



Energy Use Then and Now

Summary: Students research energy use practices of the past and compare them to present energy use practices.

Grade Level: 5–8

Subject Areas: English
Language Arts, Social Studies

Setting: Classroom, library,
and community

Time:

Preparation: 50 minutes

Activity: Three 50-minute class
periods

Vocabulary: Consumption,
Energy use practice

Major Concept Areas:

- Consumption of energy resources
- Quality of life

Objectives

Students will be able to

- describe how energy use practices and consumption patterns have changed over time; and
- analyze the evolution of energy use practices.

Rationale

Comparing the time and energy needed to complete common daily tasks in the past to the present helps students become more informed about the conveniences that energy provides and enhances students' ability to make wise energy choice decisions.

Materials

- Samples of tools and appliances from the past, such as a washboard, iron, slide rule, etc. (optional)
- Copies of following pages:
 - *Winter Eggs* (optional)
 - *Selection Grid*
 - *Energy Use Then and Now Report Form*
 - *Readings about the Past* (optional)
- Find additional resources related to this activity on keepprogram.org > Curriculum & Resources

Background

How would you like to wash all your laundry by hand? If you had to travel across the country, how would you feel if it took you three months rather than a few hours? How would you like it if you had to spend all day searching for enough fuel to cook your dinner? Most Americans are not subjected to such labor-intensive activities. Instead, machines and appliances—washing machines, vacuums, garbage disposals—that require less direct human energy are doing more and more of the work.

When these new technologies were introduced, they were viewed as modern miracles. Imagine having to simply turn a thermostat to increase the heat in your home after years of chopping and hauling wood. Next time you send some vegetables shooting through a food processor or pop a frozen dinner in the microwave, think of the time involved in preparing these dishes only 30 years ago. Once you have that image in your mind, think what would be involved in preparing a meal 500 years ago.

The evolution of how society uses energy (energy use practices) corresponds to the evolution of society itself. Prior to the arrival of the French in the mid-1500s, Native Americans who lived in the area that was eventually called Wisconsin included the Winnebago or Hochungara, the Menomonie, the Sioux or Dakota, the Chippewa or Ojibwa, and the Fox. These nations were primarily hunter-gatherer societies that were also skilled in certain agricultural practices. The energy sources they used included wood, human energy, and water power. Wood was used to heat their dwellings and cook their food. Human energy was used to hunt and fish, to carry materials, to travel across land, and to paddle across lakes. Native Americans also took advantage of the energy in flowing rivers to carry them by canoe to distant locations.

From the late eighteenth through the late nineteenth centuries, Wisconsin was largely a nonindustrial agricultural society that was also engaged in mining and timber extraction. The rush of migrants from the newly formed United States and immigrants from Europe in the early 1800s placed new demands on traditional energy resources. Wood continued to be the dominant energy resource during this period. It was used for heating homesteads, cooking food, and forging tools and farm implements. Candles, and later oil lamps, provided light. Animal energy, mostly from horses, transported people and products and helped farmers plow fields. Human energy was still required for many tasks, including cutting wood, harvesting crops, housecleaning, mending clothes, and food preparation and storage.

During the second half of the nineteenth century, Wisconsin slowly made the transition from a nonindustrial agricultural society to an industrial society. Iron and zinc mining flourished, and paper mills were established in the northern part of the state. Milwaukee and other

cities along Lake Michigan grew as they developed into manufacturing centers that produced iron rails, farm implements, and later, tools and machinery. By the mid-1800s, canals and railroads were built to transport people and commercial products. The transition to an industrial society required greater amounts of energy than before. Although wood was initially used to power factories, hydropower and finally coal became the primary energy source. Coal also displaced wood as a fuel source for heating homes. Because coal had to be imported from other parts of the United States, Wisconsin became dependent on external sources to meet its energy needs.

With industrialization came the development and use of electricity. Power companies or utilities arose to provide this new form of energy. Instead of each home or factory providing its own energy (by burning wood or coal), electricity was generated at a centralized location using power plants and then distributed to homes and industries using transmission lines.

