



Fourth Grade Curriculum Teacher's Guide

Prepared by
The Studebaker National Museum
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**STUDEBAKER NATIONAL MUSEUM
SCHOOL FIELD TRIPS
PLANNING YOUR FIELD TRIP**

The museum is open for school trips Monday through Friday from 10:00 a.m. to 5:00 p.m. Eastern time.

Choose dates and make your reservation:

- Phone: Contact Tour Coordinator, Harriet Shock at (574) 235-9714, or toll free at 1-888-391-5600.
- Email: giftshop@studebakermuseum.org
- Fax : (574) 235-5522, attention Harriet Shock

Watch your mailbox or fax. Once we've received your reservation, we will send you a confirmation with your assigned tour date and time as well as the admission fee for your group.

FEES

School field trip admission is \$2.00 per person, children and adults.

TOUR LENGTH

The tour of the Studebaker National Museum generally takes one and a half to two hours. A tour guide can be arranged at no extra charge. These docents are trained to work with school age children helping them to bring the student workbook information to the museum exhibits, asking questions and soliciting active participation.

ACCESSIBILITY

The museum and galleries are fully handicap accessible.

CANCELLATIONS

To receive a refund, cancellations must be made at least 48 hours prior to the tour. In the event of a cancellation by the museum, full refunds will be given.

CENTER FOR HISTORY

The Center for History and the Studebaker National Museum are adjacent to each other and tours of both facilities can be scheduled by calling the Studebaker National Museum or the Center for History.

STUDEBAKER NATIONAL MUSEUM
PRE-VISIT LESSON PLAN
FOR
ACTIVITIES RELATED TO STUDENT CURRICULUM

ACTIVITIES:

1. Read and discuss the Student Workbook
2. Complete Activity Sheets at end of the workbook.
3. Arrange to view the film “The Studebaker Story”. It is available from the Studebaker National Museum or the South Bend Public Library. If you are not from South Bend, you can borrow the film on Inter-Library loan.
4. Have students ask their family members if anyone from the family worked at Studebaker. If so, have them interview the person if they are available or have them gather as much information as is known by the family about the person who worked at Studebaker Corporation. Have those students write a one page report and share with the class what they found out.
5. Have the students research other area industries. Have them write a one page report on that industry and share it with the class or have them make a classroom scrapbook of articles and advertising for products made in the area.
6. Create an assembly line in the classroom for the production of an item. Afterwards have the students talk about what it was like to work on only one part of the production rather than create the whole item themselves.

THE STUDEBAKER STORY

HISTORICAL BACKGROUND AND IMPORTANT IDEAS

The 1850 Census reported a great change in the American way of life. The census noted that in earlier times “the bulk of general manufacturing done in the United States was carried on in the small shop and the household by the labor of the family or individual proprietors who apprenticed assistants”. By 1850, most manufacturing was done by a “system of factory labor, compensated by wages, and assisted by power”.

This Industrial Revolution helped bring about a transportation revolution. South Bend factories in the mid to late 19th century produced farm equipment and other necessities for life in rural America. Water power, steam power, and electricity were used to operate machinery. The same steam power that made factories possible also brought the steamboats and the railroads to carry products of farm and factory into the other regions of the country.

By the turn of the last century, the Studebaker Brothers Manufacturing Company was the largest wagon maker in the world. At the turn of the century, wagons, buggies, and carriages provided most of the transportation in our country. By 1925, the Indiana Highway Commission reported “horse-drawn traffic has almost disappeared from our main highways. Such traffic has decreased rapidly in the past six years and now consists only of the local farm traffic”.

The Studebaker Corporation was the only wagon company to successfully change production to automobiles. Indiana played a major role in the development of the automobile. Over 200 types of cars were produced in Indiana during the first two decades of the 20th century. Elwood Haynes, for example, developed one of the nation’s first automobiles in 1894. His Haynes Automobile Company sold more than seven thousand cars by 1916 but could not keep up with the assembly line production of Ford or General Motors.

There were many reasons for the decline of Indiana auto makers. Among them was the post World War I recession, the Great Depression and the lack of investment capital. The only Indiana auto maker that survived past World War II was Studebaker.

