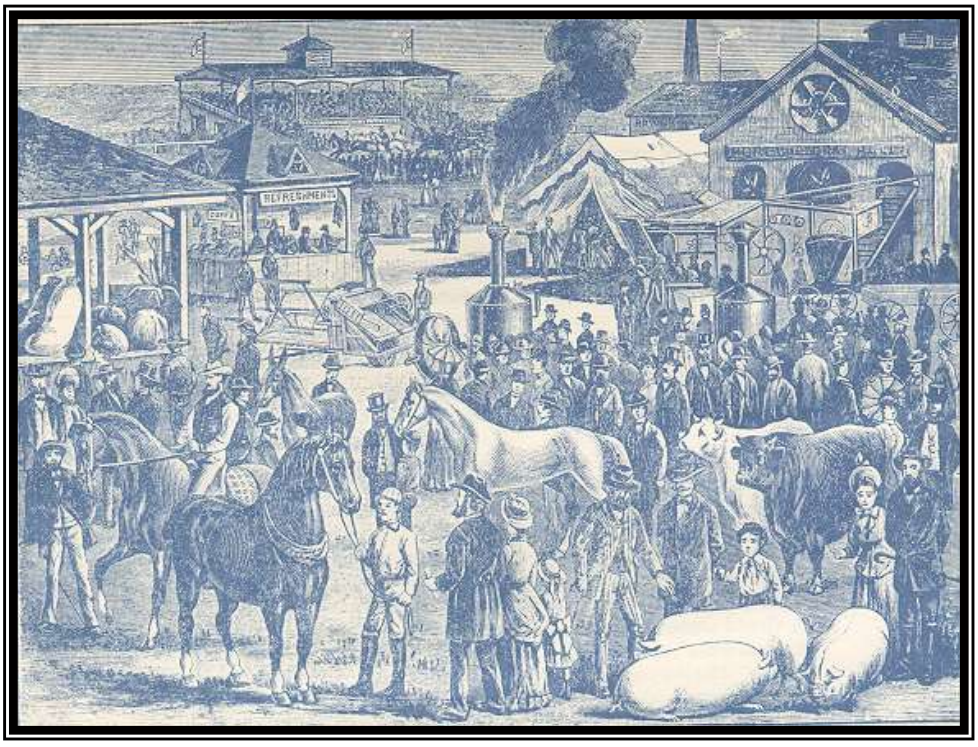
OLD SEDGWICK COUNTY FAIR EDUCATION DAY

October 6, 2026



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Contents

WELCOME 3
MISSION AND PURPOSE 3
KANSAS CURRICULAR STANDARDS 3
TOUR OVERVIEW 4
TOUR OBJECTIVES 4
PRE-VISIT ACTIVITIES 5
WHAT IS A COUNTY FAIR?- a pre-visit lesson 6
FIRST SEDGWICK COUNTY FAIR 16
COUNTY FAIRS IN KANSAS 18
INVENTIONS – a pre-visit lesson 29

Continues in Part 2

WELCOME

We are glad that you are planning to join us at Harvest of Progress: Fair Education Day. Old Cowtown Museum has worked to create a series of learning activities that will be both educational and fun. We hope that you and your students will enjoy experiencing some of the sights, sounds and traditions of a typical Kansas county fair of the 1870s.

MISSION AND PURPOSE

Old Cowtown Museum is an open-air, living history museum that interprets the history of Wichita, Sedgwick County and life on southern plains, circa 1865-1880.

KANSAS CURRICULAR STANDARDS

Old Cowtown Museum has correlated the Harvest of Progress: Fair Education Day pre-visit lesson plans and event day activities with the Kansas Curricular Standards.

* Pre-visit curricular correlations are located on the pages immediately following the “Objectives” in each of the four lessons.

TOUR OVERVIEW

At Education Day, your students are welcome to explore any of the 36 activity stations and/or 18 historic buildings during their 2 hour visit. In order to provide a large variety of activities to meet the children's varied interests, we have purposely scheduled **more** activities than can be completed during the 2 hour time block. **We strongly recommend that your class select their most desired activities before they arrive at Old Sedgwick County Fair Education Day.**

Students, in groups of 5 with an adult chaperone, will tour the grounds of Old Cowtown Museum for 2 hours. While there they will encounter and experience a wide number of typical 1870's fair activities.

Before beginning their tour, each student will receive a "Harvest of Progress: Fair Education Day Passport" listing activities that may be found at the event. These activities include such things as corn shelling, quilting, judging exhibit, wheat grinding, midway games, musical performances, and sorghum pressing. Participating students will receive an "County Fair Certificate of Achievement" from Old Cowtown Museum at the conclusion of their tour.

There will be several food and drink vendors at Old Sedgwick County Fair Education Day. Your students may wish to bring a small amount of spending money with them, although this is optional.

At the conclusion of the visit, students and chaperones should gather at the front gate for departure. You will be assigned a specific time and place for your class to meet so that everyone will be ready for your scheduled class departure time.

TOUR OBJECTIVES

- ✔ The students will learn about one purpose of county fairs by creating class contest entries. Class exhibits will be judged at the fair according to the standards listed in the County Fair Judging Contest lesson.

- ✔ The students will identify how a community gathering can meet the basic needs of people.

- ✔ The students will describe how competition between individuals can help the community recognize new and better products and ways of doing things.

- ✔ The students will learn about the role of agriculture in Sedgwick County.
- ✔ The students will observe and/or participate in several home, business, agricultural and commercial practices commonly used in the 1870s.

PRE-VISIT ACTIVITIES

Completion of the following lessons will enhance your students' educational experience at the County Fair Education Day. They have been designed to prepare your class for the activities they will find at the event, as they help you meet several curricular benchmarks for your grade. If you have any questions about the pre-visit lessons or event activities, call Anthony Horsch at (316) 350-3322.

"What is a County Fair?" (p. 9) is a lesson that will help your students understand the concept of county fairs and identify the similarities and differences between an 1870s fair and a modern fair. It includes an optional video, 3 readings, discussion questions, an activity book, and a game that is similar to charades.

"Inventions" (p.35) is a lesson that will introduce inventions as important change agents for industry and society in 1870. It will take your students through the process of making their own invention, giving them opportunities to learn and practice brainstorming, creative thinking, and evaluation techniques as they complete the lesson.

"Judging at the County Fair" (p. 61) is a lesson which introduces the concept of judging as a process of evaluation. It discusses why judging contests were so important at the county fairs of the 1870s. It teaches students how to use pre-set criteria to evaluate a set of exhibits, and offers an opportunity to practice evaluation skills in the classroom. It includes a reading, discussion questions, practice examples, and directions for several classroom judging contests.

"County Fair Judging Contest Entry" (p. 81) will take your class through the process of completing an exhibit to enter in the County Fair judging contest. It includes a list of possible entries, recipes or directions for preparing class exhibits, standards by which they will be judged and a timetable for entering class exhibits in the judging contest. Ribbons will be awarded to all entrants. We strongly encourage your participation in this activity; your students will enjoy seeing some of their own work at the fair.

ALL ENTRIES MUST BE DELIVERED TO OLD COWTOWN MUSEUM BETWEEN 8:00 AM AND 5:00 PM, **WEDNESDAY OCTOBER 4th, 2023.**

RIBBONS AND EXHIBITS (EXCEPT GRAND PRIZE WINNERS) **MUST** BE PICKED UP BETWEEN **THURSDAY, OCTOBER 12 AND FRIDAY, OCTOBER 13** BETWEEN 8:00 AM AND 5:00 PM. BECAUSE OF HEALTH CONCERNS, FOOD EXHIBITS WILL NOT BE RETURNED.

GRAND PRIZE WINNING EXHIBITS MAY BE PICKED UP ON **THURSDAY, OCTOBER 19, OR FRIDAY, OCTOBER 20** BETWEEN 8:00 AM AND 5:00 PM.

WHAT IS A COUNTY FAIR?- a pre-visit lesson

County fairs have been held in Kansas for more than 100 years. Many of the things that happen at today's county fairs are based on things that happened at the very first county fairs. Some of those activities have stayed exactly the same, and some have changed as Kansas has become more modern.

In the 1870s, people would come to the county fairs to shop; attend special entertainment events; participate in a gathering of their community; and see new technology, farm and home products. Today the county fair is still an exciting part of community life and people from all walks of life come to the fair each year.

What was it like to visit a county fair in 1870?

How have county fairs changed and how have they stayed the same since then?

OBJECTIVES

- ✔ Describe the community members, past and present, who attend county fairs.
- ✔ Discuss the individual and community benefits of county fairs in Kansas.
- ✔ Compare and contrast the similarities and differences of modern and historical county fairs.

MATERIALS

One copy per student of "Come To The Fair" (see pp.19-20 or p.21)

One copy per student of *Kansas Heritage Magazine* article: "County Fairs in Kansas" (pp. 23-27)

One copy per student of *Wichita Eagle* article: "Winning, Losing, Heat and Dust All Part of Fun" (p. 28-30)

One copy per student of "Come To the Fair" activity booklet

"Come To The Fair" Video (optional)

TV and VCR (optional)

"Who's There?" game pieces

Small paper bag, bowl or basket

Construction or drawing paper

Markers, crayons, etc.

Glue and/or tape

Scissors

PREPARATION ACTIVITIES

Use the following activities to introduce your students to county fairs, past and present. Although the activities may be completed separately, they will be most effective if presented in sequence listed below.

Lead a class discussion using the following questions as a guide:

* What to you think a county fair is?
* Where do you think you might find a county fair?
* Have you ever been to a county fair?
* What do you think you might see and do at a county fair?
* What do you think might be your favorite activity if you visited a county fair?