Electrification of Wisconsin's cities took place quickly in the early 1900s but took nearly half the century to spread throughout the rural parts of the state. By the beginning of the depression in 1930, most farm homes



Installing electric wires, Fond du Lac, WI 1934

in Wisconsin were still not connected to electric power lines. Wisconsin's shift to an industrial society was completed by the middle of the twentieth century when the state's rural areas were finally electrified. Fossil fuels and, to a lesser extent, nuclear energy supplanted human and wood energy as the primary resources for meeting energy demands. Today, Wisconsin citizens depend on a number of energy resources to maintain their lifestyles. Homes are heated with natural gas, oil, and propane. Automobiles—the primary means of transport within the state—are fueled with gasoline made from petroleum. Lights, kitchen appliances, televisions, and computers require electricity to run. In turn, the electricity is typically generated by burning fossil fuel or nuclear energy resources. Renewable energy resources are also playing an increasingly important role in meeting the energy needs of Wisconsin's citizens and may become more prominent in the future. Although wood is no longer the dominant energy resource that it was in the past, many homes rely on wood for heating. Dams on many of Wisconsin's rivers and modern windmills produce electricity. A number of residents have installed solar collectors on their roofs to heat water.

What caused this evolution of energy use practices? There are a variety of reasons, including the desire to get things done in less time (efficiency) and with less effort (convenience). Other reasons energy use practices have changed over time include discoveries of fuel sources, depletion of fuel sources, the rise of centralized power companies, health and safety concerns leading to new inventions, and political decisions and social conflicts (such as war) requiring new technologies.

In general, modern conveniences have greatly improved the standard of living for most people and have yielded many benefits. However, the costs of these conveniences include increased use of energy resources, water, minerals, and agricultural products that results in increased waste production. Compare the amount of materials and the energy needed to make an electric can opener to making a manual one. Consider the air emissions generated by running a gasoline-powered lawn mower compared to an emissions-free push mower.

Procedure

Read aloud or have students read *Winter Eggs*. Ask students to describe how they would obtain and preserve eggs today. Discuss the time, energy, and other resources involved in obtaining eggs then and now. Which method do they prefer? Why?

Ask some of the questions provided in the beginning of the **Background**. If tools or appliances from the past are available, show and discuss these with the class.

Steps

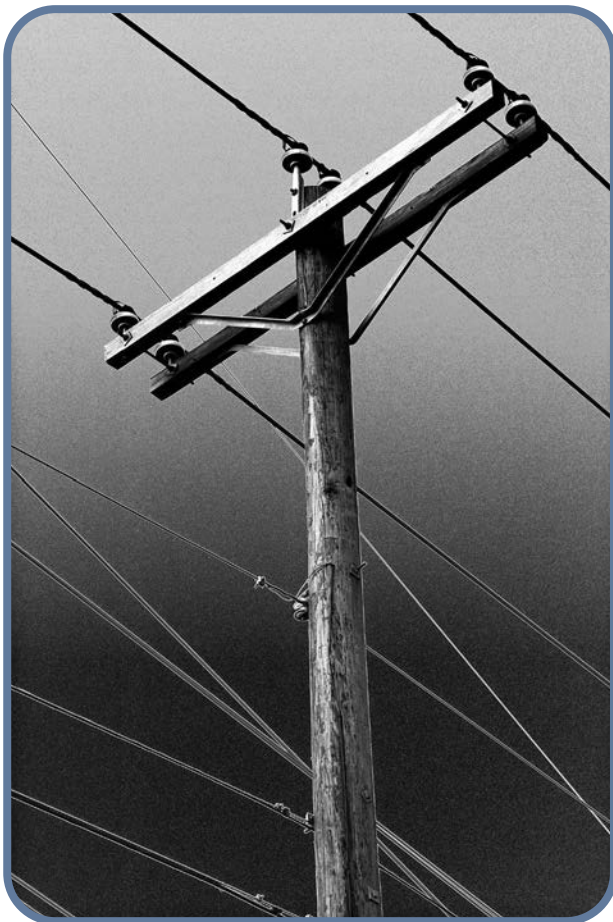
1. Ask students to list and describe daily activities that require energy. How do students think these activities were accomplished in the past? For example, students can develop a list of appliances and other labor-saving devices that are found around the home or school. Which of these would have been commonly used 50 years ago? If people 50 years ago didn't have these appliances, how did they accomplish these tasks?
2. Have students work individually or in groups. Assign or have students select what energy-using activities they want to compare to the past. They also need to decide which time period(s) they want to research. The **Selection Grid** can help students make this decision. Following are several options:
 - Assign or have students choose a row or certain boxes within a row of the grid to compare the same activity over different time periods
 - The class might focus on one column, looking at energy use practices during one time period, perhaps focusing on a certain population or event, such as precolonial Native Americans in Wisconsin
 - Have students work on the same time period but compare rural or urban energy use (for example, in the early 1900s some parts of Wisconsin were more like an industrial society, while others still used nonindustrial agricultural practices)
3. Hand out copies of the **Energy Use Then and Now Report Form**. Discuss how students could find information to complete this form. Students may suggest using history books and magazines, conducting interviews, watching movies, or reading nonfiction and fiction books about the past. **NOTE:** Readings from various time periods have been provided. Students can read these to find information for the report form, but it is a good idea for them to find additional information on their own.

