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ABSTRACT

This lesson packet suggests ways for children to explore cultural change through studying technology used in the kitchen. Lessons include: (1) "Using Oral History as a Strategy"; (2) "The Test Kitchen"; (3) "Bread Making from Scratch"; (4) "Then and Now Kitchen Museum"; and (5) "Kitchen Mysteries." A references section is offered for additional ideas. (EH)

Facilitating Children's Understanding of Technology as Agents for Cultural Change in the Kitchen.

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CHANGING TIMES IN THE KITCHEN

USING ORAL HISTORY AS A STRATEGY

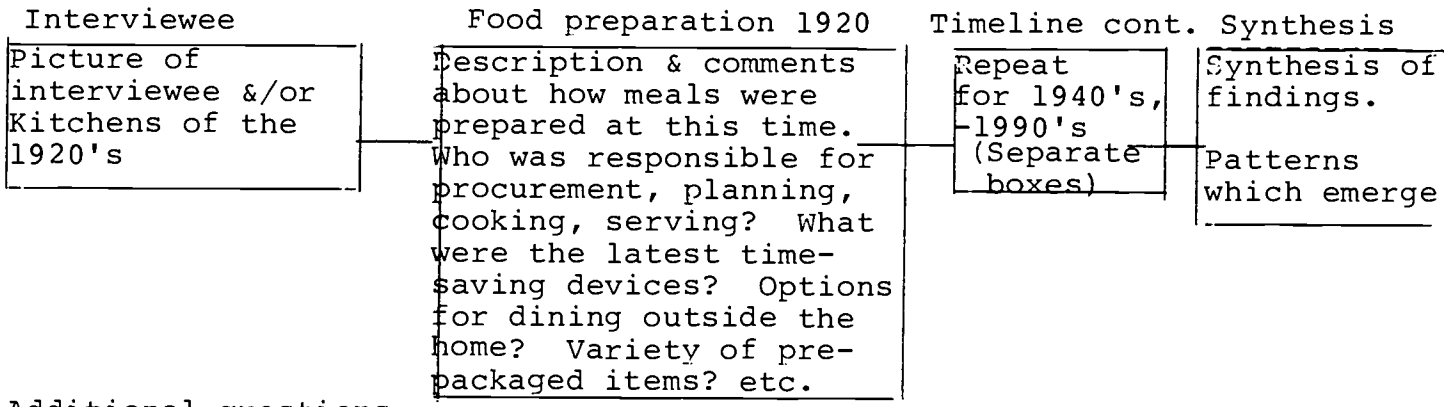
Purpose: Note changing patterns of food preparation over time
Examine how technology and science have influenced the preparation process and our culture
Sharpen interviewing skills
Analyze and synthesize information
Design attractive documentation of findings

Provide children with the opportunity to interview individuals who had the responsibility of food preparation for a family during the 1920's, 40's, 60's, 80's, and currently.

Help students develop a standard set of questions for interviewees to address. Provide queries ahead of time for reflection. Questions could focus on changes in kitchen equipment and appliances, preparation time for meals, dietary research available at the time, changing family meal patterns, etc.

Contrast the past with current practices. Use the interviews to synthesize the changes in food preparation due to the advances of technology. What patterns emerge? How has technology changed family meals and dining over time?

Create a timeline with pictures of the interviewees and their comments. If possible capture kitchen scenes representative of the time periods. Old magazines may be the best source for this information, and try the internet. Share findings with parents and peers.



Additional questions:

How has TV changed meal time?
What other factors influence meal preparation and family meal time?
Ex. women working outside the home, food preservation, mass production,etc

THE TEST KITCHEN

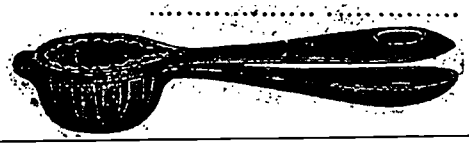
Purpose: Observe first hand how science and technology has impacted food preparation at home through the use of labor-saving devices and improved products.

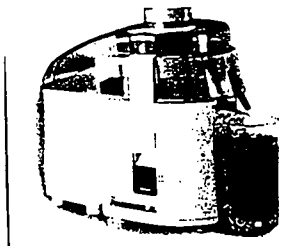
Procedures: Have children inventory the kitchen for small, labor saving devices. Include items designed to save time and remove the drugery of food preparation. Try to identify items which do not have a motor. Children (with parent permission) may bring the item to class to share. Use the matrix below to examine each item. Be prepared to bring items too.