Teacher's Guide

3.1.4 Give examples of people, events, and developments that brought important changes to the local community or region. Developments in transportation.

The Early Years of South Bend and Studebaker Brothers Company.

In 1831, South Bend was just a group of log cabins and one framed house.

By 1837, the little village had grown into a town. It had around 1,200 people and many houses, shops, and stores.

In 1845, the University of Notre Dame was established north of the town. By the 1850, there were 1,652 people living in South Bend and it was growing bigger every year.

There was an industrial revolution taking place around the world. It was the reason that small towns kept growing into big cities.

What does the term “industrial revolution” mean?

In the early 1800s, many shops and stores were owned by an individual or by a small company, and had just a few employees. Most of the work was done by hand or small machines. By 1850, factories started to become more common and they employed many people. Factories were built beside a river because the water provided both transportation routes and energy for steam and electricity. South Bend, located on the St. Joseph River, was an ideal place for factories back in the 1800s. Another thing that helped South Bend grow into a town was the railroad. On Saturday, October 4, 1851, the railroad reached South Bend. Many people began to move here in order to start a business. Among them were Clement and Henry Studebaker.

Henry



Clement



Brothers Clement and Henry Studebaker moved from Ashland, Ohio to South Bend, Indiana in 1850. Clement found work as a school teacher and Henry worked as a blacksmith. By 1852, the brothers opened a blacksmith shop called H. and C. Studebaker on the corner of Jefferson Boulevard and Michigan Street. A bronze plaque marks the spot where the first shop was located.

A blacksmith works with metal. His tools include a forge and bellows, an anvil, and hammer and tongs. One of a blacksmith's jobs is shoeing horses. H. & C. Studebaker's first customer was a gentleman who needed his horse shod. He was charged \$.25 for the service.

In 1852, people relied on horses and horsedrawn vehicles for their transportation needs. The Studebaker brothers also made wagons, and built two wagons that first year. As the company grew, they built a large number of Farm Wagons like the one in the picture. Farm Wagons were typically painted red and green, with “STUDEBAKER” painted in yellow on the side of the wagon. This type of wagon is on display at the museum.

The picture on the right is the Studebaker office and shops around 1855. In 1857, the U.S. government ordered 100 wagons from the Studebakers. This order helped the Studebaker brothers expand their business.



The Studebaker Family

Clement and Henry Studebaker were the eldest sons of John and Rebecca Studebaker. The Studebaker family came to America in 1736 and settled near Gettysburg, Pennsylvania. John later moved the family to Ashland, Ohio where he had a blacksmith shop.

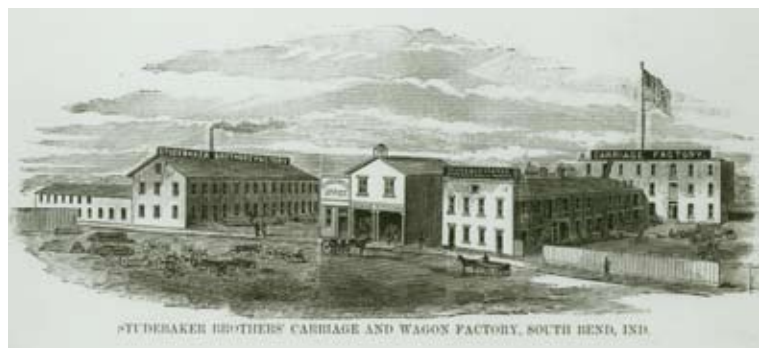


The Studebaker brothers came from a large family. There were thirteen children and ten of them lived to be adults - five brothers and five sisters.

In 1858, another brother named John Mohler joined Clement and Henry in the business. John had been living and working in California during the Gold Rush. He made wheelbarrows and got the nickname “Wheelbarrow Johnny”. When John joined the company, Henry retired to run his farm. The remaining two brothers, Peter and Jacob, joined the company in the 1860s. .

Studebaker Brothers Manufacturing Company: Wagons and Buggies

The Studebaker brothers built supply wagons and ambulances for the Union Army during the Civil War. The picture on the right is of the Studebaker factory in the early 1860s.





This picture to the left is what South Bend looked like around 1860.

