

## Lesson Plan: Recipes

### Objective:

Students will learn about the food cooked in the past through a multi-sensory experience and by using the information in recipes to practice manipulating fractions.

### Outcomes: Students will...

- Feel and smell several ingredients used in the 18<sup>th</sup> century, and be able to identify at least three.
- Strengthen their math skills by using 18<sup>th</sup> century recipes as word problems to add, subtract, and multiply fractions.

### Common Core Standards Addressed:

#### 4<sup>th</sup> Grade Standards:

##### Mathematics → Measurement & Data

- CCSS.Math.Content.4.MD.A.1  
Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz, l, ml; hr, min, sec. Within a single system of measurement, express measurements in larger units in terms of a smaller unit.

##### Mathematics → Numbers & Operations: Fractions

- CCSS.Math.Content.4.NF.B.3.d  
Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.
- CCSS.Math.Content.4.NF.B.4.c  
Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem.



## English Language Arts → Reading: Informational Text

- CCSS.ELA-Literacy.RI.4.3  
Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.
- CCSS.ELA-Literacy.RI.4.4  
Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a *grade 4 topic or subject area*.

## English Language Arts → Speaking & Listening

- CCSS.ELA-Literacy.SL.4.1  
Engage effectively in a range of collaborative discussions with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.
- CCSS.ELA-Literacy.SL.4.1.C  
Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.

## 5<sup>th</sup> Grade Standards:

### Mathematics → Operations & Algebraic Thinking

- CCSS.Math.Content.5.OA.A.2  
Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.

### Mathematics → Measurement & Data

- CCSS.Math.Content.5.MD.A.1  
Convert among different sized standard measurement units within a given measurement system and use these conversion in solving multi step, real world problems.



## Mathematics → Number & Operations: Fractions

- CCSS.Math.Content.5.NF.A.1

Add and subtract fractions with unlike denominators by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators.

## English Language Arts → Reading: Informational Texts

- CCSS.ELA-Literacy.RI.5.4

Determine the meaning of general academic and domain specific words and phrases in a text relevant to a grade 5 topic or subject area.

## English Language Arts → Speaking & Listening

- CCSS.ELA-Literacy.SL.4.1

Engage effectively in a range of collaborative discussions with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.

- CCSS.ELA-Literacy.SL.4.1C

Pose and respond to specific questions by making comments that contribute to the discussion and elaborate on the remarks of others.

## Items Used:

- Tins with recipe ingredients
- Math problems (on disk)
- Ingredient Matching Game sheets (on disk)
- *American Cookery* by Amelia Simmons (for further reading)

## Preparation:

- Print or photocopy mathematics problems
- Print or photocopy ingredient matching game, 1 for each student
- Open ingredients tins so that the label is obscured



## **Lesson:**

### Part 1, Match Ingredients

1. Students each receive an ingredient matching game sheet.
2. They must guess what each ingredient is, and write their guess on the sheet.
3. They may see, touch, and smell each ingredient. *Please do not allow them to taste anything.*
4. When everyone is finished, start a discussion to see if they, as a class, can determine the correct answers. Ask them to state why they think each ingredient is what it is.

### Part 2, Math

Students solve the math problems provided, which use 18<sup>th</sup> century recipes to add, subtract, and multiply fractions. (Adjust rigor & instructions as needed to meet the needs of your grade level and/or student ability.)

### Part 3, Optional Cooking

Allow students to take home the recipes in the file “Recipes to Try” (on disk) and try them. Please be on the alert for food allergies.