Complete the matrix. Test each item with adult supervision. Some items will need to be demonstrated by adults, but students may observe the results and record their findings.

ITEMS TO COMPARE	PURPOSE OF BOTH ITEMS	FINDINGS	HOW DID TECHNOLOGY CHANGE PERFORMANCE & APPEARANCE OF THE ITEM?
Test 1			
knife (use plastic) vs potato peeler Test material: a potato	remove skin of potato	peeler easier to use, even removal of skin	blade & handle angle made peeler safer & easier to use. Skin of potato came off easily
Test 2			
fold-over plastic bag vs zip-lock bag Test material: 2 T water	hold freshness, no leaks, easy storage	zip-lock held water without spilling	plastic tracks fit together to seal bags liquids stay inside/ air stays outside
Test 3			
hand-operated egg beater vs electric mixer Test material: whipping cream	mix/blend ingredients	cream whipped faster with electric mixer	addition of motor made job easier- less effort/time required to whip cream

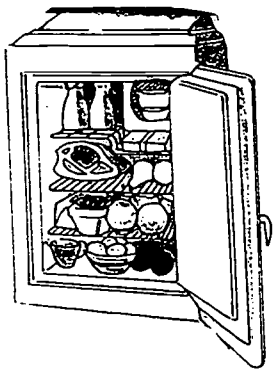
ITEMS TO COMPARE	PURPOSE OF BOTH ITEMS	FINDINGS	HOW DID TECHNOLOGY CHANGE PERFORMANCE & APPEARANCE OF THE ITEM?
Test 4 juicing by hand vs metal press juicer (electric juicer may be used with supervision) Test material: an orange or lemon	remove juice from fruit	easier to juice with the metal press than by hand	more juice, less waste, seeds separated from juice clean hands





JUICEMAN JR.
Powerful motor with built-in speed control. Automatic pulp ejection, large pulp receptacle, safety switch
Reg. 99.99

Extending Activities: Expand the home inventory to include larger appliances. Have children identify items they enjoy and may take for granted in the kitchen, for example, the refrigerator, microwave, food processor, dishwasher, etc.



Have students complete the following sentences and share their ideas.

"If it hadn't been for the invention and improvement of the refrigerator (name invention), I might not have cold milk, ice cream and _____. I'd have to go to the grocery more often (how change life?), and find another way to keep my food cool."

Older students may enjoy brainstorming the essential inventions and corresponding technology which made many kitchen appliances possible. Team with the science teacher for this activity.

Take a field trip to: an experimental station, working farm or farm equipment show, food distribution center or food processing plant. Identify the ways technology has enhanced food production and distribution? Contrast past and present practices. How has this benefited you as a consumer?

BREAD MAKING FROM SCRATCH

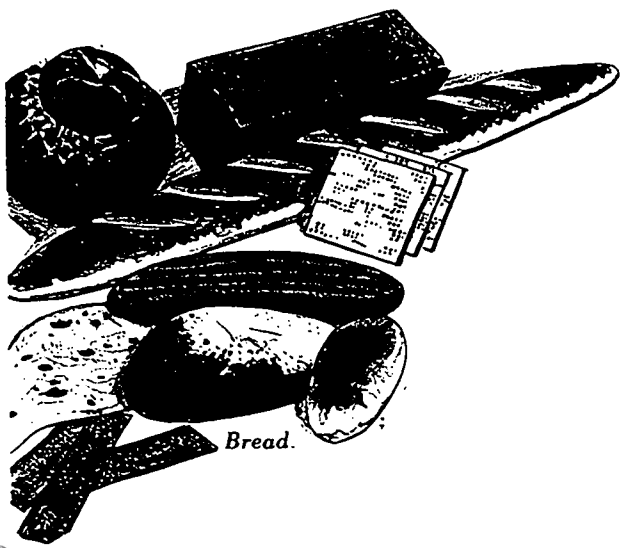
Purpose: To examine first hand how technology has made food production easier and more efficient