Closure

Have students complete one or more **Energy Use Then and Now Report Forms** and use the information to help them form an opinion about past and current energy use. Students can consider the following questions:

- What would they like and dislike about living in different time periods? (Consider time required to complete tasks, convenience, resources used, and waste production.)
- What do students notice about the sources of energy used in the past compared to the present? (They should find that many of the tasks that are powered by electricity today used human and wood power in the past.)
- What could have contributed to the evolution or change of energy-related activities? (Consider some of the responses to the previous questions.)
- What are some costs and benefits associated with changes in energy use over the past 100 to 500 years?
- How do students think they will or will not alter their energy use habits considering their findings?

Encourage students to creatively express their opinions about changes in energy use practices that



have occurred, particularly related to our increased dependence on electricity. Several ideas for reporting their results and conclusions are listed in the **Assessment**. Students can help develop criteria or rubrics that can be used to evaluate their reports or presentations (such as thoroughness, clarity, expression of opinion, attention to detail, rationale of opinion). If pertinent, the results can be sent to or performed for the people interviewed.

Assessment

Formative

- How thoroughly did students research and complete the *Energy Use Then and Now Report Form*? (Consider how many sources and references they cited, whether they conducted research or interviews, etc.)
- How actively did they participate in discussions? What questions did they generate? How thoughtful were their responses?
- What changes, if any, in students' opinions of current and past energy use practices are apparent?

Summative

Following are several different ways students could creatively express their opinions about their findings:

- Develop a skit or write a story that shows people from one time period visiting another. Which energy use practices would need to be explained to the visitors? What would their reaction be to the amount of energy used? Of what practices would they approve? Of which would they disapprove?
- Organize a picture book that compares past and present appliances, labor-saving devices, and techniques, used to accomplish tasks. Under each appliance, device, or technique list costs and benefits.
- Design a brochure that provides suggestions for using energy more efficiently and perhaps living more simply. The brochure can include alternative ideas for entertainment, travel, cleaning, etc.

Related KEEP Activities

This activity can accompany many of the activities in this guide that address current energy resource development and use practices. A few of these include "Get That Gasoline!" "So You Want to Heat Your Home?" and "Careers in Energy." An interesting extension of this

activity would be “Energy Futures.” See also Investigation Ideas: “Energy and Culture” in the Energy Sparks section for ways to enrich this activity.

Credits

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In the Old Days used by permission of the author.

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Winter Eggs

By LaVerne H. Benson

Around the time of World War I (1914 to 1918), supermarkets, as we know them today, and electric refrigerators in every home, were still a future event. I lived in Kenosha and many homes, ours among them, didn't even have an icebox. Our icebox in winter was a shelf placed across the pantry window with the storm window open. In summer, foods were kept in a dark corner of the cool basement. Perishable foods were kept in minimal supply; it was far safer to purchase them daily at the corner grocery store.



Like the proverbial ant putting away food for the winter, so did thrifty families. My dad planted a large garden every spring. The harvest of his garden was stored in the basement fruit cellar. The door to the fruit cellar was kept closed; it was dark and cool in there. In the fruit cellar were large wooden boxes filled with clean sand, and into these boxes went all the root produce grown in the garden—carrots, parsnips, rutabagas. Thus buried they kept fresh all winter long. The navy beans, along with the apples from our tree, which had been pared, cored, and sliced, were spread out on clean sheets in the attic to dry, then put in containers and placed on shelves which lined the walls of the fruit cellar. The shelves were also bulging with hundreds of jars of canned fruit, vegetables, and pickles. These jars were my mother's pride and joy, her badge of being a good, thrifty, capable housewife. The fact that they had cost her hours of backbreaking work to prepare and even more hours of standing over a hot wood-burning stove was insignificant. The pleasure she derived from gazing at the colorful array far outweighed any hard work entailed.

We children were usually sent down to the fruit cellar to retrieve whatever items Mother needed to prepare meals, and we never really minded, except when sent for eggs. We had no chickens, unlike some of our neighbors, but Mother had six brothers who were all farmers in the Green Bay area. Every year, late in the fall, either we would drive up to visit them or one of my uncles and family would drive down to Kenosha. We enjoyed the visits immensely, but the main purpose was to replenish our supply of eggs—at least three crates of them. Each crate held twenty-four dozen eggs.

