

### OVENS, CANS AND ICE

Note to teachers: This supplement includes a discussion guide, lessons and Michigan Content Standards to use with the “Michigan Time Traveler” page published in the *Lansing State Journal* on December 8, 2004. You may reproduce the pages in this supplement to use with students.

**MASTERY** (*SOC 1.2 Comprehending the Past; SOC 1.3 Analyzing and Interpreting the Past*)

- How did farm families in the early 1900s obtain food and other items that they could not produce themselves? (They would trade eggs, butter and extra produce.)
- What were the differences between the early general store, early self-serve markets and modern supermarkets? (General stores: The ordered items were delivered. Grocer would take your list and get the items from the shelves. Self-serve markets: Shoppers picked up their own items. Supermarkets: wide aisles, shopping carts, cashier lanes.)
- What types of foods were people likely to can themselves? (Fruits & vegetables) What types of canned foods were shipped in from places outside of Michigan? (“Fancy” foods, oysters, pineapple)
- Why would poor families often make stews and soups? (Less expensive ingredients, could make the meats and vegetables you had available go farther, feeding more people or lasting longer.)
- What were the reasons that home refrigerators were not widely purchased during the 1930s and 1940s? (1930s – Jobs were scarce during the Great Depression. 1940s – factories were making weapons and equipment for WWII.)
- What were some of the innovations that helped to change food availability and marketing in Michigan and the rest of the United States between 1900 and the 1950s? (Canned goods, supermarkets; electric refrigerators; new highways; refrigerated trucks; television.) What changes did each of these innovations bring about?

**ACTIVITY ONE: WHAT WILL IT COST?**

(*SOC 1.3 Analyzing and Interpreting the Past; MAT 3.1 Collection, Organization and Presentation of Data; MAT 5.1 Operations and their Properties.*)

Make copies and pass out page four to your students that contains some average U.S. prices for grocery items from 1904. Ask students to look through their Lansing State Journals for grocery store ads and write down the prices they discover in the space next to the appropriate food item. They can then use their figures to complete the arithmetic problems. In 1904, teachers (men) in Ingham County made an average \$50.18 a month. Women made an average of \$36.32 a month. Today, teachers (men and women) make an average of about \$5,000 a month.

Answers:

1. You go to the local grocery store to buy the following items: 2 lbs. of sirloin steak, a quart of milk, 5 lbs. of coffee, 6 cans of tomatoes, a dozen eggs, and one pound of sugar. What would you spend to purchase these items in 1904? (\$3.30) What will you pay at the supermarket in 2004?
2. It is 1904. Your mother is getting ready to bake cookies and discovers that she is out of molasses, sugar, eggs and baking powder. She sends you to the store with \$5.00 to purchase a quart of molasses, 5 lbs. of sugar, a dozen eggs and a pound of baking powder. What will the total purchase cost? (\$.94) How much change will you take home to your mother? (\$4.06) What will you spend to purchase the same items in 2004?
3. You have \$10.00 to spend. Create a list of what you might buy that would total \$10.00 in 1904. Create another list of what you might buy at 2004 prices that would total \$10.00.

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**ACTIVITY TWO: LET'S TASTE AND SMELL HISTORY** (*SOC 1.3 Analyzing and Interpreting the Past; MAT 2.3 Measurement.*)

Food is a fun and delicious way to experience history. With changes in lifestyles, the foods that we eat have also changed. Below is a recipe from a Lansing cookbook in the 1890s. Prepare the recipe from scratch (or ask a parent or the school cook to do so). Purchase a box cake mix and canned frosting and prepare the cake for your class. Give each child a copy of the recipe and a listing of the ingredients from the sides of the cake box and the frosting can. Give each child a sample of each cake. Children with food allergies can still participate in the activity without actually tasting the cakes.

Ask your students to use all of their senses to examine the cakes.

What can they tell you about each cake's appearance, aroma, texture and taste?

Have students write down their comments.

Ask them to review the ingredients of each cake.

How do convenience foods differ from homemade cakes?

Which cake do they prefer? Why?

**Feather Cake:**

Two scant cups sifted flour, two tablespoons of Queen Flake baking powder, one tablespoon of butter, one cup of milk, one egg, one to two teaspoons Jennings' vanilla. Sift flour and baking powder together. Cream butter, beat in sugar and add flavoring, then the milk, and egg beaten to a foam. Stir in the flour quickly and bake in a shallow pan in a quick oven. Bake in layers.

--Mrs. M. W. Bement

*The Pilgrim Cook Book*

**1895, Pilgrim Congregational Church**

**ACTIVITY THREE: MAKE AN ICE BOX** (*SOC1.3 Analyzing and Interpreting the Past; SCI 1.1 Constructing New Scientific Knowledge; SCI 2.1 Reflecting on Scientific Knowledge; SCI 4.2 Changes in Matter.*)

Ask your students to imagine what it was like to depend on only ice in an icebox for keeping perishable foods cold. What happened when the ice melted? Below is a simple way for your class to create an icebox and monitor its internal temperature.

**Materials:**

Several sandwich sized storage containers that will be used to freeze the “ice blocks”

One Styrofoam ice chest that will be your “ice box”

One shallow rectangular plastic food storage container that will fit inside the ice chest and hold the “ice blocks”

4-6 tall plastic glasses that will create the space beneath the “ice blocks” where the food would be stored

One refrigerator thermometer

**Directions:**

Several days before the experiment:

- Spray the sandwich-sized storage containers with Pam, fill them with water, and freeze (the Pam will make it easier to get the ice out). Make enough ice to fill the food storage container with solid chunks of ice.

On the day of the experiment:

- Place four or six glasses upside-down in the chest, leaving room for the refrigerator thermometer.
- Record the temperature registered on the thermometer before placing it at the base of the chest.
- Place the food storage container on the glasses.
- Put the “ice blocks” in the food storage container.
- Put the lid on the ice chest.
- Set up a time schedule to monitor and record the temperature (every hour or every two hours).

How long did it take for the temperature to reach the safe food range of 40 degrees or below Fahrenheit?

Did you have to add more ice to reach this temperature?

Once the temperature was reached, what happened as the ice melted?

What was the rate of temperature decline? (You may want to graph the temperature.)

What was the temperature the following morning?

Discuss food safety with your students. What would happen if no one were home to add fresh ice? What else could affect the temperature in the icebox? (Outdoor temperature, how often you opened the icebox) Is this a reliable way to keep food safe to eat—why or why not? Are there foods that students would be reluctant to store this way? Do any of the students know of an older person who remembers using an icebox? Ask the student to interview this person about what they remember about food storage when iceboxes were used—or invite the person to school for a class interview.

## WHAT WILL IT COST?

ITEM	1904 PRICE	2004 PRICE
Baking Powder	\$.45/lb.	
Bacon	\$.23/lb.	
Sugar	\$.04/lb.	
Sirloin Steak	\$.61/lb	
Milk	\$.15/qt.	
Eggs	\$.14/doz.	
Coffee	\$.25/lb.	
Ketchup	\$.17/bottle	
Molasses	\$.15 /qt.	
Tea	\$.35/lb.	
Canned Tomatoes	\$.25/3 cans	

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