In 1868, the company was renamed the Studebaker Brothers Manufacturing Company. By 1875, the company made its first million dollars, and by 1895, it was the world's largest wagon producer making more than 75,000 wagons and buggies a year. The factory buildings covered 98 acres and employed almost 3,000 people.

The Studebaker Brothers Manufacturing Company was the world's largest wagon producer, and was well known across the United States. Peter Studebaker led the company's sales department. He travelled all over the United States, making promoting Studebaker products and signing up new Studebaker dealers.

Four United States Presidents had Studebaker carriages. They were President Ulysses Grant (1873 carriage), President Benjamin Harrison (1889 carriage), and President William McKinley (1896 carriage). Teddy Roosevelt also owned a Studebaker carriage. In 1890, Clement Studebaker purchased the Lincoln Carriage, after having purchased the Lafayette Carriage three years earlier.

Studebaker Brothers Manufacturing Company: Automobiles

Studebaker introduced its first automobile in 1902. It was powered by electricity, as John M. Studebaker preferred electrics to gasoline powered cars. In 1902, Studebaker made 20 electric cars and trucks like the one pictured here.



1908 Electric Runabout

In the next ten years, the company produced over 1,800 electric vehicles. The top speed of an electric was around 13 miles an hour. There are three early 1900 electric cars on display at the museum.

In the early 1900s, an electric car offered several advantages over a horse. It was less expensive than caring for a horse and always ready when you needed it. Electrics were also more reliable than gasoline powered cars of the day, as well as much quieter and easier to operate.

In 1904, Studebaker began producing gasoline-powered automobiles. In 1920, Studebaker stopped building horsedrawn vehicles to concentrate exclusively on automobiles. The Studebaker Corporation was the only company to transition from making wagons to cars. Studebaker built many new factory buildings in South Bend during the 1920s, and by 1930 employed over 12,000 people.



Studebaker's models in the early 1930s included the President, Commander, Dictator, and the Studebaker Six.

In 1931, Studebaker introduced a car called the Rockne, named after legendary Notre Dame Football coach, Knute Rockne. Coach Rockne worked for Studebaker's Sales Department in addition to coaching football at Notre Dame. Unfortunately, Rockne died in a plane crash two months before the car was introduced.



Raymond Loewy

The stock market crash of 1929 led to the Great Depression. The Depression crippled the automobile industry and many smaller manufacturers went out of business. Studebaker was Indiana's only automobile manufacturer to survive the Great Depression.

In 1936, Studebaker hired the Raymond Loewy Associates design firm to head Studebaker's Design Department. Loewy stayed with Studebaker until 1955, and returned again in 1962 to create the Avanti. Many of Studebaker's iconic automobiles were designed by Loewy and his staff. Some of Studebaker's most famous products include its 1950-1951 "Bullet Nose" models, the 1953 Champion and Commander Starliner, and the 1963 Avanti.

1950 was Studebaker's record year, with over 400,000 cars and trucks built. The factory employed nearly 24,000 people.

However, by the mid 1950s, Studebaker was struggling to survive. The Studebaker Corporation was not a small company, but Ford, General Motors and Chrysler were three of the largest corporations in America. Studebaker simply did not have the resources to compete head-to-head at that level.

In 1959, Studebaker introduced the Lark. The Lark was a "compact" car, and had few competitors. It was a rousing success, as Studebaker enjoyed record profits. The next year, however, Ford, General Motors and Chrysler introduced their own compacts, and Studebaker once again lost money.



1950 Land Cruiser



1959 Lark

The Studebaker Avanti debuted in 1962, and was intended to be Studebaker's "image car", similar to what the Corvette is to Chevrolet. However, by this time, the Avanti did not, and could not save Studebaker.



1963 Avanti

In December of 1963, Studebaker closed its South Bend factory. Automobile production continued at its Hamilton, Ontario, Canada factory until March 17, 1966.

Studebaker: Military Production

Studebaker was supplied military vehicles for six different wars beginning with the Civil War.

The Civil War, Spanish-American War and World War I were fought primarily with horsedrawn equipment. For World War I, Studebaker built supply wagons, ambulances, water carts, and gun carriages

During World War II, Studebaker manufactured military trucks, airplane engines for B17 bombers and an all terrain vehicle called the “Weasel”.