Down in the fruit cellar my dad had two big twenty-gallon crocks. The eggs were placed in the crocks ever so carefully to avoid cracking, and covered with waterglass (a solution of sodium silicate and water which formed a colorless, syrupy liquid used as a preservative). The waterglass kept the eggs usable all winter long, though I remember towards spring my mother would wistfully mention she wished she had some truly fresh eggs for a change.

The temperature in the fruit cellar was about the same as the outdoors, so the liquid in the crocks got mighty cold as the winter wore on. Fetching eggs was our most dreaded chore. The only way to get them was to reach down into the frigid wetness of those huge crocks. The eggs of course being very fragile, had to be lifted out one by one. As the supply of eggs in the crocks dwindled, one had to plunge the bare arm deeper and deeper into the icy crock. The very properties of the waterglass that made it such a good preservative also lent to it a silky, slippery feel, which to us imaginative children was just plain slimy and utterly repulsive. It was something to be avoided if at all possible.

Though we were glad to have such a plentiful supply of fruits and vegetables during the winter, we felt we could have survived a few months without eggs. After all, we asked, "Who needs eggs in winter?"

Selection Grid

Name(s) _____ Date _____

Put an X in the box or boxes that you are going to investigate. For example, if you are looking into heating and cooking in Nonindustrial Agricultural Societies, you would check the first and third boxes in the middle column. Your teacher may also have other requests, such as specifying a certain time period (like the Revolutionary War) and whether you should look at urban or rural societies.

More specific information about my/our selection:

Activity	Past Societies		
	Industrial Society (late 1800s to mid 1900s)	Nonindustrial Agricultural Society (1600s to early 1900s)	Hunter-Gatherer Society (500 + years ago)
Home Heating			
Home Cooking			
Cooking Food			
Preserving Food			
Washing Clothes			
Washing Dishes			
House Cleaning			
Entertainment			
Travel			

Energy Use Then and Now Report Form

Instructions: Use one report form for each activity and/or time period investigated.

Name(s) _____ Date _____

Activity

How is this activity accomplished today?

What is the source of energy used?

Time Period _____

Other information (e.g., urban/rural, specific dates)

How activity was accomplished

Energy source used

This information was obtained based on (check all that apply)

Research Readings Interview Other (describe)

Comments, conclusions and opinions

About energy use

About convenience

About _____

Readings about the Past

Students can use these readings to infer energy-related information about the past. Not all students will be able to find the information they need from this limited selection. However, they give some insight into what life was like before modern energy resources were readily available.

In the Old Days

Students can read this essay to learn how energy was used in an urban setting during the depression era (industrial society). This story has information on home heating, home cooling, cooking food, preserving food, and travel.

Spring Housecleaning

This reading provides details about housecleaning prior to electricity. It takes place in the very early 1900s, most likely in a small rural town. Chances are this society was in transition from a nonindustrial agricultural society to an industrial one.

An Early Rural School

This story has relevant facts about heating and food preservation in a nonindustrial agricultural society in the late 1800s.

Mountain Wolf Woman

This excerpt describes Native American food gathering, storing and preservation in northern Wisconsin in the late eighteenth century.

Readings from Caddie Woodlawn

Note: No excerpt from this book in the lesson. Most libraries carry copies of this book. This story addresses life in nonindustrial agricultural societies. Students can refer to pages 50, 71, 176–177, 199–201, and 209–210 to find information about heating, lighting, and food preservation during the mid-1800s.

Readings about the Past

In the Old Days

by David S. Lane

Home Heating

My house used coal, with the furnace in the basement, where else? But this meant that the coal had to be kept in a coal bin in the basement. The coal was delivered to the house. The delivery man placed a coal chute through a special coal window in the basement with the end resting in the coal bin. Then he would have to carry the coal in a heavy cloth bucket on his shoulder from the coal truck and dump it into the chute, where it would continue down into the coal bin. We usually got two coal deliveries each year.

My father would feed the furnace with coal every morning and evening, and empty the ashes from the bottom of the furnace into steel ash cans. Once a week, we had to carry these ash cans up from the basement and put them on the street curb for pickup. Most of the time, my father carried out the ashes, since they were heavy. Sometimes he would “allow” me to carry out a partially loaded ash can, to help with the family chores.

I remember once we put out the ashes at night just before a huge snowstorm. The next morning the snow plow came by, didn’t see—or want to see—the ash cans, and spread several cans of ashes all over our front lawn. We had gray snow for a week.

