

**Class Title: "Outdoor" Cooking: at Home**

**LESSON: #1**

**SIZE: 1-10**  
**(min/max)**

**GOALS:**

1. How do you find a use for every part of food and minimize waste?
2. How do you cook and act safely around a campfire?
3. What are the physical and nutritional properties of citrus fruits?
4. What is the science behind gelatin and how it works?
5. What is the science behind baking?

**OBJECTIVES:**

1. Cook two different recipes that require the use of all parts of an orange.
2. Use heat protection and caution if cooking in an open flame or any heating appliances.
3. Observe the different parts of an orange and how they are used differently in each recipe. Discuss oranges main nutritional property, Vitamin C.
4. Discuss the molecular binding and unbinding properties which causes liquid to become gelatin.
5. Discuss the science of baking and what causes baked good to rise.

**LESSON DESCRIPTION:**

This is a double whammy cooking lesson; fruit snacks and wacky deserts are always a kid favorite! All parts of the orange are used in conjunction with these two recipes which will demonstrate two different cooking methods. First, you'll create the base for the Orange-Honey fruit snacks. While it sets in the refrigerator, you can have fun mixing the muffin batter, filling the orange peels, and wrapping them in tin foil. The foil balls can be thrown right into the fire or on the grill and the muffins will bake without burning. In the end you'll have two sweet treats!

**Orange-Honey Fruit Snacks:**

**Prep: 5 min**

**Cooking: 2 hours**

**Total: 2 hr 5 min**

1. Slice oranges in half
2. Into a mesh strainer/colander over a measuring bowl/cup, scoop out orange flesh with spoon, set orange peels aside (we'll use them later!)
3. Strain juice as much as possible, add pulp-free orange juice to measure 1 cup
4. Pour ½ c. of orange juice into medium bowl and sprinkle 2 packets (about 2 Tbsp) of gelatin, let stand
5. In a microwave safe cup, heat remaining ½ c. of juice for 30-60 seconds
6. Pour warm juice into warm juice bowl. Add 1 Tbsp of honey and whisk until everything is dissolved
7. Pour into silicone mold or parchment-lined baking dish.
8. Refrigerate at least 2 hours before cutting into squares and storing in airtight container

**Campfire Orange-Muffins:**

**Prep: 10 min**

**Cooking: 6-8 min**

**Total: 20 min**

9. Combine favorite muffin mix batter according to package instructions
10. Over a sheet of aluminum foil, fill ½ of an orange peel with muffin batter
11. Top with other orange peel half and wrap in tin foil. Wrap in three layers of foil

12. Campfire: throw into the fire 6-8 min. Grill: throw onto heated grill for 8-10 min

13. With oven mitts, check doneness inside one orange ball. If done, carefully remove all. If not throw back for another minute or so.

**LENGTH OF CLASS:**

**30 min – 1 hour**

**Note: Fruit snacks will take 2 hours to set.**

**SAFETY CONCERNS / EMERGENCY PROCEDURES:**

**Heating appliances or elements:** Practice extreme caution if young children are participating. Always use heat protective gloves and keep a reasonable distance between self and open flame.

**Knife:** Oranges will need to be sliced in half. Have an adult perform or supervise this task.

**MATERIALS / SUPPLIES / EQUIPMENT NEEDED:**

**Materials:**

- Cutting board and knife
- Spoons
- Mesh strainer/colander
- Measuring cup/bowl
- Medium mixing bowl (x2 or wash and reuse)
- Microwave safe cup/ small bowl
- Measuring spoons
- Whisk
- Rubber/silicone spatula
- Heavy-duty aluminum foil
- Oven mitts
- Silicone mold or 8x8 baking dish
- Parchment paper (optional)
- Air tight storage container (optional)

**Ingredients:**

- 1 orange/ serving
- Pulp-free orange juice (less than a cup)
- Gelatin packet (x2 or 2 tbsp)
- Honey
- Probiotic powder (optional)
- Favorite muffin mix (blueberry is the standard flavor)
- Subsequent ingredients for muffin mix (listed on package or use favorite recipe)

**Equipment:**

- Refrigerator
- Campfire/Gas Grill/Oven
- Favorite muffin mix (blueberry is the standard flavor)

**CAMPER ELIGIBILITY:** *(Requirements for camper participation, including age, developmental needs, previous experience, prior knowledge, etc.)*

**This lesson would be best for any junior camper (9+), but Cloverbuds are able to participate with direct, adult supervision.**

**INSTRUCTOR ELIGIBILITY:**

*(Instructor qualifications/certifications/training needed)*

**Instructor(s) need to be able to safely participate and supervise around open flame or heating appliances.**

**SUPERVISION REQUIRED:**

*(Including instructor/participant ratio)*

**At least one adult per household needs to be in direct supervision of the process.  
\*\*Required for cooking on open flame**

**EXTENSION ACTIVITIES:** *(An enrichment/clarification of the current lesson for campers of different skill levels)*

[Baking Chemistry for Kids: YouTube Video](#)

**BACK-UP PLAN:** *(Alternate plan in the event of inclement weather, etc.)*

**Use household oven to bake orange muffins if campfire or grill are not available. Only wrap in one layer of foil if using this method. At 400 degrees, bake for 9-12 minutes**

**ASSESSMENT:** *(How will you determine whether or not campers have learned what was taught in the lessons? Be sure the objective(s) listed above are directly connected to your assessment.)*

**Response, participation, sharing their product (via virtual picture or presentation)**

**RESOURCES/CONSIDERATIONS FOR SPECIAL NEEDS CAMPERS:** *(disabled populations, youth with behavioral needs, etc.)*

**Parents can review the instructions and allow special needs youth to participate as appropriate.**

**Dietary restrictions:**

- **Gluten free:** purchase gluten free muffin mixes and subsequent ingredients
- **Low sugar diet:** opt out sugary ingredients and substitute with low sugar ingredients (fruit snacks:7.4g sugar, blueberry muffin mix:15-20g sugar)

**EDUCATIONAL RESOURCES**

[How Jell-O Works](#)

[Citrus Fruits for Kids](#)

[KidsHealth: Cooking Safety](#)

<b>TARGETED SOLs</b> (According to the Virginia Standards of Learning)	<b>TARGETED LIFE SKILLS</b> (From the "Targeting Life Skills Model") (See "Virginia 4-H Camping Handbook")	<b>TARGETED PILLAR(S) OF CHARACTER</b>
<p>Health: all SOLs, grades K+ pertaining to Nutrition, Safety/Injury Prevention</p> <p>Science: all SOLs K+ pertaining to Matter</p> <p>Math: all SOLs K+ pertaining to (volume) Measurement</p> <p><a href="http://www.doe.virginia.gov/testing/index.shtml">http://www.doe.virginia.gov/testing/index.shtml</a></p>	<p><i>Wise Use of Resources</i></p> <p><i>Personal Safety</i></p> <p><i>Healthy Lifestyle Choices</i></p> <p><i>Self-Motivation</i></p>	<p>Responsibility</p> <p>Citizenship</p>