World War I Ambulance



The Weasel

Studebaker also built army trucks and jet engines for the Korean War, as well as trucks for the Vietnam War.

When Studebaker closed its South Bend plant in December of 1963, its military contracts were taken over by the Kaiser-Jeep Corporation. This company later became AM General.

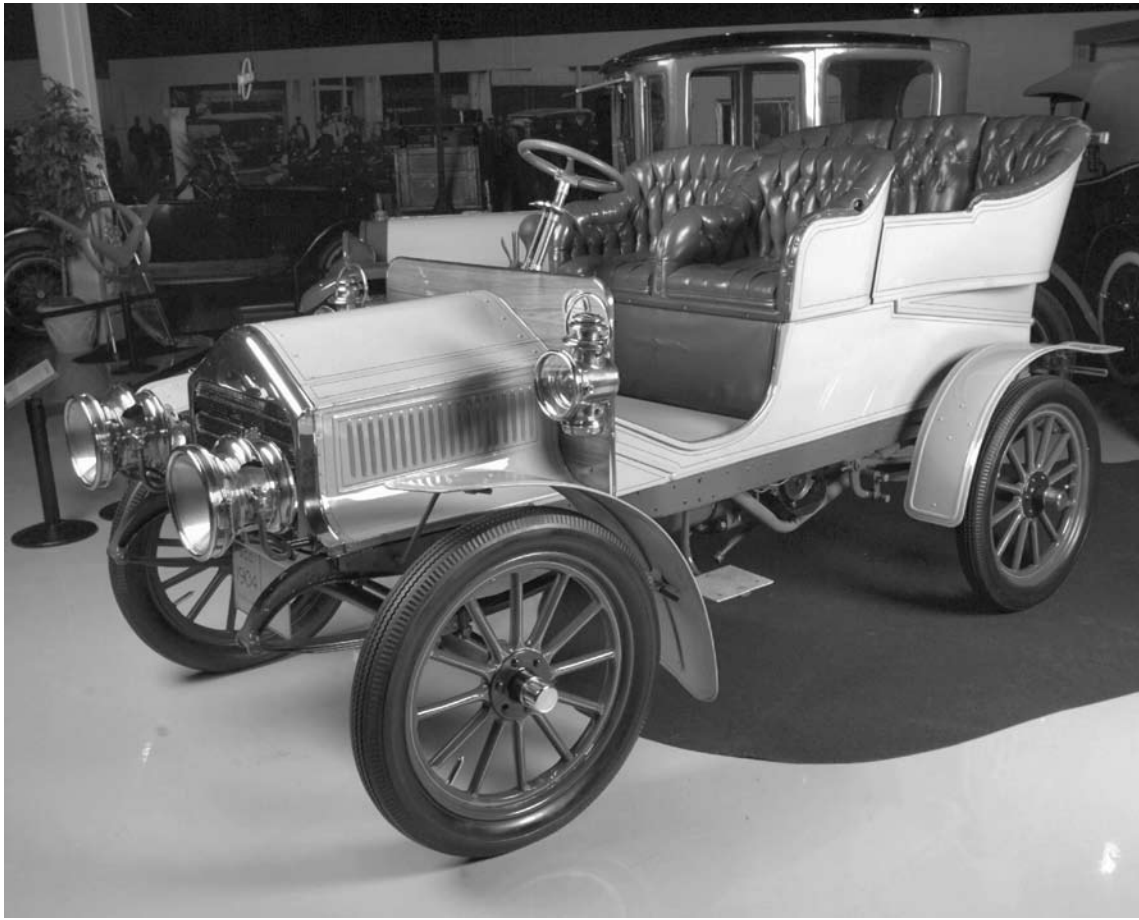
UNIT I A – ACTIVITY SHEET



Here are the five Studebaker brothers – Henry, Clement, John Mohler, Peter, and Jacob.

Identify who is who. The pictures at the museum will tell you if you got it right.

UNIT I B - ACTIVITY SHEET



1904 Studebaker Model C

This is the oldest surviving gas-powered Studebaker car.

What color do you think it was painted? What color were the seats?

Color it the way you think it would have looked and check it out when you visit the Studebaker museum.