Home Cooling

Cross ventilation, that was the big thing. (Only the movies had air conditioning, but that’s another story.) Every spring we would have our awnings put up on the windows, and every fall taken down. The awnings were held to the window frame with nails, so you can imagine the number of nail holes this would create. I often wondered if there were some limit to the number of times the awnings could be nailed up before the window fell apart. The man who did this installation also stored them over the winter, and repaired holes, rips and frayed ropes. The awnings would last some seven or eight years, and then would have to be completely replaced. Ours were always orange and yellow stripes. I thought we should get a different color each year or so.

Cooking Food

We had an electric range and stove, which were functionally about the same as now; two small and two large burners, each with continuous controls, the oven having a temperature control. I remember my grandmother had a wood/gas stove. The oven was wood burning, and it had two burners you could use as a range if you had the wood burning for the oven. These burners had a series of circular rings, which could be progressively removed to accommodate different size pots. The stove also had two gas burners, similar to today’s, to be used whenever you didn’t have the wood burning. They said gas was expensive, so most of the time the wood side was used. The wood range colored the bottom of the pots, since the bottoms were directly open to the wood flames. So every time the wood range was used the pot bottoms had to be scrubbed—a great job for a little boy. The gas was clean and didn’t discolor the bottoms. I didn’t think gas was that much more expensive, especially if they had to pay me for pot cleaning. Finally Grandma got a new stove. It was half electricity and half—yes—wood burning. I couldn’t believe it when I saw it. I guess Grandma figured that the pots couldn’t get any worse for wear, and the stove kept the kitchen cozy all winter.

Preserving Food

The everyday way to preserve items was via an ice box, with real ice. The box held about 50 pounds of ice, which would last about a week. There was a hole in the box floor with a hose which emptied the melting ice water into a hole in the floor then onto the ground below. Whenever we moved the ice box—to clean behind it in spring and fall—you always had trouble getting that hose in the back of the box into the hole in the floor.

In the Old Days

by David S. Lane

Whenever you didn't, you'd find water seeping out around the ice box after a couple of days. No, we kids didn't do this on purpose, but we all had to check each morning for a week after we moved the ice box.

Ice for the box was delivered twice a week by the iceman. To let him know how much you needed, you would place a special card, about a foot square, in the window. This card would have the numbers 0, 10, 25 and 50 printed on the four edges of the card, and you'd turn the card with the desired number up so that the ice man could read it. Using large tongs the man would then carry the ice on his shoulder, which was covered by a large rubber cloth. He'd put the ice in the box, and remove the remaining chunk if it didn't fit.

For special parties and other events you may need supplemental ice. I remember at Grandma's getting ice for beer and watermelon. We'd drive the car down to the ice house and get a 100-pound chunk which would be placed on the front bumper covered with a burlap bag. Every household had at least one burlap bag devoted to covering ice. It would stay on the bumper, because we had real bumpers in those days, and because the ice would melt due to the heat. The weight of the ice would cause the ice to sink around the bumper and lock it there. When we got home, we'd take the ice off the bumper with a pair of ice tongs—everyone had these—place it in a large tub under a tree, cover it with a burlap bag, add water, beer and watermelon. Then there would be the usual family argument as to how fine to chop the ice to maximize both the cooling efficiency and the length of cooling. Never could resolve this one. Only adults could chop the ice with the sharp ice pick. Not that we could hurt ourselves, but allegedly some kids couldn't tell the difference between ice and watermelon.



Washing Clothes

Monday was wash day. Tuesday was ironing day. No matter what. If you were sick or away on Monday, you could double up on Tuesday, but never any laundry work on other days of the week. You had to wait until the next Monday rolled around. We had an electric washer in the basement, next to the wash tubs, because the machine was used only to wash the laundry in hot water. It had three metal inverted cups that would seesaw up and down to agitate the clothes. You had to time this yourself. Then the clothes were put through the ringer—two rotating rubber cylinders that squeezed out the water—and into one of the tubs to be rinsed in warm water by hand. Then they would go through the ringer again into the second tub for a cold water rinse by hand. Then finally through the ringer and into a laundry basket. The ringer was on a pedestal so that it could rotate and thus could service the wash machine and the two rinse tubs. We usually did two washes every time. First the white clothes and then the colored ones. The same hot water was used in the wash machine, but clean water was always used for the two rinses.

The laundry was carried up from the basement to the backyard to be hung up to dry. We had a rotary clothesline, similar to what is available now, which was put up for the day and then taken down afterwards. This was done all year long. I was always fascinated when the wash was hung up in cold weather and actually froze stiff on the line. When taken down and brought inside and warmed up, the clothes would be dry. Amazing. The final step on Monday was to sprinkle and roll the clothes, readying them for the next day's ironing.