Watch "Come To The Fair" video. Classes with limited time will find that an adequate understanding of county fairs can be gained by watching the optional video

and holding a class discussion using the questions found in the next two sections. (Download at http://www.oldcowtown.org/Preservation/school-programs.htm)

Read the articles "Come to the Fair", "Meet Me at the Fair: County Fairs in Kansas" and "Winning, Losing, Heat and Dust All Part of Fun" . All three articles can be found at the end of this lesson. Use the following questions to check comprehension:

* When were county fairs started in Kansas? Why?
  1850s, because of the need for community, improved agriculture, and to attract settlers

* What did the community do to help encourage people to attend the county fair? *Special train rates, schools and businesses closed, and participation by civic organizations*

* What kinds of people came to a county fair in the 1870s?
  People from all walks of life came to the fair

* What kinds of activities could be found at an old-time county fair?
  Contests, exhibitions, races, agricultural implement sales, food booths, band concerts (students may include others)

* Was a county fair held every year? Why or why not?
  No, it usually depended on the success of the harvest that year

* Were county fairs always successful? What were some things that could cause problems for a county fair?
  No. Poor harvest, bad weather, hard times, grasshoppers, drought

* How do you think the people of Kansas felt about their county fairs in the 1870s? Why do you think that?
  Most important event of the year. It involved the whole community, business, social clubs and visitors

* What are some purposes of modern county fairs? Have they changed since the first county fairs in Kansas? How?
  Social gathering, entertainment. Yes, not as dependent on agriculture

* What kinds of activities would you see at a county fair today?
  Contests, entertainment, business and commerce, agriculture

* How are modern fairs the same as old-time ones? How are they different?
  Similarities: community gathering, agriculture, entertainment, contests. The activities at the fair reflect the interest of the families in the county.
  Differences: not as widely attended, agriculture not as important, entertainment activities more important, more youth participation.

* How many different kinds of people can you think of that come to a county fair? Why do they come?
  Community members-entertainment, farmers-agriculture, youth-contests and entertainment

Lead a class discussion using the following questions as a guide:

* Did anything surprise you about the county fairs of the 1870s? What?
* What did you learn about modern county fairs that you didn't know before?
* If you lived in Kansas in the 1870s, do you think you and your family would go to a county fair? Why or why not?
* What activity at an old-fashioned county fair do you think you would like the most? Why?
* If you went to a modern county fair do you think you would choose to do the same activity? Why or why not?
* Would you rather go to a modern county fair or an old-fashioned one? Why?
* If you could plan a county fair, what activities would you include?
* Tell about one person who would come to your fair. Why would they want come? What would they do while they are there?
* If you could change one thing about a county fair, what would it be?

Complete the "Come to the Fair" activity booklet with your students. (Optional)

PROCEDURAL STEPS

The "Who's There?" game is played much like "Charades" with the addition of student-made props. This game will help students actively experience the community of people and activities that might have attended a county fair in the 1870s.

Divide class into groups of 2-4 students.

One student from each group draws a person/activity slip from a box (basket, bag, bowl), and shares it with their group.

The group, working together, devises a pantomime of the activity described on the slip. (Some examples might be cowboys riding horses or a wagon driver and his assistants.)

The students use paper, markers, and crayons to make props. For example, if the character is a miller (someone who grinds grain), the students may wish to make paper corn or wheat.

Each group acts out the pantomime while the rest of the class guesses who they are, whether they might have been attending a modern county fair or an 1870s county fair or both, and why they would have come to the fair.

After all of the students have presented their pantomime, lead a class discussion using the following questions as a guide:

* What did you observe about the people who might have come to an 1870s county fair?
* Do you think you would see the same type of people at a modern county fair? What would be the same? What might be different?
* Make a list of reasons that people might have come to the county fair in 1870.
* If you took a survey of the people who came to the modern Sedgwick County Fair, what reasons do you think they would give for their visit to the fair?
* How many of the reasons that people come to the county fair might be the same today as they were in 1870?
* Compare your list from 1870 with your survey from today. Do you think the reasons people have for coming to a county fair have changed a lot? Why do you think that is so?

INQUIRY AND FOLLOW UP ACTIVITIES

Build a diorama of an 1870s Kansas community during a county fair. Conduct research to find out more about the people who lived in a typical Kansas town of that era and about the exhibitors who might have come to the fair. Include details about local homes and businesses, clothing, commerce, school, church, and fair events and exhibits in your diorama.

Choose one person who might come to an old-fashioned or modern county fair and find out more about him/her. Write a story (real or fictional) about him/her that includes details of his/her daily life, family life, profession or job, home, friends, and favorite activities at the county fair. Draw a picture or make a statue of him/her to go with your story.

Have a county fair scavenger hunt.

* Divide the class into groups of 3 to 6 students. Each group should work together to complete the activity.

* Use a computer with internet access or the reference section of the library to construct a list of county fair scavenger hunt questions. Possible questions might relate to name and/or number of fairs in a specified Kansas county, most famous historical visitor to a county fair, interesting trivia facts about county fairs, or an unusual logo or theme for a recent county fair.

* When completed, ask activity groups to trade questions with another group and try to answer the scavenger hunt questions. The winning group will be the one with the most correct answers in a specified length of time; or the one that completes the hunt in the shortest period of time. Small prizes or special privileges may be awarded to the members of the winning scavenger hunt team.

Plan an activity for a younger class

* Divide the class into groups of 3 to 4 students. Each group should work together to complete the activity.

* Using the information found during the scavenger hunt research, construct a game, coloring or story book, skit or song about county fairs that would be appropriate for younger students.

* Share the projects with a younger group of students that is planning to attend Old Sedgwick County Fair Education Day. Older students will help the children play the games, read or color the books, perform the skits and/or sing the songs. Adult class chaperones may be invited to attend the project-sharing day as a way to prepare for their upcoming field trip supervision.

VOCABULARY LIST

agricultural - having to do with farming, raising crops and animals

community - a group of people who live close to each other

county - small areas that make up a state. Kansas has 105 counties

county seat - the town or city in a county where government offices are located

craftsman - someone skilled in his/her trade

crops - plants grown for food

exhibit - an object in a show or contest

harvest - the time of year when crops are gathered

livestock - farm animals

manufacturer - someone who makes products

mechanical - having to do with machines or tools

merchant - a person who buys and sells goods for his or her living

prosperous - successful and well off

sponsor - a person or group that plans or supports an activity

support - to be in favor of something

territory - a part of the United States that is not yet a state

COME TO THE FAIR

Taken from “Come to the Fair”, prepared by the Kansas State Historical Society with funding from the Kansas Committee for the Humanities.

County fairs, with images of cattle, crops, carnivals, and crowds, have long been a part of life in Kansas. In fact, the first were held shortly after the area was organized in 1854 as Kansas Territory and were usually sponsored by county agricultural and mechanical societies. Organizers believed fairs encouraged use of the latest farming methods, introduced improved breeds of livestock, and promoted local trades and manufacturers. Exhibitors and fair goers compared animals, produce, domestic goods, and manufactured products and discussed methods for obtaining the best results. Agricultural publications urged farmers and their families to go to fairs “For improvement; to see, to question, and to reflect.”

Nineteenth century fairs in Kansas, however, did more than promote the improvement of agriculture. They helped create a sense of community in a newly settled land. By the 1870s, most counties sponsored an annual fair. Since county seats were usually centrally located for business, government and transportation reasons, they were ideal sites for county fairs.

Area newspapers and specially designed fair posters urged everyone in the county to attend. Posters often conveyed a sense of community spirit and pride with such phrases as “Larger, better and more inviting than ever before”; or “Exhibits of everything Worth Seeing in Ness County, Kansas.” The *Junction City Union* in 1879 stated “As there will be many strangers here during the fair week we must sport our best clothes before them and do everything possible to make a favorable impression.”

Merchants supported the fair with displays on the grounds and by closing one afternoon or day to allow employees to attend. Since fairs in the 19th century were held in September and October, schools also closed one day during the festivities. Railroads offered excursion rates to fair goers and freight reductions to exhibitors for transporting produce and livestock to the fair. Local civic groups operated refreshment stands and occasionally prepared exhibits. For example, townships or granges prepared agricultural exhibits or the sewing society of a local church entered its handiwork in the Ladies Department. Such efforts illustrated community and county support for fairs; and attendance figures, which often totaled several thousand a day, indicated that fairs were an important part of local life.

Not only did fairs create a sense of community, they also reflected the uncertainties of settling the plains. When times were hard, fairs were either canceled or hampered by poor exhibits. When times were good, exhibits were extensive and local residents publicized the successful harvest. If the growing season were productive, newspaper accounts during the fair extolled the abundance of crops raised in the county and promoted successful farming as an important aspect of county and state economies.

Farm publications urged readers to support fairs and to show what the state could produce, since the good agricultural exhibits were considered one way to attract new settlers. This was particularly true in the late 1870s when Kansans needed to demonstrate the state's agricultural potential. In 1874, grasshoppers ruined crops across much of the state and many settlers left Kansas. Those that remained did so with aid from state and national relief efforts. In addition, Kansans sought to dispel the myth that Kansas was the "Great American Desert."

Fairs consciously promoted Kansas as a prosperous place to live. Fair posters often proclaimed that visitors would see a "grand agricultural display". Other efforts were more specific. Constructed entirely of locally grown corn, the arch at the entrance of the 1886 Finney county fair refuted critic's claims that "Corn Won't Grow in Southwest Kansas".

In one instance, a county fair was a vehicle for favorable national publicity for the state. In 1879, the Woodson county fair board invited President Rutherford B. Hayes to the fair in Neosho Falls and he accepted. His visit to Kansas was widely reported and an illustrated article on the fair was published in *Leslie's Weekly*, a magazine with national circulation. The drawings in the magazine depicted extensive agricultural exhibits at the fair as well as an archway proclaiming "KANSAS- 1856, Bleeding; 1860, Drouthy; 1879, Booming."

Not all fairs were successful. Secretaries of fair boards filed reports with the state secretary of agriculture, and each year several wrote that the harvest was too scant to hold a fair, that the fair had lost money, that the exhibits were poor, or that bad weather discouraged attendance. The secretary of the Pawnee county fair board described the difficulties of holding a fair in 1879 in spite of a well publicized visit by President Hayes. Pawnee county did not hold a fair in 1880, for the secretary reported "too hard times and crops too poor to hold a Fair. (President Hayes was not on exhibit this year)"

Nineteenth century county fairs, by promoting improved agriculture, helping create a sense of community, and encouraging settlement of the region, reflected major concerns of the people that attended. Fairs, in a sense, were celebrations of another year of progress. Because city and rural residents depended on the agricultural economy, fairs became important annual events whose traditions are still evident in county fairs.

COME TO THE FAIR

(Short version)

Adapted from "Come to the Fair" prepared by the
Kansas State Historical Society

County fairs have been part of Kansas for a long time. The first fairs were held in the 1850s, soon after Kansas became a territory. They were usually sponsored by the county agricultural and mechanical society.

Fair planners believed that county fairs helped farmers learn about the newest ways to farm and the best kinds of livestock. They also believed that fairs helped craftsmen and manufacturers become more important in their county. Everyone who came to the fair looked to see what was new and tried to learn better ways to do things.