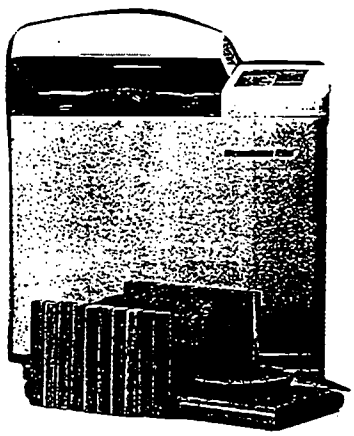
Procedure: Have students prepare a loaf of bread from scratch. Begin by sifting, measuring, mixing ingredients. Knead the dough and prepare the pan. Bake in a conventional oven. Record the process with photographs or a camcorder. Make a chart/timeline documenting time required to complete the process from beginning to final product.

On the following day, have students prepare bread with a pre-packaged mix in a bread machine. Document the bread making process as before with photos keeping a record of the time and steps from beginning to completed product.

Compare the two experiences using video/photos and the time required for completion. Discuss how technology altered the bread making process. Compare ease of preparation, time, cost of ingredients and equipment, quality of final product, advantages and disadvantages of both procedures (scratch vs packaged mix). Help students evaluate the "opportunity costs" of both approaches.

Extending Activity: Visit a bakery, cafeteria or another location where students can observe the mass production of a bread product. Observe economies of scale and high tech automation. Discuss how technology enables individuals to have alternatives to baking bread daily through the use of mass production. Conversely, technology has also made it possible to bake bread at home daily in an efficient manner.





"THEN AND NOW" KITCHEN MUSEUM

Purpose: To examine first hand how technology changes and improves products over time and generally makes them more affordable.

This will require research, but it is a great way to enable students to examine the developmental or evolutionary stages in product development.

Have students examine precursers to current kitchen products. Actual items are preferred. Many of these items may be obtained from antique shops, local historical society members, some museum-lending programs, and individuals who are collectors in the community. If it is not possible to obtain realia, use an old catalog such as Sears and Roebuck, Montgomery Wards, etc. to make zeroxed reproductions. Some children's books have illustrations of life in the past which may supply photos or illustrations. Search the internet for other sources. Don't forget back issues of magazines like House Beautiful, Better Homes and Gardens and others.

Have students place the items in sequential order. A note card highlighting improvements with each succeeding stage should be posted beside the items. For example, trace the evolutions of a cast-iron dutch oven to its modern day counterpart--the crockpot. Another example might be the hand-operated egg beater or whisk to its modern counterpart the electric mixer.

Some items may be suitable for demonstration. If safe, let students do so. Compare efficiency, size, weight, mobility, product materials and construction, safety, etc. so children can note improvements with each succeeding model design and function.

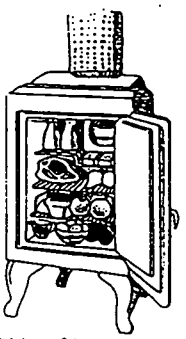
Discuss with children how technology can make some items in the kitchen obsolete and they disappear entirely, for example, the butter churn, wooden cottage cheese maker, butter mold and wooden sugar bucket. Try to locate similar items and create a table of "Mystery Items from the Kitchen." Provide opportunities for children to speculate on the purpose of the item and why it became obsolete. Other items might be the coffee grinder, tongs for blocks of ice and a coffee bean roaster.

If possible, plan a "Then and Now" Kitchen Museum Day and invite the public. Let children serve as docents in order to share their research.

g ago ice was frozen lakes

The iceman put the cake of ice right into the icebox.

Then the iceman carried it through the streets and sold it. "Ice! Ice!" he called.



1920s refrigerator

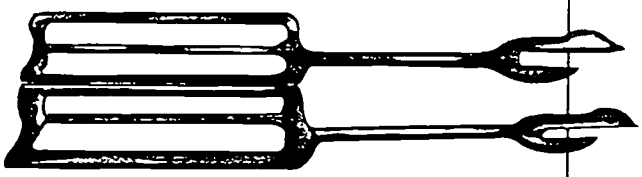
1990's

KITCHEN MYSTERIES

How many can you identify?