On Tuesday the big mangle would be rolled out of the kitchen closet right after breakfast. This was a big ironing machine. It had one large rotating cylinder, about a foot in diameter and four feet long, which rolled against a heated curved metal plate. You operated this monster sitting down. There was a large one foot by four foot board in front of the cylinder by which you guided in the clothes and also controlled the rotation

In the Old Days

by David S. Lane

of the cylinder. One press down on the board started the cylinder rolling and pressed it forward against the heated metal plate. The next press of the board released the cylinder back from the plate and stopped the rotation. The ends of the cylinder were almost completely open so that you could do complicated stuff, like the cuffs of shirts, collars, etc. Most of the time the clothes just went in the top of the cylinder and rolled out underneath onto a wooden shelf; other times, e.g., ironing a pair of pants, you would iron one leg up from the bottom to the crotch, stop the roller, then repeat for the other leg. Then the main parts of the pants were ironed around the end of the roller. I was permitted to do some flat work, mainly handkerchiefs and towels. I never conquered using the end for complicated items, but did manage to burn my hand a few times trying. This was not an easy machine to conquer and my mother was the only one who could do it right and loved doing it. The rest of the family, including my father, just mangled away.



Travel

Most of my travel was done on a bicycle. I road to elementary school (1.2 miles), high school (6.4 miles), church twice a week for choir practice and once on Sundays (3.3 miles), to movies (1.3 miles) and after school for sand lot softball, football, etc. I remember once I made chains for my bike by wrapping cord around the tires. I thought this would increase the traction. I had never seen anyone do this before, and I thought I could apply for a patent if it really worked. It didn't.

We did travel a lot by car. Not far, as measured by today's standards, but often. In summer, Sunday afternoon was usually devoted to a sightseeing trip in the country or mountains, to get some cool air and have a roadside picnic. Our big trips were those to visit Grandma on each of the major holidays of the year. This would be about a seven-hour trip. The luggage was strapped onto the running board on the driver's side, since the trunk wasn't big enough for the suitcases. My brother and I were bundled in the back seat. There was a heater, but only strong enough to warm the feet of the front seat passengers. We usually took Molly, the cocker spaniel, along too. In the back seat of course. Once we stopped for lunch and sat at a window where we could see the car. In the window, staring at us drooling was Molly. We felt so sorry for her that we brought her an extra helping of table scraps to eat. Arriving at the car, we discovered that she had eaten all



of our scrapple that we were bringing home from Pennsylvania. She didn't get the table scraps. We rarely made the trip without a problem, usually flat tires. Once we broke an axle, and had to stay overnight while the car was repaired. This was the first time I stayed in a hotel. Great fun.

Readings about the Past

Spring Housecleaning

by Estella Bhryn

Spring housecleaning, like everything else, has changed with the years. A sure sign that spring had really arrived was when one or two heaters were taken down and either carried to a back porch to rust during the summer or hidden in a back closet. The putting up or taking down of stovepipes was sometimes accompanied with such profane language that younguns were sent outside to play until the pipe was down and the soot had settled. Company, especially a clergyman, was ill-timed.

Cleaning the backyard was a back-breaking job. All winter, dishwater, wash water from clothes washing and baths, along with potato peelings, cabbage leaves and wood ashes were thrown there to enrich the ground. And how simple it was to heave broken dishes and bottles and ham bones into the back yard. Some were gathered up and taken to the country to be dumped along the roadside or in a farmer's pasture; sometimes it was easier to just pass this and that over the neighbor's fence into his yard, hoping that he in turn would pass it on to his next neighbor. Basements were generally dark, damp holes with dirt floors and a solitary small window for light. Entrance was by raising a trap door, either outside the house or in the kitchen or pantry floor. The darkness as one descended made you wish you had cat's eyes.

Cleaning the basement was simply a matter of carrying up the stairs and out potatoes and carrots that had grown long vines, and cabbage, pumpkin and squash that had rotted to a spongy mass. Often the vines were picked off the potatoes, and the tubers used for seed. Pumpkin and squash were thrown along the fence

or in a ditch in hopes that they would reseed themselves.

There were always glass canning jars of spoiled fruit and soggy pickles, a stone crock with the remains of well-fermented sauerkraut, and jugs of sour wine that was always tasted before being thrown out.

With the heavier work done, the lady of the house took over. Curtains were carefully washed and starched by boiling starch and water to the proper consistency, not too thick, not too thin. They were then pinned on curtain stretchers to dry in the sun. There were several hundred, or so it seemed, small pins set close



Spring Housecleaning

by Estella Bhryn

together, and how exasperating it was to get done and find the edges hadn't been perfectly stretched and the curtain hung unevenly. The lady who could stretch several curtains without pricking her fingers until they bled on the sharp pins had nimble fingers indeed.