**YOU SHOULD REPLACE THE HORSE WITH
STUDEBAKER COMMERCIAL VEHICLES, BECAUSE**

<p>1 Cost less to maintain. Horse maintenance charges continue to increase; "Studebaker" upkeep decreasing.</p> <p>2 Horse a perpetual expense while alive. Must always be fed and groomed, whether at work or idle.</p> <p>3 Studebaker Electric costs nothing when unemployed.</p> <p>4 Cuts down stable space required to less than one-half.</p> <p>5 So compact, can be stabled in smaller quarters, permitting less expensive housing.</p> <p>6 Requires fewer caretakers.</p> <p>7 Needs no attention on days when not in use.</p> <p>8 Lasts longer.</p> <p>9 Does the work of at least two horse vehicles, and sometimes three.</p> <p>10 Cuts down expense of drivers and wagon boys.</p> <p>11 Goes there and back while the horse is on the way.</p>	<p>12 Quicker deliveries; meeting the demands of the times.</p> <p>13 Working hours of a day not limited.</p> <p>14 Requires no time for rest.</p> <p>15 Less hampered and delayed in congested traffic.</p> <p>16 Garages inoffensive and can be located in convenient places near distributing centers. No insurance restriction.</p> <p>17 Always ready when you want them.</p> <p>18 Will work under weather and road conditions when the horse cannot.</p> <p>19 Can be worked overtime without handicapping efficiency.</p> <p>20 Requires less space for loading; saves time in loading and unloading. More can be loaded at same time.</p> <p>21 More cleanly and sanitary.</p> <p>22 Costs can always be accurately determined and gauged.</p> <p>23 Makes possible extension of free delivery limits at a lower cost.</p> <p>24 An indication of progressiveness, and a good advertisement.</p>
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What do you think is the best reason for choosing a car over a horse?

UNIT 1 D -Activity

Draw a line connecting words in the first column with words in the second column.