PUZZLER

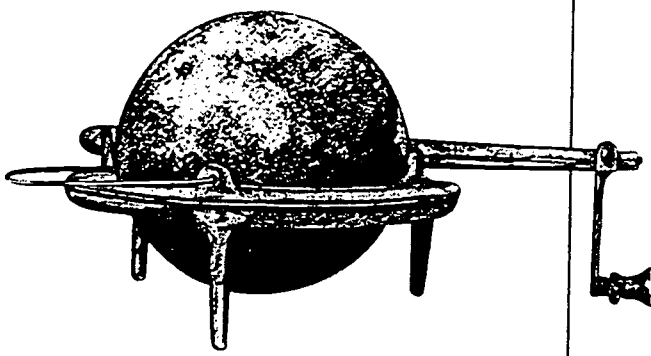
THIS DUAL-PURPOSE INSTRUMENT, hinged in the middle, came in handy before the invention of pot holders.



ANSWER: *Lid lifter. Closed, it was used to lift a stove lid on a woodstove; opened, to lift the covers from pots and kettles.*

PUZZLER

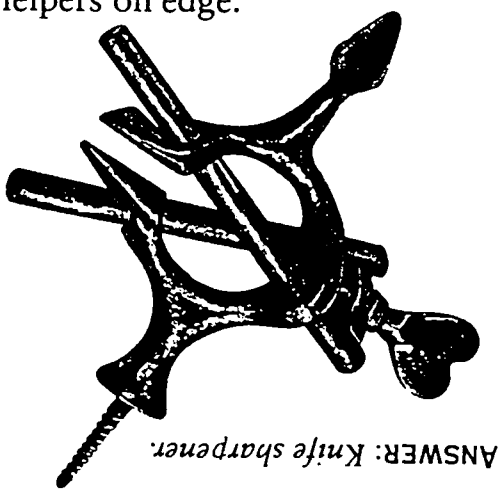
THIS WASN'T A TEACHER'S AID IN some early physics class, but something you used to get the old bean in shape for the daily grind.



ANSWER: *Coffee bean roaster.*

PUZZLER

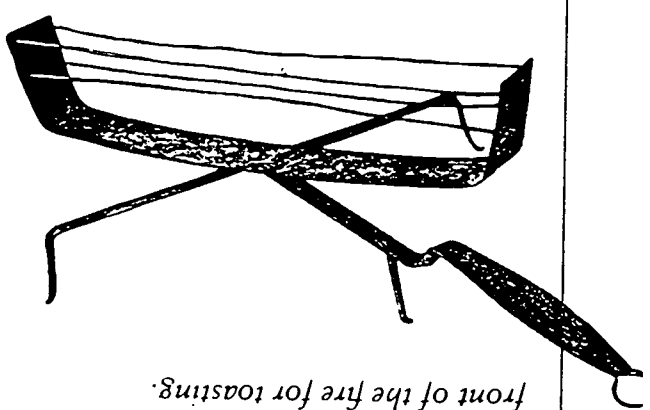
FASTEN THIS LITTLE APPLIANCE to the side of a counter, and you're ready for a quick draw that will keep your best kitchen helpers on edge.



ANSWER: *Knife sharpener.*

PUZZLER

IN THE DAYS BEFORE POP-TARTS and instant waffles, this offered a surefire way to cook your breakfast.



ANSWER: *Fireplace toaster. The bread was placed in the tines, then rotated in front of the fire for toasting.*

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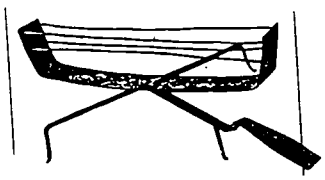
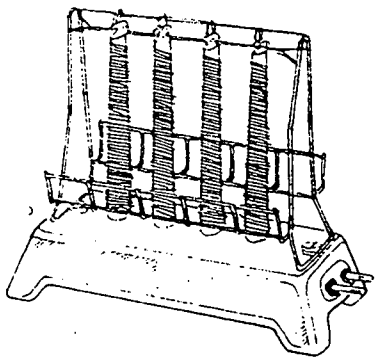
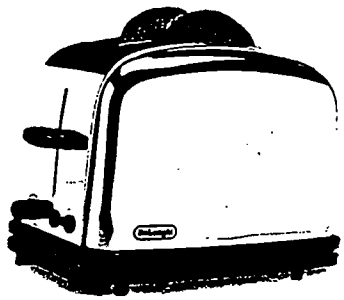


ELECTRIC TOASTERS, first made in 1909.





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