On a hot sunny day the parlor carpet was taken out on the lawn and aired or hung on the clothes line. The lady of the house crawled around the four sides of the rug armed with a carpet tack hammer and a small dish. She carefully extracted each tack which held the rug to the floor, and placed the tacks in her mouth until she had a row to spit in the dish. When the last tack was out the rug was taken outside to the clothes line where it was beaten with a wire rug beater. The clouds of dust that rose varied with the savagery of the beating. When the lady's back, and the back of the rug, were about broken, the rug was carried into the house, the tacks nailed in once more, and the beauty of the rug was admired until the next spring when the procedure was repeated.

Heavy mattresses were given the sun treatment by being carried outside and placed on either sawhorses or chairs to keep them off the ground. They received a good beating with the rug beater, and perhaps a sprinkling of kerosene around the edges as a "No Trespassing" sign to unwelcome intruders.

When at last the house shone from top to bottom the homemaker wondered why she was tired, why her back ached, and why she just had no get up and go anymore.



Readings about the Past

An Early Rural School

by Evelyn McLean

In November of 1916 our family moved from the village of Edgar, Wisconsin, to a cheese factory eight miles into the country.

The school I attended was two miles from my home. Every day I walked this distance unless I was lucky enough to get a ride with one of the factory patrons. For these long winter walks I was dressed as for an Arctic expedition, in long fleece-lined underwear, long black cotton stockings, high-buttoned shoes, a flannel petticoat topped by a woolen dress and a hand-knitted heavy sweater and warm coat.

Often, the lunches in the tin lard pails would be frozen by the time one reached school. We would set them near the pot-bellied stove to thaw out for the noon lunch. The stove stood at the back of the room between the two entry doors. It was the duty of the older students to fill the woodbox at noon. A triangular shelf held the water pail and dipper. The water had to be carried from a neighboring farm, as the school had no well. Two children usually went for water. This was considered a privilege in the warm months, but not much fun in winter. Two outdoor privies took care of other needs.

Classes were of fifteen-minute duration. The subjects were minimal: reading, writing, spelling, grammar, arithmetic, geography, and history. There were no art, music, or science courses.

Children varied in age from five years to sixteen. However, these older pupils often attended only during the cold months, when there was little farm work to do. Most of the children much preferred going to school than to staying home. This was often the only time they had to play. At home most of them worked like adults and were kept at home during fall and spring months to work in the fields. I always recall a girl named Rose who lived near the school. She had to stay home for several days and take care of the baby while her mother helped outside. At recess Rose would come down to the fence, holding the baby in her arms, and wistfully gaze across at the children playing on the school grounds. Another time, walking home from school, I grumbled that I wished it was Friday night, so I would not have to go to school the next day. A little girl from the primer class piped up, "Oh, I like to go to school. Days when I am home I have to clean the barn."



Before the school year was over, Mr. Wirkus, our teacher, was drafted into the army. We were embarking upon World War I. A young lady taught the last few weeks of school.

The next fall I accompanied my mother to Edgar. A flag-draped coffin was lifted from the train and accompanied down the street to the sound of marching feet and muffled drums. Daniel Wirkus had died in camp at the start of the influenza epidemic.

The next year I attended school in another district, which had a nine-months' course, and more modern facilities and teaching methods. Whether I learned more or not is debatable. In March we usually traveled to

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the Mississippi River close to La Crosse, sometimes even across the river, and then we returned again in the last part of May. We used to live at a place on the edge of the Mississippi called Caved In Breast's Grave. My father, brother-in-law and brothers used to trap there for muskrats. When they killed the muskrats my mother used to save the bodies and hang them up there in great numbers. When there were a lot of muskrats then they used to roast them on a rack. They prepared a lot of wood and built a big fire. They stuck four crotched posts into the ground around the fire and placed poles across the crotches. Then they removed the burning wood and left the embers. They put a lot of fine wood crisscross and very dense on the frame. On this the muskrats were roasted, placed all above the fireplace. As the muskrats began roasting, the grease dripped off nice and brown and then the women used long pointed sticks to turn them over and over. The muskrat meat made a lot of noise as it cooked. When these were cooked, the women put them aside and placed some more on the rack. They cooked a great amount of muskrats. When they were cooled, the women packed them together and stored them for summer use.

They were paid a good price; fifty cents a quart is the price they used to get toward the beginning of the season, and as the season wore on, toward the end, they got a quarter. They saved their money and they even bought horses. Some of the Indians had no wagons and that is why they let the horses carry the berries, but some of them had wagons. Thus the Indians came through history. That is the way they procured food for themselves. They saved food and they saved money.