Early fairs in Kansas helped new people work together and get to know each other. By the 1870s, most counties planned a county fair every year in September or October. The fairs were usually held at the county seat, which was an easy place for the county people to find.

Everyone was encouraged to attend the fair. Newspapers and special posters said things like: "Exhibits of Everything Worth Seeing in Ness County" and "Patronize the County Fair, Exhibits Invited in All Classes". One newspaper wrote that everyone should wear their best clothes so they would look nice for the visitors to their fair.

The county was proud of its fair and supported it in many ways. Merchants opened booths at the fairgrounds and gave their employees a day off to go to the fair. School children got a day off, too. Railroads offered special tickets to people traveling to the fair. Local churches and clubs sold food and entered exhibits in the contests. County fairs were an important part of life in the 1870s and thousands of people came to them.

Fairs in the 1870s tried to show off what was good about Kansas. Fair posters told farmers that they would see a "grand agricultural display". Fair sponsors hoped that the display would encourage new farmers to move into Kansas. United States President Rutherford B. Hayes was invited to the Woodson County fair in 1879. Newspapers and magazines from all over the U.S. wrote articles about his visit and about Kansas.

Not all fairs were successful. If the harvest was too small, county fairs might be canceled. Some fairs lost money and some had bad weather that kept people away. Several fairs didn't have enough exhibits entered in their contests. Sometimes, the local people didn't have enough money to come to the fair. Counties never gave up, though. They would always try again the next year.

County fairs were very important to local people in the 1870s. They helped teach new ways to do things, encouraged farmers to move to Kansas counties, and helped people get to know each other. Our modern county fairs still have traditions that were started in the 1870s.

FIRST SEDGWICK COUNTY FAIR

The first Sedgwick County Fair was held in the fall of 1873. It was a major attraction for residents of the area. In the October 3, 1873 issue of *The Wichita City Eagle* newspaper, editor Marshall Murdock said, “The fair yesterday was an entire success as to exhibits and numbers in attendance. The day was delightful and people poured in from the county and city...”.

County fair activities in the 1870s had a large impact on the local community. Editor Murdock estimated that two thousand people listened to a speech by T. Dwight Thatcher, editor of the *Lawrence Journal*. The *Wichita Daily Beacon* reported an attendance of six thousand on the last day of the fair at a time when Sedgwick County’s population was about five thousand persons.

At the fair there were displays of livestock consisting of horses, cattle, swine and poultry; commercial and private garden produce; and hardware and farm implements locally made and from afar. All displays were judged to determine the best in the county, and to show the ability of the county to out-produce any others. There was a hall that held an exhibition of locally grown flowers and fruits that Marshall Murdock, editor of *The Wichita City Eagle* touted as the best in the state. There was also a baby contest, contests for the best lady equestrian and horse races.

The fair was important to the whole city, and it was not surprising that there was controversy about how to make it the best. The exclusion of a band from the fair brought screams of indignation from *The Wichita Daily Beacon*. It reported that the Sedgwick County fair committee had not found it worth while to pay the band $45 a day, but the Douglas County fair committee not only paid that amount, they provided transportation, which cost $30 more.

Despite these words, The *Wichita Daily Beacon* concluded their article by stating, “...shortly after the crowd dispersed in all directions, echoing their hilarity and satisfying the resonant valley in jolly shouts of their appreciation of the day’s entertainment.”

Youngsters risk sticky fingers and faces as they enjoy a special treat of cotton candy at the 1951 Kansas Free Fair in Topeka.

COUNTY FAIRS IN KANSAS

By Cathy Ambler

KANSAS HERITAGE - AUTUMN 1996

When the 4-H projects are safely on display, cattle and horses proudly tucked into their stalls, and flowers carefully arranged in the agricultural ball, it's time for the county fair! County fairs swirl around Kansans much as cotton candy does around a white paper cone – they closely wrap a sense of community around friends and neighbors who gather to socialize, discuss town events, support local activities, and have fun. They remind town and country residents of the ties they have to each other and to agriculture in the state. Local Kansas fairs have existed for nearly 140 years because they have been able to adjust to changing community needs and values.

Fairs in Kansas began during early territorial days when McCamish, a Johnson County town (no longer existing), held a fair in 1858. Newly settled residents created fairs much like the ones they knew before coming to Kansas; fairs and agricultural societies had long histories in both northern and southern states in the eastern part of the country. As early as the 1740s an elite farmer class in America had created agricultural societies similar to those in England. Agricultural societies, and therefore fairs, had grown in popularity during a period of nationalism following the Revolutionary War, but their numbers declined in the early nineteenth century until increasing westward settlement, improving mechanization, and expanding markets eventually caused renewed interest in them.

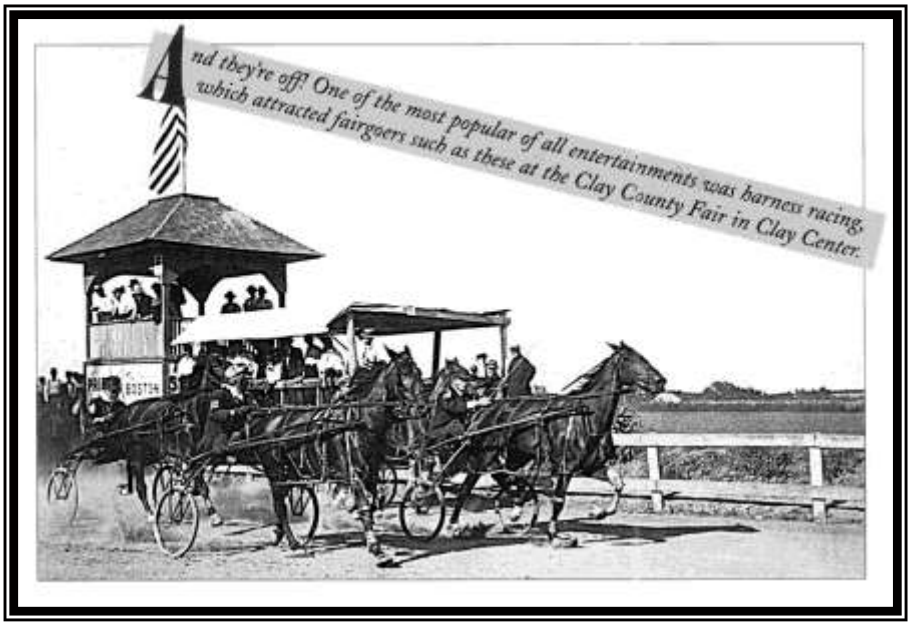
Along the fair's midway in ca. 1910, well-dressed gentlemen invite visitors to "step right up" and see the lovely Maid of the Mist for only two bits.

Kansas's nineteenth-century fairs were different from those of today because they were designed more for adults than for youth, and they promoted town growth more often than farming. Kansas laws established the agricultural societies that sponsored fairs as private stock corporations rather than public entities, and as a result more merchants, professionals, and tradesmen were stockholders than were farmers. The corporation structure was intended to help fairs because investors could supply the necessary capital to buy fairgrounds and construct permanent buildings. To recover costs, agricultural associations charged fair goers admission at entry gates, and this "gate take" was critical to a fair's survival. Although most stockholders never

anticipated much return on their investments, they did expect fair income to cover operating expenses.

Agricultural associations used fairs to show off natural resources, manufactured products, and the skills of local craftsmen to encourage new settlers to the area. A good display of farm products still mattered, however, because piles of lush apples promised bounty from the soil and advocated that success was only a matter of hard work. Despite promotional emphasis, farm families anticipated their local fair because it was a holiday, a time to socialize, with friends and family, and an opportunity to view the latest factory goods and farm equipment. Fairs were exciting events. Amusements included "beautiful baby”contests, wrestling matches, plowing contests, and ladies' equestrian events. Exotic midways set the stage for amazement and intrigue with their wheels of fortune, shell games, and other games of chance.

One of the most popular of all entertainments was racing, especially harness racing; and Kansas had its share of famous racers. "Little Pete," a horse from Linn County, won a gold medal at the Philadelphia Centennial Exposition races in 1876. Racing contests in "speed rings" attracted fair goers, since friendly and spontaneous road races were commonplace away from fairs. Proponents of organized racing also argued that such contests were legitimate accessories to fairs because they stimulated better livestock breeding. Financing a fair for agricultural associations was just too difficult without the attendance that racing attracted, despite disapproving and critical voices that objected to it. However, interest in racing at fairs began to decline in the late nineteenth century, aided by a broader cultural pursuit of morality and virtue that economic hard times helped precipitate. Farmers began to see little need for either racing or entertainment. To many, entertainment appeared frivolous, and horse racing and its attendant gambling only seemed to mock hard work and frugality.



Nineteenth-century fairgrounds, dedicated to fair use, looked somewhat different from today's. Most had a half-mile oval race track, judge's stand, and high board fencing

surrounding the grounds with a main entry gate. Streams, springs, or wells were necessary to water stock, and nearby trolley lines or railroad sidings carried livestock and fair-goers to the grounds. Associations preferred a park or grove setting, and some early fairs had carriage drives around the grounds. Besides dining halls and animal pens, main buildings frequently were octagonal, "Greek" cross-shaped (with cross arms of equal length), or sometimes a combination of both. Few of these early fair buildings remain today, however. The state's oldest extant fair building is a stone octagon agricultural hall from 1875 in Manhattan's city park; and a remaining Greek-cross form dating from the 1880s is in use by the Clay County Fair in Clay Center.

Around the turn of the century, Kansans began to change the purpose of fairs. Corporation-run fairs no longer served most communities now more interested in advancing agriculture than in attracting settlers. Although promotional fairs declined, communities created new celebrations, and a bloom of new fair types burst forth in street, institute, grange, and memorial fairs; poultry shows; corn carnivals; reunions; and stock shows. Towns simply created new fair forms to renew local pride and self-awareness, and to acknowledge their relationships with agriculture – especially after World War 1. Perhaps the most important factor for fair development in the twentieth century, however, was the rise of the extension service and 4-H. Kansas farmers during World War I increased agricultural production substantially, and the federal and state governments rewarded them by improving extension programs and by increasing the numbers of county agents. With this help system in place, any Kansas farmer had access to agricultural college and experiment station research projects as scientific research actually began to change what the farmer did on his land.