Designer

Clement

Studebaker founder

Raymond Loewy

Sports Car

Avanti

President

Commander

Wagon

Backward/Forward Car

Peggy

Weasel

Bullet Nose

Conestoga

Military vehicle

Benjamin Harrison

STUDEBAKER NATIONAL MUSEUM

POST-VISIT AND/OR LESSON PLAN TEST

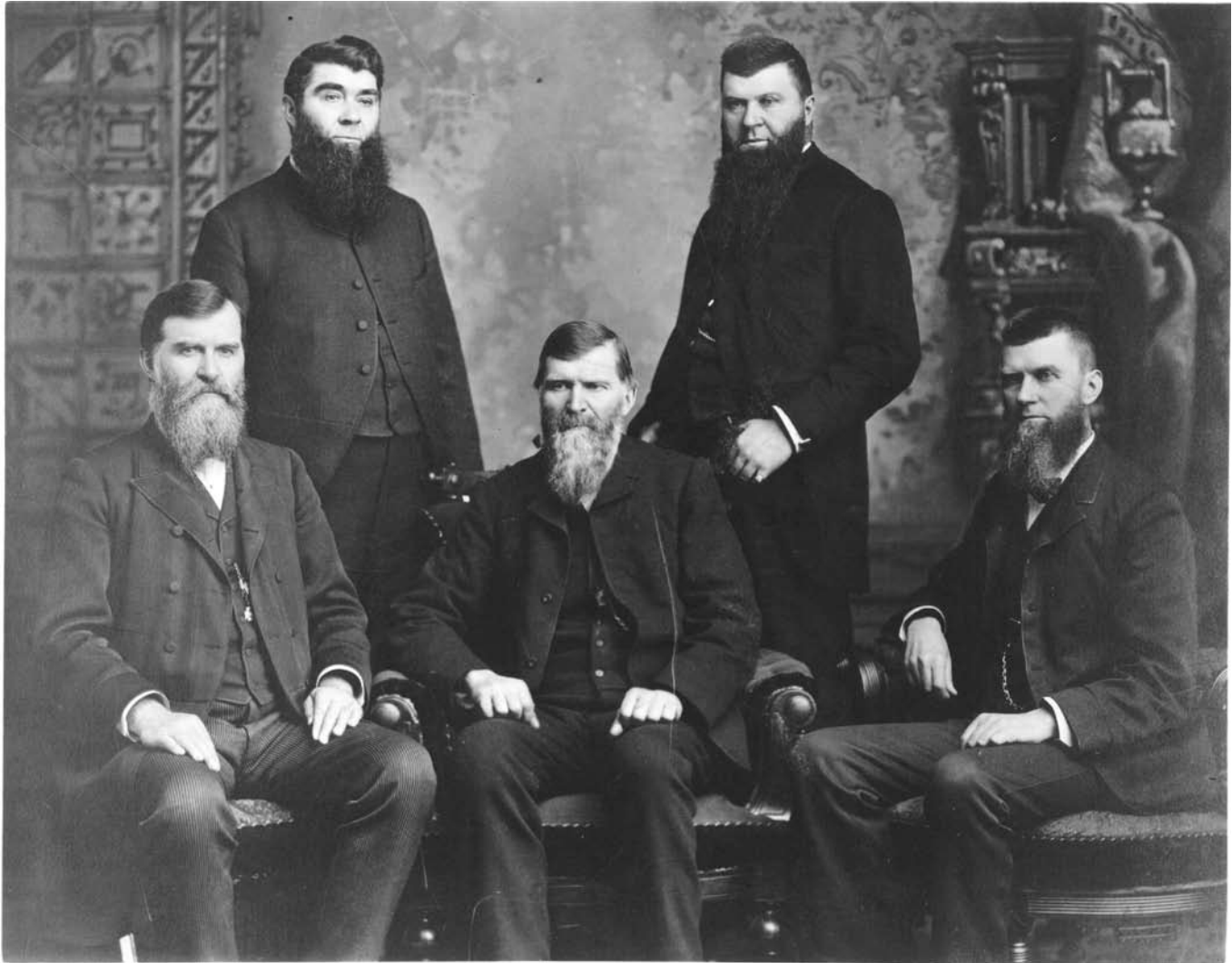
1. The development of the automobile completely changed the American way of life.
T F
2. A famous Studebaker buggy was the Wuzzer.
T F
3. By 1895, the Studebaker Brothers Manufacturing Company had become the world's largest wagon maker.
T F
4. At the turn of the 20th century, people rode in wagons, buggies, and carriages
T F
5. The Studebaker Corporation closed its doors in South Bend in 1950.
T F
6. The Avanti is made of fiberglass.
T F
7. Henry and Clement Studebaker were blacksmiths by trade.
T F
8. Raymond Loewy was a famous Studebaker designer.
T F
9. John Mohler Studebaker went to California to look for gold and ended up making and selling shoes.
T F
10. "The Bullet Nose" automobile design was inspired by the airplane industry.
T F

STUDEBAKER NATIONAL MUSEUM

POST-VISIT AND/OR LESSON PLAN TEST

True-False answer sheet

1. T
2. F
3. T
4. T
5. F
6. T
7. T
8. T
9. F
10. T



Henry
front row

Peter
back row

Clement
front row

Jacob
back row

John Mohler
front row

Here are the five Studebaker brothers – Henry, Clement, John Mohler, Peter, and Jacob – in a picture when they were older.