When various foods were ripe the people dried them. They also steamed things underground. They harvested a lot of corn and carried it home on their backs. When I was a little girl our family was large, I was the youngest and I had three older brothers and two older sisters. Another older sister and I were the younger ones. When they harvested the gardens, they harvested a great amount. They steamed the corn. In the evening they dug a pit and heated stones there in a big fire.

They put the stones in the pit and when the stones became red hot they took out all the wood and embers and put in the corn husks. Then they put in the fully ripe corn and covered it with more husks. Finally they covered it with the earth that had been dug out. They covered the pit but they left four holes in which they poured water. We used to hear the red hot stones make a rumbling sound.

Then, very early in the morning they opened the pit with great care. They removed the earth very carefully and finally when they reached the husks they took them out. Eventually they reached the corn and it was thoroughly cooked. It was really hot! They took the corn out and put it on the husks. Sometimes other people heard about it and worked with my family. The helpers came and spread out a big piece of canvas on which they put the corn. Then they used metal teaspoons or clam shells to scrape the corn off the cobs. They used to dry it and after it was dried you could see sackfuls of corn standing here and there. They dried the corn in the sun and put it in white flour sacks. Some corn was allowed to remain on the stalks after it was ripe. This they saved for seed. In addition to saving seed they made hominy of this dried corn. They mixed it with ashes and popped it to make hominy.

They used to dig a hole to save whatever they were not going to use during the winter. They kept out whatever they thought they would need for that winter and they saved in the hole what they would eat in the spring. Seed was also buried in the ground. They made a hole and buried things in it and took them out as they were required. "Dig up that which is buried," they used to say.

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Stealing from mice is something I never did but aunt and grandmother told me about it. They would go off in the brush, in the woods, and steal wild beans from the mice. These mice know how to store things. Running back and forth, the mice carried things to a particular place. Their little trails showed the way they went into their little holes in the ground. There they gathered very many of those wild beans. Grandmother said that when a family had a lot of little boys it used to be said of the last born, the youngest one, that he is married to one of these mice. It was that boy who used to find the storehouses. That is why they used to say the little boys married little mice. Mother's brothers were all big and they did not have any little boy. Even my youngest uncle was grown up, but they used to say, "Squeaking Wing's wives have stored some things, let us go look for some of them." They always found some. Grandmother used to say that some women knew very well how to look for wild beans. They would stand some place and look around. "There is one over there!" they used to say, and "There is one right here too!" When they scraped away the leaves and the earth there the holes used to be, just all full of wild beans. They would take them and save them. Sometimes they said they found a bucketful, I do not know how big a bucket they meant. Those beans were very good; I ate some of them. When I went to Nebraska they gave me some there. I cooked them in the same way I cook any beans. The beans that we eat today are good, but wild beans are much more delicious.

Four or five households of Indians migrated to this area where they built long wigwams; my father and my brothers, also my brother-in-law Cloud, and another brother-in-law Little Naqiga as well as their relatives, and sometimes our uncles came there too. Our family was large enough to require a two-fireplace wigwam. We lived in a rush wigwam. My grandmother and my mother made our house of cattail matting. The wigwam was covered with mats of cattail stalks. The inside of the house was never smoky. I suppose that was because it was properly made. It was very pleasant to live in a rush wigwam. My older sister White Thunder and my brother-in-law Cloud lived next door, but they lived in a large round wigwam. Another person who lived in a big round wigwam was Cloud's brother who was called Big Thunder. Big Thunder's wife's name was Axjinwinga—and I do not know what that would mean in English. Her mother's name was Four Women and her husband's name was Daylight.

One time when we had been living there only a short time, as I recall, this old man, Daylight, died. When he was about to die he was very sick. He was really very sick but he said that he wanted to see the daylight, he wanted to go outside. He said this as he lay there. Upon hearing this my mother came home. She had evidently gone to visit him. She said, "My sons, he is to be pitied that he is saying this. Go and carry him. Take him outside. Let him see the daylight." So, my older brothers did as they were told to do. Then the old man said as he lay there, "Daylight, at one time I knew this daylight well. That accounts for my name; they called me Daylight. But nothing can be done to help me, so I am going away. At one time there was a certain food of which I was fond, skunk meat. If you should kill a skunk, cook it and think of me as you do so. Think of me and scatter some tobacco for me. Whatever you want when you do this, it will be granted to you." That is what the old man said. That is the way the old people were; the old people were supposed to be respected. "Respect those old people," mother and father used to say to us. That is what we used to do. We respected the old people, but today they do not respect the old people.