With the arrival of the Great Depression, New Deal programs made farming less a financial risk than it had been in the nineteenth century. However, the best boost to farming income resulted not from these programs but from increased production demanded by both world wars. In Kansas, as public esteem for agriculture became more focused on the family farm, the control of fairs' passed from private stock corporations to the public realm with public funding. Communities created "free" fairs with no admission fees, which were more in concert with promoting agricultural education. The rise of 4-H in the state breathed new life into fairs and changed their focus from adult accomplishments to the accomplishments of Kansas youth. Fairs provided a culmination to the 4-H year with judges evaluating projects and rewarding hard work. Fairs then became one more aspect within an emerging system to

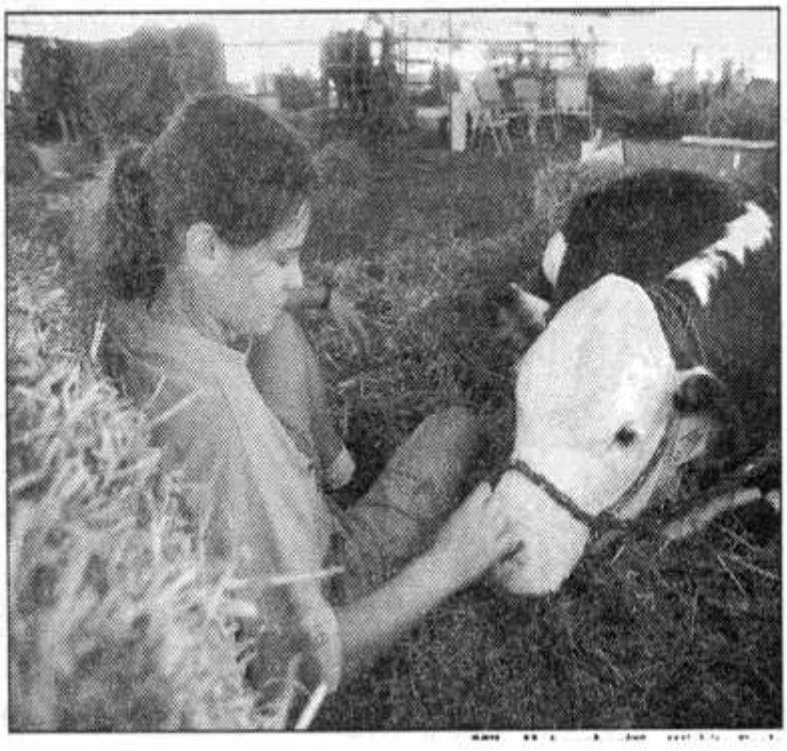
perpetuate farming and to provide at least one time during the year when communities celebrated their agricultural connections.

Today four types of fairs serve diverse Kansas communities, and each has a slightly different emphasis. Community fairs involve the entire community, have a high degree of involvement by civic groups and volunteers, and offer a little something for everyone. Generally these fairs are in towns where the fair is still one of the most important occasions on a community's calendar of events. Community/4-H fairs have a wide appeal, but their main focus is on 4-H exhibits and projects. These fairs are popular in towns where farming still is a strong factor in a community's economic survival. The 4-H fairs have more limited community involvement and are mainly for 4-H-ers and their families. Extension offices frequently organize these fairs, and they involve largely the rural segment of a community. Urban fairs highlight professional entertainment, although they maintain some agricultural emphasis. These fairs usually attract a large urban attendance.

Beginning about 1950 communities began to use their fairgrounds and buildings in more practical ways. Now they often are used year-round instead of just at fair time, and they share space with swimming pools, tennis courts, baseball diamonds, and National Guard armories. Agricultural halls often are multiple-use and practical structures that frequently hold more Saturday auctions than fair exhibits. Communities value this flexible fair space because they host a variety of events from family reunions to monthly meetings of clubs and organizations.

In an October 17,1883, *Kansas Farmer*, "Aunt Polly from Hermit Hill" related the importance of fairs to many Kansans when she said, "Our county fairs are the farmers' holiday, the common people's jubilee, as it were; the day of joy and merriment; the day of renewing old acquaintances and making new ones; the day of aspirations, hopes, success and disappointments; the day of happy family reunions with the old folks; the day of gallantry and flirtation among the young, and day of toys and candy for the children; the day in which the people see the blue ribbons tied on the products of their neighbors and observe the joyous countenances of those that have been successful." Aunt Polly captured the value county fairs for many Kansans because, whether in the past or in the present, they have been able to remain local celebrations of community spirit.

CATHY AMBLER earned her Ph.D. in American Studies from the University of Kansas in 1996. Her dissertation was a study of the history of Kansas county fairs. Cathy has researched and visited these events across the state for more than two years.



Anne Marie Seiler of the Andale Jets 4-H dub spends a few Private moments with her polled Hereford steer Friday before he goes on the auction block tonight at the Sedgwick County Fair in Cheney. The 17-year-old has been raising and selling livestock for eight years, but giving them up at auction hasn't gotten any easier. "I don't think I'll ever get used to seeing them sold," she said.

WINNING, LOSING,

HEAT AND DUST

ALL PART OF

THE FUN

The county fair ends today with horse and beef shows, bullriding, a parade and dance.

By Phyllis Jacobs Griekspoor
The Wichita Eagle
July 20, 1996

CHENEY - The heavy shade surrounding the animal barns and show rings at the Sedgwick County Fair was a welcome thing as the sun began to gather strength toward another blazing Friday.

Beneath the trees where scores of 4-Hers washed, clipped and combed bleating lambs, the welcome south breeze felt almost cool.

Jessica Martin took a shot at getting some help at preparing her lamb for the show ring, but her sister simply pointed to a sign on the gable of the barn that read "Taking care of the animal is the 4-Her's responsibility" and continued grooming her own animal.

Jessica, a member of the Andale Jets 4-H Club, simply shrugged, picked up a comb and got to work. She's been showing since first grade and will be in fourth grade this fall, the 9-year-old said, and she seemed to know what it was going to take to get her as-yet-unnamed ewe lamb ready for the show ring.

Out in the ring, Dorset judging was just ending as a class of three ram lambs were led around the ring, handled by the judge and pushed and shoved into correct stance by their handlers.

The judge walked back and forth several times, checking the young rams from all angles before awarding tie championship to Joe Smarsh of tie Colwich 4-H Club. Billy Stein of Riverview took reserve champion, and his sister, Sami, finished last .

Sami held back tears of disappointment and stomped from the ring, shoulders square and eyes straight head. It wasn't coming in last that was the problem. It was losing to her brother.

“She really shouldn't let this upset her," said her grandmother, Nancy Stein "She had a great day yesterday."

Sami, in her first year to show a steer, took champion in fitting and showing in the junior division.

That was of little consolation to Sami, who was led away from the sheep pens for a little chat by her dad, Bill Stein Jr., who was searching for ways to remind her that it's impossible for everyone to win every time.

That left Billy to bear the blue ribbons, a little statue reading "Grand Champion Dorset Ewe" and championship money envelopes and bring back another half-dozen or so of the Stein Dorsets that had been part of the show.

He found willing helpers in Andy and Ben Ingold, both members of the Andover Aces Club, who raced behind him to halter the lambs and lead them back to the pens.

The Ingold kids were celebrating on Friday - they had shown their hand pets on Wednesday night and had the purple ribbons to prove it.

The swine show on Thursday evening had also gone well for the Ingolds, including older sister Annie, who got her first Grand Champion in showmanship, her mom, Sandy, said, proudly. "She's worked for years and years to get that and has always been beaten out in the last round. She's really happy with this one."

Andy took a blue ribbon on his pig, a move up from last year when he earned a red, and Ben took a red on his pig. But he wasn't worried about a second place. He had his Showmanship Champion of the junior division to console him.

Over in the 4-H building on the other side of the fairgrounds, the breeze was a welcome relief to the 30 or so spectators seated to watch demonstrations on topics that ranged from house pets to nutrition.

It wasn't so welcome to young Andy Brand of the Wichita Sunflower 4-H Club. He was trying to keep his posters and notes in place despite the occasional 20-mph gusts that sent them flying off the easel and the table.

Andy didn't miss a beat in his demonstration on how to make a fruit kabob, however. He didn't even pause when every one of his poster boards sailed to the floor. He simply continued talking when his labels went flying and an audience member retrieved them and put them back on the table.

He even managed to continue calmly putting his fruit pieces onto plates when he spilled the little cup of pineapple juice he was using to dip his fruit to prevent browning.

"You can dip the fruit in lemon juice, sugar water, pineapple juice or grapefruit juice to keep it from turning brown," he told the audience. "I've found that lemon juice works best but it leaves a sour taste, so I like to use pineapple juice."

The completion of his demonstration drew a couple of audience questions and one from a judge.

"How often do you make these? she asked.

"A couple of times a night" Andy replied. "They're good."

The Sedgwick County Fair continues at Cheney Fairgrounds through tonight. The closing show will include a "bull blowout" the first time ever for bullriding at the Fair.

4-H exhibits on subjects from entomology to photography to crafts to canned goods will continue on display until 8 p.m.

The fair wraps up with a country street dance, beginning at 11:30 p.m. and ending at 1:30 a.m. Sunday.