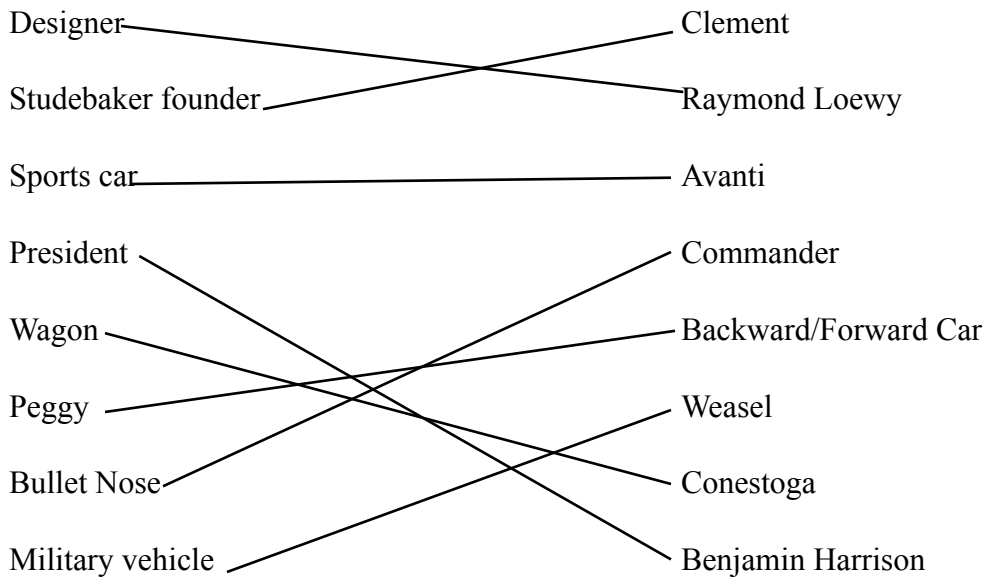
1904 Studebaker Model C

This is the oldest surviving gas-powered Studebaker car. It was built in 1904.

What color do you think it was painted? (GRAY) What color were the seats? (RED LEATHER) Color it the way you think it would have looked and check it out when you visit the Studebaker National Museum.

UNIT 1 E –Activity answer sheet

Draw a line connecting words in the first column with words in the second column.



STUDEBAKER NATIONAL MUSEUM
GLOSSARY

Anvil: A heavy block of iron or steel on which metal may be forged

Artifact: Anything made by human work or skill.

Assembly Line: An arrangement of industrial equipment and workers in which the product passes from one specialized operation to another until completed.

Automobile: An automobile (via French from Greek auto, self and Latin mobilis moving, a vehicle that moves itself rather than being moved by another vehicle or animal) or motor car (usually shortened to just car) is a wheeled passenger vehicle that carries its own motor. Most definitions of the term specify that automobiles are designed to run primarily on roads, to have seating for one to eight people, to typically have four wheels, and to be constructed principally for the transport of people rather than goods. There were 590 million passenger cars worldwide (roughly one car for every eleven people) as of 2002.

Blacksmith: One who works iron on an anvil and uses a forge to make horse shoes and other iron products.

Buggy: A lightweight carriage, as in horse and buggy.

Carriage: An inland haulage usually horse-drawn vehicle. It is especially designed for private passenger use and for comfort or elegance, though some are also used to transport goods. It may be light, smart and fast or heavy, large and comfortable.

Census: An official count of a population complete with statistics covering all aspects of life.

City: An urban settlement with a large population of several thousand or larger.

Conestoga wagon: A type of covered wagon used by American pioneers for westward travel.

Electric cars: The electric car, EV, or simply electric vehicle is a battery electric vehicle (BEV) that utilizes chemical energy stored in rechargeable battery packs. Electric vehicles use electric motors and motor controllers instead of internal combustion engines (ICEs). Vehicles using both electric motors and ICEs are examples of hybrid vehicles, and are not considered pure BEVs because they operate in a charge-sustaining mode.

Factory: A business for the manufacture or assembly of goods.

Forge: To heat metal and work into a shape. A fire pit that heats metal to working temperature.

Industrial Revolution: A name for the great changes brought about by factories in the 19th century.

Industry: Any specific branch of production or manufacture.

Labor: Physical or manual work done for hire.

Manufacture: To make or process a product on a large scale.

Product: Anything produced through labor.

Prototype: An original model on which later cars are to be based.

Town: A community of people ranging from a few hundred to several thousands. Usually a “town” is thought of as larger than a village but smaller than a city.

Truck: A vehicle usually used for transporting bulk goods, materials, or equipment. The word “truck” comes from the Greek “troches”, meaning “wheel.”

Village: A clustered human settlement or community with fixed buildings, generally located in rural areas and smaller than a town.

Wagon: A heavy four-wheeled vehicle pulled by animals such as horses, mules or oxen, and used for transportation of people or goods. Wagons are distinguished from carts (which have two wheels), and from lighter four-wheeled vehicles such as carriages. A wagon may be pulled by one animal or by several, often in pairs.

Wheelbarrow: A small hand-propelled vehicle, usually with just one wheel, designed to be pushed and guided by a single person using two handles to the rear.

Wheelwright: One who makes or repairs wheels.