: none"> STEM 		
STANDARDS ADDRESSED: (Common Core State Standards; National Core Art Standards)		
<ul style="list-style-type: none"> Math: Make sense of problems and persevere in solving them. Math: Use appropriate tools strategically. 		
LESSON OBJECTIVE: (What youth should get from this activity, what they should achieve?)		
Youth will be able to: <ul style="list-style-type: none"> Use materials to solve a real-world STEM scenario strategically. 		
MATERIALS NEEDED:	PREPARE AHEAD OF TIME:	
<ul style="list-style-type: none"> Straws Toothpicks Plastic Spoons Plastic Cups Rubber Bands Tape Scissors Leaves (real or artificial) Fall Leaf Fiasco Handouts (Attachments) 	<ul style="list-style-type: none"> Set up leaves for collection on a table top. 	

PART ONE:
INTRO TO REFLECT
SAY: Today we're going to we are going to work as a group to solve a real world problem—a FALLING LEAF FIASCO!
ASK & CONNECT (prepare opening ideas to connect lesson to youth's prior experience or prior session)
<ul style="list-style-type: none"> What is a "fiasco"? Have you ever had to rake leaves before? Have you ever jumped in a leaf pile? Share your experiences.

PART TWO:

(What are the steps for youth to complete this activity?) Highlight steps when youth have a choice.

1. Share the real world problem: **The leaves are falling all around our program and they are beginning to pile up. We need an efficient way to clean them up.**
2. Share: Your challenge is to collaborate with a group in order to design and build a prototype of a tool that will efficiently pick up leaves.
3. Share: Here are some criteria (what you MUST have) and constraints (what it CANNOT have):
 - a. **Criteria:** your tool must be able to pick up the most amount of leaves in the time limit in order to be considered a winning tool.
 - b. **Constraints:**
 - i. You cannot touch the leaves with your hands while collecting the leaves.
 - ii. The collection container may not be moved during testing.
 - iii. Your tool must be operated by two people or less.
 - iv. You may not use more than 10 materials.
 - v. You may not exchange materials once the materials have been selected.
4. Share: you will have access to a variety of materials—but again, will only be able to use 10 materials or less. You can use some of each, none of some, etc.
 - a. Straw (1)
 - b. Toothpick (1)
 - c. Plastic Spoon (1)
 - d. Rubber Band (1)
 - e. Tape (Unlimited)
 - f. Scissors—can be used but not PART of your project.
5. Share: this is a prototype, or a model, of an actual tool that you would use outside but today we are going to test the tool picking up these leaves on the tabletop. You need to make sure the leaves are picked up and not just swiped into the bin.
6. Distribute handout and divide group into smaller teams. Youth can begin working as soon as they have all their materials. Let youth work for an adequate amount of time suitable to the age and program needs.
7. Youth should work to complete the sheet. Once they have completed their prototype, TEST!
8. Have youth complete the post-competition questions and reflect.

What key skills will I need to be prepared to model or teach?

Define:

- **Prototype:** a first, typical or preliminary model of something, especially a machine, from which other forms are developed or copied.
- **Efficient:** (especially of a system or machine) achieving maximum productivity with minimum wasted effort or expense.

ASK DURING (open-ended questions for during activity)

- What is your plan for this xxx material?
- What is your role in this group? How will you make sure you are being an equal participant?

SITE SPECIFIC (complete prior to lesson delivery)

Leadership (How can youth help lead?)	Choices (What content or process choices are there?)	How will I promote exploration? How will I nurture creativity?
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PART THREE:

REFLECT

- Did your prototype win? Why or why not?
- How would you change your prototype if we did this challenge again? Why would you make these changes?
- Whose prototype worked the best? Why do you think it worked better than others?

FAMILY AND PARENT ENGAGEMENT (Select how activity will be shared)

- Invitation: During activity, invite families to join as they are picking up their child
- Conversation: Draw parent’s attention to their youth’s contribution at pick up and explain their child’s positive contributions to the final product or process
- Communication (written): Photos or written Staff or Youth recap for upcoming newsletter or parent email