“WHO’S THERE?” GAME PIECES

People riding horses	People petting a cat	People milking a cow	People selling food
People cutting wood	People driving a wagon	People washing clothes	People baking bread
People riding on a train	People all dressed up	People with newspapers	People in the school
People with baskets	People shoeing horses	People with animals	People in the church
People working on the train	People playing games	People dancing	People showing off new plows and tools
People looking at exhibits	People playing music	People talking	People grinding grain

“WHO’S THERE?” GAME PIECES

Cowboys on a cattle drive	Ladies who make quilts to enter in the fair	Children who live near the fair	The blacksmith and his assistants
The printer and his assistants	The men who drive the delivery wagons	Children who came from far away to see the fair	The saloon keeper and his assistants
The meat cutter and his assistants	Soldiers visiting the fair	Men who work on the railroad	People riding the railroad to the fair
Native Americans	Millers who grind the grain	A family of visitors to the fair	The owner of the general store and his employees
The carpenter and his assistants	A farmer and his family bringing their cattle to the fair	The minister and his family	Students and their teacher
A church group selling lemonade and cookies	A group of dance hall girls	A group of gamblers	People who live in the town

ADDITIONAL RESOURCES

The modern Sedgwick County Fair, which is held in Cheney during the second week of July, has a website that includes directions to the fairgrounds, schedule of events, facts and figures about the fair, and entry information for the many contests held during fair week. It can be accessed at:

https://ourcountyfair.com/45-home

The Kansas State Fair's website includes a link that traces the history of the fair from its creation in 1874 to the present day. It includes a link to all the county fairs in Kansas, and a schedule and description of all the events, activities and competitions held each year at the state fair. It can be accessed at:

http://www.kansasstatefair.com/

Kansas Heritage Group website, has many Kansas history links. Topics include towns, forts, famous Kansans, museums and maps. It can be accessed at:

http://www.kansasheritage.org/

LESSON SOURCES

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Old Cowtown Museum
1865 Museum Blvd
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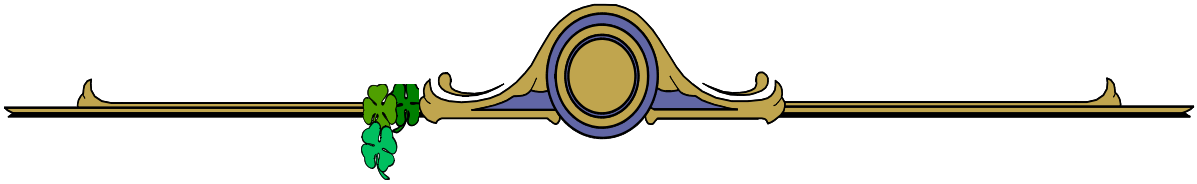
References:

"County Fairs in Kansas"
Kathy Ambler
Kansas Heritage Magazine, Autumn 1996
Kansas State Historical Society
6425 SW Sixth Avenue
Topeka, Kansas 66615-1099
(Reprinted with permission)

"Winning, Losing Heat and Dust All Part of the Fun"
Phyllis Jacobs Griekspoor
The Wichita Eagle; July 20, 1996
825 E. Douglas
Wichita, Kansas. 67202
(Reprinted with permission)

"Come To The Fair"
Kansas State Historical Society
6425 SW Sixth Avenue
Topeka, Kansas 66615-1099
(Reprinted with permission)



INVENTIONS – a pre-visit lesson

One of the most important parts of a county fair in the 1870s was the chance to see what was new. In the age of the industrial revolution new inventions were changing people's lives almost daily, and Kansans were trying to shake off the image that they lived in "The Great American Desert". They firmly believed that the land in Kansas was untested, but promising. Because of this, agricultural publications encouraged farmers and their families to come to county fairs "For improvement; to see, to question, and to reflect."

New inventions are often sparked by the possibilities created by current invention. Most inventors use a special procedure to come up with their new ideas. This technique makes it easy to identify a problem, list many possible solutions, and construct an object that will fulfill people's needs. Your students can use this process to produce an 1870s-style invention which may be entered in the judging contest at Old Sedgwick County Fair Education Day.

How did inventions change people's lives in the past and present?

How is an invention made?

OBJECTIVES

Students will identify a problem of the past or present and describe how it was solved with a new invention or an improvement in technology

Students will describe how inventions and technological advances have changed the lives and fortunes of people in the past and present.

Students will apply creative thinking and problem-solving skills as they plan and design an original invention

MATERIALS

- ➔ Paper and pencil for each student
- ➔ Handout copies for each student
- ➔ Chalkboard or easel for classroom lists
- ➔ Inventor's journal for each student
- ➔ Tools and fasteners (tape, glue, wire, pliers, screwdrivers, staplers, scissors, etc.)
- ➔ A box or bag of odds and ends from old machines, household gadgets, textiles, etc. for each activity group
- ➔ Colored pencils, markers, crayons and/or pens
- ➔ Construction paper, clay, yarn, wire, etc for invention models
- ➔ Supplies for construction of inventions

PREPARATION ACTIVITIES

Use one or more of the following activities to introduce your students to inventions and inventors and how they affect our daily life both now and in the past.

Read the stories about inventors and the Technology Invention Timeline which can be found at the end of this lesson (or copy them for the students to read themselves). Using the following questions, conduct a class discussion about inventions and inventors.

* How did these inventors get their ideas?
* How did they make their ideas a reality?
* Did their inventions change people's everyday lives at the time they were invented? How?
* Are their inventions still used today? Who uses them, and how?
* If you were inventing something, what would you like to invent? Why?

Ask the students to look for inventions in the classroom and/or at their home; one place to start is the pencil sharpener. Inventions can often be identified by the U.S. patent number(s) located on the sides or bottom. Make a list of all of the inventions they discover at school and/or at home.

Lead a class discussion using the following questions as a guide:

* How many inventions did we find in our classroom and/or homes?
* Were you surprised to find that some of these things were inventions?
* Which ones surprised you most? Why?
* How do you think your life would change if we didn't have these inventions?
* Would you improve any of the inventions you found? How?
* We read about some inventions from the 1700s and 1800s. How do you think they changed the lives of the people of that time?
* How do we still use some of these old inventions?
* What kind of improvements have been made to these inventions since 1870?
* Pick an invention from the past or present. What kind of improvements would you make to it?

Creative thinking requires skill building and practice. Use the following exercises to introduce the concepts of inventive thinking and brainstorming.

* Begin with a brief explanation of brainstorming and a discussion about the rules of brainstorming using the handout page at the end of this lesson.

* As a class, use brainstorming and creative thinking techniques to change a familiar story. Create a new ending, change a character or situation, or create a new beginning that will result in the same ending for the story.

* Choose a common item (or group of items) from school or home (i.e. paper plate or cup, shoestring, pencil, window blinds, pillow). As a class, brainstorm a list of other ways they can be used.

* Divide students in small groups (3 to 5 students). Put a list of objects on the chalkboard, or provide a box of common household objects and odds and ends for each activity group. Challenge the children to combine the objects in a different way to create a new product.

* Before your students begin to find their own problems and create unique inventions or innovations to solve them, you can assist them by taking them through some of the steps as a group. The procedure for identifying problems and finding solutions is explained below.

BRAINSTORMING

Brainstorming is a process of creative thinking used by an individual or by a group of people to generate numerous alternative ideas without judging them. Introduced by Alex Osborn in his book *Applied Imagination,* brainstorming is the crux of each of the stages of all problem-solving methods.

RULES FOR BRAINSTORMING

NO CRITICISM ALLOWED. People tend to automatically evaluate each suggested idea--their own as well as others. Both internal and external criticism are to be avoided while brainstorming. Neither positive nor negative comments are allowed. Either type inhibits the free flow of thought and requires time which interferes with the next rule. Write each spoken idea down as it is given and move on.

WORK FOR QUANTITY. Alex Osborn stated that "Quantity breeds quality." People must experience a "braindrain" (get all the common responses out of the way) before the innovative, creative ideas can surface; therefore, the more ideas, the more likely they are to be quality ideas.

HITCHHIKING WELCOME. Hitchhiking occurs when one member's idea produces a similar idea or an enhanced idea in another member. All ideas should be recorded.

FREEWHEELING ENCOURAGED. Outrageous, humorous, and seemingly unimportant ideas should be recorded. It is not uncommon for the most off-the-wall comment to be one that contains the solution for the problem.

Finding Problems Use the brainstorming technique to make a list of problems in the classroom. As a group, use the following steps to select one of the problems and identify a number of potential solutions:

* Use democratic process, consensus, or secret ballots to choose a problem to work on.

* Analyze and discuss the situation surrounding the problem using the following list of questions:
  What happens when we have this problem?
  When and where does the problem happen?
  How many people are affected by the problem?
  Why is it a problem for the people it affects?
  Do we have control over the problem? If not, who does?
  Have others had the same or similar problem?
  What did they do about it, if anything?

* Brainstorm possibilities for solving the problem. Make a list of many, varied, and unusual ways of solving the problem. Be sure to allow even the silliest possible solutions; creative thinking must have a positive, accepting environment in order to flourish.

Finding Solutions Follow the steps below to choose a class solution to the problem.

* Use democratic process, consensus, or secret ballots to choose one or more of the potential solutions from your brainstorm list. You may want to divide the class into groups, and let each one choose and work on a different idea.

* As a class or within the small groups, improve and refine the idea(s)
* Share the group solution(s) and/or invention(s) for solving the class problem.

* Decide how the solution(s) will be implemented in the classroom, and encourage the students to follow through.

Solving a "class" problem and creating a "class" invention helps students learn the process of creative thinking and problem solving. This preliminary practice will make it easier for them to work on their own invention projects in the next part of the lesson.

PROCEDURAL STEPS

DEVELOP AN INVENTION IDEA –Use the steps below to identify and select an idea for an original invention.

* Conduct a survey. Interview everyone you can think of to find out what problems need solutions. What kind of invention, tool, game, device, or idea would be helpful at home, work, or during leisure time?

* List the problems that need to be solved.

INVENTION IDEA SURVEY

One of the best ways to collect ideas for developing an innovation or invention is to take a survey. The more people you talk to, the more ideas you will get; talk to variety of people of all different ages and occupations. The following list of questions may help you:

1. What does not work as well as you would like it to work?

2. What problem(s) would you like to see solved?

3. What need(s) are not being filled?

4. If you could invent something to make your life easier, what would you invent?

5. What is the most annoying problem you have found

   at home?
   at school?
   at work?
   at the airport?
   on the road?
   at the supermarket?
   at the bank?
   at the shopping center?
   at the_____?

* Using the list of problems, decide which problems would be possible to work on. List the pros, cons and possible solution(s) for each possibility. Use this list to select the problem that provides the best opportunity for an inventive solution.

PLANNING YOUR INVENTION

PROBLEM - What is the problem you hope to solve?

ALTERNATIVES - List the possible solutions.

PROS & CONS - Make a list of positive and negative reasons to support each solution.

CRITERIA - List the criteria for judging the alternatives.

EQUIPMENT - What equipment will you need to complete your drawings and your invention model? (Ex: tape recorder, construction materials, writing instruments, etc)

SOURCES OF INFORMATION - List several sources where you will find information about your possible solution. People, books, films, places, etc.

FINAL PRODUCT - What form will your invention take? How will you share your results?

DECISION - What did you decide to invent? Why?

RESULTS - How did your invention plan work? What changes, if any, did you make?

* Begin an Inventor's Log or Journal. A record of your ideas and work will help develop your invention and protect it when it is completed. Use the Rules for Authentic Journal Keeping to help with your journal entries

RULES FOR AUTHENTIC JOURNAL KEEPING

* Using a bound notebook, make notes each day about the things you do and learn while working on your invention.

* Record your idea and how you got it.

* Write about problems you have and how you solve them.

* Write in ink and do not erase.

* Add sketches and drawings to make things clear.

* List all parts, sources, and costs of materials.

* Sign and date all entries at the time they are made and have them witnessed.

EVALUATE YOUR IDEA - Use the list of questions below to make sure that you can turn your idea into an invention. If you are not sure about the idea you have chosen after answering the questions, return to step one (1).

* Is my idea practical?
* Can it be made easily?
* Is it as simple as possible?
* Is it safe?
* Will it cost too much to make or use?
* Is my idea really new?
* Will it withstand use, or will it break easily?
* Is my idea similar to something else?
* Will people really use my invention? (Survey classmates or people in the neighborhood to document the idea's need or usefulness.)

COMPLETE THE INVENTION– When you are satisfied that your idea can become a useful invention, make a plan to complete your project. The following planning technique will save you a great deal of time and effort:

* Identify the problem and possible solution.

* Give your invention a name. Use the information in the box on page 45 for ideas.

* Collect materials to illustrate your invention and to make a model of it. You will need paper, pencil, and crayons or markers to draw your invention. You might use cardboard, paper, clay, wood, plastic, yarn, paper clips, and so forth to make a model. You might also want to use an art book or a book on model-making from your school library.

* Make a plan for completing your invention. List, in order, the steps you will need to take to finish your project.

* Think of the possible problems that might occur during your project's construction, and make a list. How would you solve them?

* Complete your invention. Ask your parents and teacher for assistance if you need help with the model.

NAMING YOUR INVENTION

An invention can be named in one of the following ways:

1. Use the inventor's name
   * Levi Strauss = LEVI'S® jeans
   * Louis Braille = Alphabet System

2. Use the components or ingredients of the invention
   * Root Beer
   * Peanut Butter

3. With initials or acronyms
   * IBM®
   * S.C.U.B.A.®

4. Use word combinations (notice repeated consonant sounds and rhyming words).
   * KIT KAT®
   * HULA HOOP®
   * PUDDING POPS®
   * CAP'N CRUNCH®

5. Use the product's function
   * SUPERSEAL®
   * DUSTBUSTER®
   * vacuum cleaner
   * hairbrush
   * earmuffs

EVALUATE THE EXPERIENCE– After your invention is complete, evaluate your experience as an inventor using the following questions.

What do you think of your invention?

Did it turn out as you had expected?

What was the same? What was different?

Did you change your plan during the construction of the model?

If so, how?

What was harder than you expected about the being an inventor?

What was easier?

Will you do anything differently the next time you invent something? What?

Now that you know how to be an inventor, how will you use what you have learned at school? At home? In your community?

What would you tell someone who was just learning to be an inventor?

CREATE AN ADVERTISEMENT - Discuss the visual effect created by a television commercial, magazine, or newspaper advertisement. Collect magazine or newspaper ads that are eye-catching and use the following questions to evaluate their appeal.

Which type of ads are more effective, those with more words or more pictures?

Why do you think so?

Which senses are most important to consider when designing an advertisement?

Why do you think they are important?

What else is important in a print or televised ad?

What elements should be included in an effective advertisement?

Using the information gathered in the previous discussion, create an advertisement for the invention constructed in this lesson. Consider entering it in the Judging Contest.

INQUIRY AND FOLLOW UP ACTIVITIES

Invite a local inventor to speak to the class. Since local inventors are not usually listed in the phone book, you can find them by calling a local patent attorney or your local intellectual property law association. Your community may also have a Patent and Trademark Depository Library or an inventor's society that you may contact. If not, most of major companies have a research and development department made up of people who think inventively for a living.

Develop a slogan or jingle for your invention. Discuss the terms "slogan" and "jingle" and the purpose of having a slogan for a product. List some popular slogans and jingles and use the following questions to evaluate them.

What makes a slogan or jingle effective?

What is the most effective slogan or jingle you can think of?

Why do you think it is effective?

What elements should be included in your slogan or jingle?

How will you tell if your slogan or jingle is effective?

Using the information gathered in the previous discussion, write slogans or jingles for the new inventions.

Record a Radio Promo A radio promotion often includes facts about the usefulness of an invention, a clever jingle or song, sound effects, or humor. The questions below will help identify the elements of an effective promotional advertisement.

What makes a radio promotion effective?

What is the most effective promotion you can think of?

Why do you think it is effective?

Are radio promotions effective by themselves, or do they need to be paired with another type of advertising? Why do you think so?

What elements are most effective in a radio promotion?

Should you include all the elements in one promotion? Why or why not?

Using the information gathered in the previous discussion, write and record audio tapes of promotional ads for the new inventions.

Marketing Miscellany Collect 5 or 6 objects and give them new uses. For instance, a toy hoop could be a waist reducer, and some strange looking kitchen gadget might be a new type of mosquito catcher.

Divide the class into small groups, and give each group one of the objects to work with. The group is to give the object a catchy name, write a slogan, draw an ad, and record a radio promotional ad.

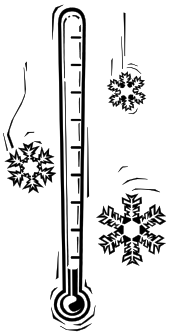
Sponsor a Young Inventor's Day - It is important that children be recognized for their inventive thinking. A special Young Inventor's Day can provide opportunities for the children to display their inventions and tell the story of how they got their idea and how it works. Invite older students, parents, community and business representatives and school officials to attend the event and share the children's' excitement. Prepare a certificate or other type of recognition that will be given to all children who participate in the Inventor's Day activities.

Stretch your Mind. For an outlandish look at getting very simple things done in the most difficult ways, consider the work of Rube Goldberg. His "Mousetrap" game type methods are quite impractical, but can help to expand your students' minds as they consider alternative methods of achieving their goals. For a lively look at inventions, visit the website

http://www.rubegoldberg.com

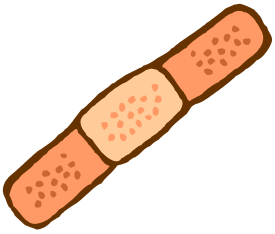
Learn More about Non-inventors. Not everyone likes new inventions. The Luddites were a group of people in England whose jobs and ways of life were threatened by the steam powered spinning wheel. This group set out to stop inventions from spreading by destroying them. In the Midwest of the United States, some farmers acted in the same way when Cyrus McCormick invented his grain reaper, putting those who cut grain and shocked it by hand out of business. The name "luddites" is now applied to any group or individual who does not embrace the change a new invention brings.

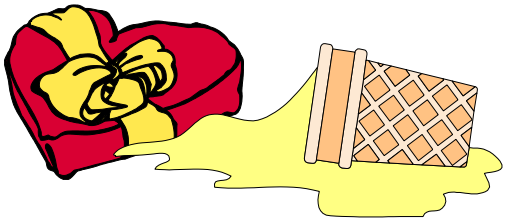
GREAT THINKERS AND THEIR INVENTIONS



Earmuffs On a cold December day in 1873, 13 year old Chester Greenwood wanted to protect his ears while ice skating. He found a piece of wire, and with his grandmother's help, padded the ends. His friends laughed at him until they realized that he was able to stay outside skating long after they had gone inside freezing. They stopped laughing and began to ask Chester to make ear covers for them, too. At age 17 Chester applied for a patent. For the next 60 years, Chester's factory made earmuffs, and earmuffs made Chester rich!

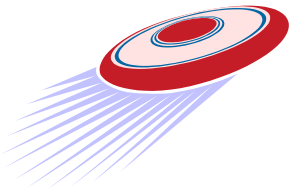
BAND-AID® In the early 1900s Mrs. Earl Dickson, an inexperienced cook, often burned and cut herself. Mr. Dickson, a Johnson and Johnson employee, got plenty of practice in hand bandaging! Out of concern for his wife's safety, he began to prepare bandages ahead of time so that his wife could apply them by herself. By combining a piece of surgical tape and a piece of gauze, he fashioned the first crude adhesive strip bandage!





LIFE-SAVERS® Candy During the hot summer of 1913, Clarence Crane, a chocolate candy manufacturer, found himself facing a dilemma. When he tried to ship his chocolates to candy shops in other cities they melted into gooey blobs. To avoid dealing with the "mess," his customers were postponed their orders until cool weather, and Mr. Crane was going broke. He needed to find a substitute for the melted chocolates, so experimented with hard candy which wouldn't melt. Using a machine designed for making medicine pills, Crane produced small, circular candies with a hole in the middle. The birth of LIFE SAVERS!

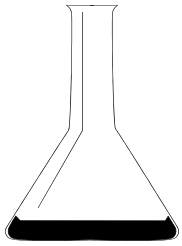
FRISBEE® More than 100 years ago in Bridgeport, Connecticut, William Russell Frisbie owned the Frisbie Pie Company. He baked his pies in a 10" round tin with a raised edge, wide rim, six small holes in the base, and "Frisbie Pies" pressed into the bottom. He delivered the pies locally to Yale University, where playing catch with the tins soon became a popular sport. Because the tins were slightly dangerous when a toss was missed, it became the custom to yell "Frisbie" when throwing a pie tin. In the 1940's, when plastic was invented, the pie-tin game was turned into a marketable product which is now produced by Wham-O Mfg. Co.



THOMAS EDISON AND OTHER YOUNG INVENTORS

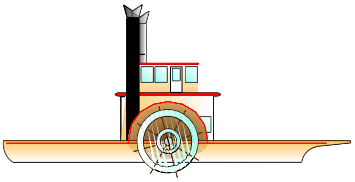
Thomas Alva Edison showed signs of inventive genius at a very early age. By the age of six, Thomas Edison's experiments with fire burned down his father's barn. By his early teens, he had designed and perfected his first real invention, an electrical cockroach control system consisting of parallel strips of tinfoil glued to a wall and wired to a powerful battery. He received the first of his 1,093 U.S. patents by age 22.

In 1858, one 14 year old schoolboy invented a rotary brush device to remove husks from wheat in the flour mill run by his friend's father. The young inventor's name? Alexander Graham Bell.



At 16, another young man saved pennies to buy materials for his chemistry experiments. While still a teenager, he decided to develop a commercial aluminum refining process. By 1885, when he was 25 years old, Charles Hall received a patent on this revolutionary electrolytic process.

Samuel Colt always enjoyed taking mechanical things apart to see how they worked, especially firearms. When he went to sea at the age of 15 in 1829, the ship's turning wheels sparked his idea for his new revolving pistol. He used his experience and imagination to design a device that could set off an underwater explosive by remote control, and developed the first underwater telegraph cable.



When Robert Fulton was ten years old, his teacher reported that "his head was so full of original ideas that there was no room for the storage of the contents of dusty books." By the time he was 31 in 1796, he had designed a submarine, a paddlewheel boat and an extensive system of navigation canals in the U.S. and Europe.

Guglielmo Marconi's early mechanical/electrical tinkering led, in 1895, to a wireless telegraph system which he installed in his home and garden. By 1901, he was able to send a message between Poldhu, Cornwall, and St. John's, Newfoundland, a distance of 2100 miles.

GREAT WOMEN INVENTORS

Inventions tell something about an inventor's place in his/her society, so it is not surprising that most women's inventions were related to childcare, housework, and healthcare until the mid 20th Century. While women have frequently come up with new ways to make their work easier, they have not always received credit for their ideas. Some women inventors who recognized that they lived in "a man's world," allowed men to patent their inventions.

In 1794 Eli Whitney received the patent for the cotton gin that revolutionized agriculture in the south. However, **Catherine Greene** is credited with sharing both the problem and her ideas for a solution with him. According to some historians his first model was fitted with wooden teeth, which did not work well. When Whitney was about to throw the unfinished gin aside, Mrs. Greene proposed that he use wire teeth to catch the cotton seeds, turning it into a successful invention.

Margaret Knight, remembered as "the female Edison," received a total of 26 patents for a wide variety of inventions in the 1880s and 1890s. They included a window frame and sash, machinery for cutting shoe soles, a device used to shut down textile machinery to prevent injury, and improvements to internal combustion engines. One patent was for machinery that would automatically fold and glue paper bags to create square bottoms, an invention which dramatically changed shopping habits. Workmen reportedly refused her advice when first installing the equipment because, "after all, what does a woman know about machines?"

Sarah Breedlove Walker, the daughter of former slaves, was orphaned at seven and widowed by 20. Madame Walker is credited with inventing hair lotions, creams, and an improved hair styling hot comb. Her Walker System, which included a broad offering of cosmetics, licensed Walker Agents and Walker Schools. She offered meaningful employment and personal growth to thousands of Walker Agents who were mostly Black women. Before Sarah Walker died in 1919, she was the first American woman self-made millionaire.

Did you know

* windshield wipers were patented by **Mary Anderson** in 1903?
* dandruff shampoo was patented by **Josie Stuart** in 1903?
* a dishwasher was patented by **Josephine Cochrane** in 1914?
* the first disposable diaper was patented by **Marion Donovan** in 1951?

Note: Much of the material in this section was drawn from the Minnesota Historical Society Exhibit, "Her Works Praise Her, Inventions by Women." For further information on women inventors, you may contact the Minnesota Historical Society's Traveling Exhibition Department at 612/297-4497.

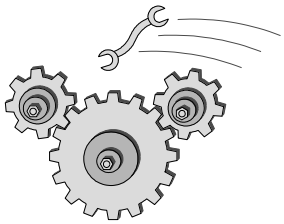
GREAT MINORITY INVENTORS

Between 1863 and 1913, approximately 1,200 inventions were patented by Black inventors. Many more were unidentified because they hid their race to avoid discrimination. Some sold their inventions to white men. The following stories are about a few of the great minority inventors.

Elijah McCoy. Have you ever heard of the term "real McCoy?" That term may apply to a famous Black inventor by the name of Elijah McCoy. He earned about 50 patents, but the most famous one was for a metal or glass cup that fed oil to bearings through a small-bore tube. Machinists and engineers who wanted genuine McCoy lubricators may have originated the term "the real McCoy." Elijah McCoy was born in Ontario, Canada, in 1843, the son of slaves who had fled Kentucky. He died in Michigan in 1929.

Benjamin Banneker. In 1753, Benjamin borrowed a pocket watch from a well-to-do neighbor. He took it apart and made a drawing of each component, then reassembled the watch and returned it, fully functioning, to its owner. From his drawings Banneker carved, out of wood, enlarged replicas of each part and constructed the first working wooden clock that kept accurate time and struck the hours in the U.S. He used it for more than 50 years. He became known as the "Afro-American Astronomer." He published an almanac and with his knowledge of mathematics and astronomy, he assisted in the surveying and planning of the new city of Washington, D.C.

Granville Woods, who had more than 60 patents, was known as the "Black Edison." Starting in 1874, when he was 18, he invented fifteen appliances for electric railways, improved Bell's telegraph, and created an electrical motor that made the underground subway possible. His system of tracking trains as they traveled averted many accidents and saved hundreds of lives.



In 1923, **Garrett Morgan** invented the traffic signal that saved thousands of lives when the automobile became popular, and developed a safety hood for firefighters that was later refined into a gas mask used by U.S. Army during World War I.

George Washington Carver changed the South with his many inventions. He created 325 products from peanuts, found 108 applications for sweet potatoes, and developed 75 products derived from pecans. He dedicated himself to teaching others, learning and working with nature. He taught poor farmers how to rotate crops to improve their soil and their cotton. George Washington Carver was a great scientist and inventor who learned to be a careful observer and who was honored throughout the world for his creation of new things.

TECHNOLOGY INVENTION TIMELINE

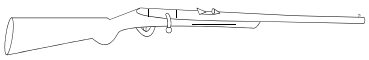
1752 Lightning Rod
Benjamin Franklin's electricity experiments lead him to a valuable application -- the lightning rod, which when placed at the apex of a barn, church steeple, or other structure, conducts lightning bolts harmlessly into the ground.

1776 Submarine
David Bushnell's "Turtle" submerges by taking water into its tanks and reverses the process to rise. It moves by means of a hand crank propeller. The "Turtle" is used in an attack on Lord Howe's Flagship "Eagle," but attempts to attach a mine to the Eagle's hull fail.

1790 First U.S. Patent
The United States issues its first patent to William Pollard of Philadelphia. His machine roves and spins cotton.

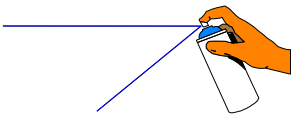
1794 Cotton Gin
Eli Whitney patents his machine to comb and deseed bolls of cotton. His invention makes possible a revolution in the cotton industry and the rise of "King Cotton" as the main cash crop in the South, but will never make him rich. Instead of buying his machine, farmers built bogus versions of their own.

1797 Interchangeable Parts



Eli Whitney contracts to manufacture 10,000 muskets for the U.S. Army. At the time, an entire musket would be made by a single person, without standardized measurements. Whitney divided the labor into several discrete steps and standardized parts to make them interchangeable.

1801 Steam-Powered Pumping Station
The Fairmount Water Works harnesses steam power to provide water for the city of Philadelphia.



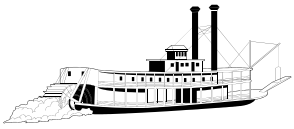
1803 Spray Gun
Dr. Alan de Vilbiss of Toledo, Ohio, invented this device to replace swabs as the method of applying medication to oral and nasal passages.

1805 Amphibious Vehicle
Oliver Evans' "Orukter Amphibolos" dredges the waters near the Philadelphia docks. Its steam-

powered engine drove either wooden wheels or a paddle wheel. Evans demonstrated his machine in Philadelphia's Center Square, where he passed the hat for money.

1806 Coffee Pot

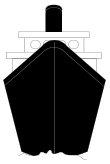
Coffee drinkers the world over no longer have to chew their brew. Benjamin Thompson, Count Rumford, invents a coffee pot with a metal sieve to strain away the grounds.



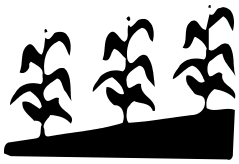
1807 Steamboat

Robert Fulton, former miniaturist and landscape painter, opens American rivers to two-way travel. His steamboat the "Clermont" travels 150 miles upstream between New York and Albany at an average speed of 5 mph.

1813 Armored Warship



Steam power enhances military power. Robert Fulton's "Demolos" sails. At 140 ft. in length, it carries a thirty 32-pound cannon.

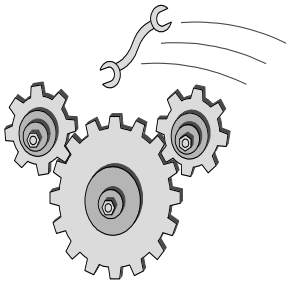


1814 Plough

Farmers had furrowed the rocky soil of New England with wooden-tipped ploughs. John Jethro Woods of Poplar Ridge, New York, creates a plough with a replaceable cast-iron tip, making farming in America easier.

1817 Erie Canal

Overland travel in the 1800s is slow and arduous. Engineers propose a plan to supplement natural water systems by digging a 363 mile canal to connect the Hudson River with Lake Erie. The "Seneca Chief" will make the inaugural run through the Erie Canal in 1825.



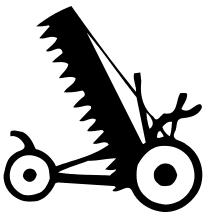
1818 Profile Lathe

Thomas Blanchard of Middlebury, Connecticut, builds a woodworking lathe that does the work of 13 men. His invention helps to lower wood prices.

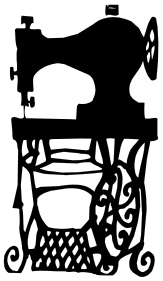
1830 Electro-magnetic Motor

Joseph Henry, Professor of Mathematics and Natural Science at the Albany Academy, built a motor employing the electromagnet, invented by William Sturgeon in London just five years earlier.

1831 Reaping Machine



The McCormick Reaper, which cut grain much faster than a man with a scythe, failed to catch on. McCormick sold the first unit around 1840; by 1844, only 50 had sold. After taking his operation to Chicago, McCormick prospered. By 1871 his company was selling 10,000 reapers per year.

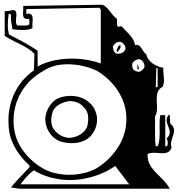


1833 Sewing Machine
Walter Hunt invents the first lock-stitch sewing machine, but loses interest and does not patent his invention. Later, Elias Howe secures patent on an original lock-stitch machine, but fails to manufacture and sell it. Still later, Isaac Singer infringes on Howe's patent to make his own machine, which makes Singer rich. Hunt also invents the safety pin, which he sells outright for $400.

1834 Threshing Machine
John A. and Hiram Abial Pitts invent a machine that automatically threshes and separates grain from chaff, freeing farmers from a slow and laborious process.

1836 Revolver
To finance the development of his "six shooter," Samuel Colt traveled the lecture circuit, giving demonstrations of laughing gas. Colt's new weapon failed to catch on, and he went bankrupt in 1842 at age 28. He reorganized and sold his first major order to the War Department during the Mexican War in 1846, and went on to become rich.

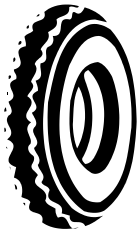
1837 Power Tools
Thomas Davenport of Brandon, Vermont, is one of the first to find a practical application for the electric motor. He uses a motor he built to power shop machinery and also builds the first electric model railroad car.



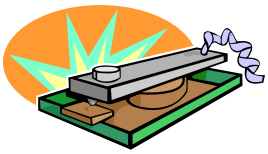
1840 Paint Tube
John Rand invents a collapsible metal squeeze tube. The container immediately hits markets in Europe, where it is used to hold and dispense artists' pigments.

1842 Ether Anesthesia
Crawford Williamson Long, of Jefferson, Georgia, performs the first operation using an ether-based anesthesia, when he removes a tumor from the neck of Mr. James Venable. Long will not reveal his discovery until 1849.

1843 Vulcanized Rubber
Rubber, so named because it could erase pencil, had long been considered a waterproofing agent, but in its natural state, it melted in hot weather and froze solid in the cold. After ten years of tireless work and abject poverty, Charles Goodyear perfects his process for "vulcanizing" rubber, or combining it with sulfur to create a soft, pliable substance unaffected by temperature.



1844 Telegraph



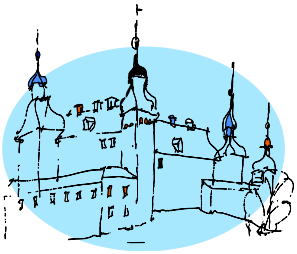
Samuel F.B. Morse demonstrates his telegraph by sending a message to Baltimore from the chambers of the Supreme Court in Washington, DC. The message, "What hath God wrought?," marks the beginning of a new era in communication.

1845 False Teeth

Cladius Ash helps Americans get a better grip on what they're eating. He creates a new type of artificial dental wear featuring individual porcelain teeth mounted with steel springs.

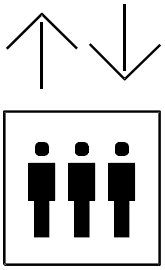
1846 Cylinder Printing Press

Richard M. Hoe creates a revolution in printing by rolling a cylinder over stationary plates of inked type and using the cylinder to make an impression on paper. This eliminated the need for making impressions directly from the type plates themselves, which were heavy and difficult to maneuver.



1851 Crystal Palace

In a glass conservatory in London, the Great Exhibition begins. Among the 14,000 exhibits were Colt's repeating pistol, Goodyear's vulcanized rubber, and Gail Borden's meat biscuit. More than six million visitors from around the world attended. The exhibition became a model for all World Fairs to come.



1857 Passenger Elevator

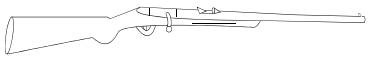
Elisha Graves Otis dramatically demonstrates his passenger elevator at the Crystal Palace Exposition in New York by cutting the elevator's cables as it ascends a 300 foot tower. Otis' unique safety braking system prevents the elevator from falling; his business prospects rise.

1858 Burglar Alarm

Edwin T. Holmes of Boston begins to sell electric burglar alarms. Later, his workshop will be used by Alexander Graham Bell as the young Bell pursues his invention of the telephone. Holmes will be the first person to have a home telephone.

1859 Oil Well

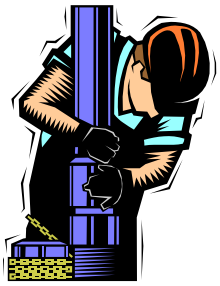
Drilling at Titusville, Pennsylvania, "Colonel" Edwin Drake strikes oil at a depth of 69.5 feet. Prior to that, oil, which had been used mostly as a lubricant and lamp fuel, had been obtained only at places where it seeped from the ground. Western Pennsylvania witnesses the world's first oil boom.



1860 Repeating Rifle
B. Tyler Henry, chief designer for Oliver Fisher Winchester's arms company, adapts a breech-loading rifle invented by Walter B. Hunt and creates a new lever action repeating rifle. First known as the Henry, the rifle will soon be famous as simply the Winchester.

1862 Battle of the Ironclads
For the first time, two armored ships battle each other at sea. The Union Monitor, designed from scratch by John Ericsson, features a two-cannon revolving turret and eight-inch plate armor. The Confederate Merrimac, a wooden hulled ship hastily outfitted with iron plates, holds it own against the Monitor. The two battle to a draw.

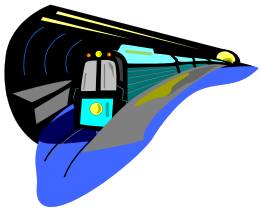
1863 Roller Skates
James Plimpton of Medford, Massachusetts, gives the world the first practical four-wheeled roller skate. This sets off a roller craze that quickly spreads across the U.S. and Europe.



1864 Oil Pipeline
Built in the oil fields at Pithole, Pennsylvania, Samuel van Syckel's five-mile, pump-operated pipeline made oil transport infinitely easier. No one appreciated this less than the Teamsters, who saw the pipeline as a threat to their business and destroyed it. The determined van Syckel hired a crew of "pipeline protectors" and rebuilt the pipeline.

1865 Web Offset Printing
William Bullock introduced a printing press that could feed paper on a continuous roll and print both sides of the paper at once. Used first by the Philadelphia Ledger, the machine would become an American standard. It would also kill its maker, who died when he accidentally fell into one of his presses.

1867 Barbed Wire
Lucien B. Smith of Kent, Ohio, invents the product that will close down the open cattle ranges by closing in cattle onto individual plots of privately owned land. I.L. Ellwood and Company's Glidden Steel Barb Wire will dominate the market; by 1890 the open range will be only a memory.



1870 Pneumatic Subway
Working in secret to hide his operation from Boss Tweed, who opposes it, Scientific American publisher Alfred Ely Beach builds a pneumatic subway under Broadway in New York. Beach's single subway car, which features upholstered chairs and chandeliers is driven along the 300 foot tunnel by a 100 horsepower blower.

1873 Typewriter

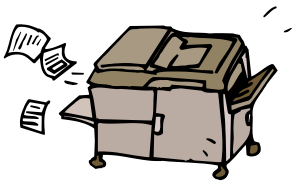
Inspired by a Scientific American article featuring a British attempt at a typing machine, Christopher Latham Sholes invents his own. In 1873 he sells an improved prototype to Remington and Sons, gunsmiths, of Ilion, New York, who begin to mass produce the machines. Among the first works to be produced on a typewriter is Mark Twain's "Adventures of Tom Sawyer."

1874 Structural Steel Bridge

Captain James Buchanan Eads finishes the bridge across the Mississippi at St. Louis. Using steel supplied by Andrew Carnegie, Eads incorporates a triple arch design, with spans measuring 502, 520, and 502 feet. The construction amazes the engineering world; Eads will be the first American engineer to be awarded the Albert Medal of the Royal Society of Arts in London.

1875 Electric Dental Drill

George F. Green of Kalamazoo, Michigan, replaces the agony of tooth decay with the anxiety of the dental drill when he invents an electric powered device to drill teeth.



1875 Mimeograph

While using paraffin in an attempt to invent and improve telegraphy tape, Thomas Alva Edison discovers a way to make duplicate copies of documents instead.

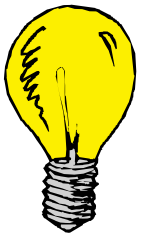
1876 Telephone

Alexander Graham Bell patents his telephone, built with the assistance of young self-trained engineer Thomas A. Watson. Elisha Gray, who developed a similar device at about the same time, will unsuccessfully challenge Bell's patent.

1877 Phonograph

Working with a team of engineers at his Menlo Park, New Jersey, laboratories, Thomas Alva Edison perfects a system of sound recording and transmission. The first recording replayed is a voice saying "Mary had a little lamb its fleece was white as snow."

1879 Incandescent Light Bulb



Backed by $30,000 in research funds provided by investors including J.P. Morgan and the Vanderbilts, Thomas Edison perfects an incandescent light bulb. The first commercial incandescent system will be installed at the New York printing firm of Hinds and Ketcham in January, 1881.

From “The American Experience” produced by Public Broadcasting Station WGBH in Boston, MA.

ADDITIONAL RESOURCES

Inventions don't generally happen by accident or in a random order: science and technology progress in a very logical way, with each new discovery leading on from the last. You can see that in our mini chronology of invention, below. It's not a complete history of everything; it's simply another way to explore the 450 or so detailed articles on our website.

http://www.explainthatstuff.com/timeline.html

Camp Invention is a one-week day camp, sponsored by the U.S. Patent and Trademark Office, for children entering grades 2-6. Camps are held at various locations (usually schools) around the U.S. The camp program includes a series of team work, creative problem solving and inventive thinking activities. The link below connects to the organization's home page.

http://www.invent.org/inspire/

The PatentCafe young inventors website includes a large variety of kid-friendly activities, parent and teacher lesson plans, and resources for young inventors. The teacher's page includes curricula that is divided by age and subject matter, links to grant sources, and email addresses for listserves and teacher chat rooms. The website is sponsored by a commercial entity that serves patent lawyers and inventors.
http://teacherweb.com/WI/DeForestAreaMiddleSchool/YoungInventorsWebQuest/h5.aspx

Kids Inventing!: A Handbook for Young Inventors - Susan Casey
ISBN: 978-0-471-66086-6 148 pages

http://www.wiley.com/WileyCDA/WileyTitle/productCd-0471660868.html

January 17th – Kids Inventors Day
http://www.kidinventorsday.com/

LESSON SOURCES

Lesson Compiled and Edited by:

Beth Drescher
County Extension Agent, Youth Development
K-State Research and Extension, Sedgwick County
7001 W. 21st St. N.
Wichita, KS 67205

Lesson Reviewed by:

J. Anthony Horsch
Coordinator of Education
Old Cowtown Museum
1865 Museum Blvd
Wichita, Kansas 67203

Resources:

The Inventive Thinking Curriculum Project
Author: Marion Canedo, Director of Early Childhood and Academy Programs
Editor: Ruth Ann Nyblod, Public Affairs Specialist
U.S. Patent and Trademark Office
Washington, D.C.

The American Experience
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"Imagination is more important than knowledge, for imagination embraces the world."
Albert Einstein