

## Teacher's Guide: Matthew Edel Blacksmith Shop

### Goal:

Students will learn about Matthew Edel, blacksmithing, and life in rural Iowa in the late 19th and early 20th century.

### Objectives:

1. Identify Matthew Edel as a successful blacksmith and inventor
2. See a demonstration of blacksmithing techniques
3. See examples of Edel's inventions, tools and blacksmithing abilities
4. Develop an understanding of what of daily life was like in rural Iowa in the late 1800s and early 1900s

## Site Summary

### Matthew Edel and Family

Matthew Edel was born in 1856 in Stuttgart, Germany. He and his family (his parents and siblings) emigrated to the United States in 1869. They originally settled in Effingham, a town in central Illinois. Matthew moved to the Iowa City area in 1881 or early 1882. There he met the woman who became his wife, Mary Hoffman.

Married in April of 1883, Matthew and Mary had eight children: Joseph (1885-1945), Anton (1887-1959), Mary (1898-1977), John (1891-1961), Martin (1895-1916), Albert (1896-1949), Louis (1899-1978) and Leo (1902-1996). Louis was the son most involved with the blacksmith shop and operated the adjacent car repair garage which closed in 1952.

At the age of 12, Matthew would have been too young to have fully completed his apprenticeship (training). In Germany, blacksmiths were highly trained specialists, often with artistic skills.

### Blacksmithing

A blacksmith is a person who makes objects, such as tools, out of iron. The process used is called forging. In this process, the blacksmith places a piece of iron into a very hot coal fire (built in a forge). The heat causes the metal to become pliable which allows the blacksmith to pound the heated part against an anvil into the desired shape. The heating and shaping process is repeated until the item is complete. The main tools of the blacksmith are anvils, tongs and hammers. The tongs are necessary to hold the red-hot metal and hammers are used to shape the metal. Hammering is not only a way to change the shape of the metal, but is also a way to attach other pieces of metal.

Blacksmithing is an ancient profession. Many cultures have mythical figures, such as the Norse god Thor, who were blacksmiths. Blacksmithing is more than forging iron products. Many blacksmiths doubled as farriers (fair-ee-ers), people who shoe horses, mules, and oxen. In addition to making useful tools, some blacksmiths also make decorative pieces, such as fancy candle holders and iron gates.

Today, there is an increasing demand for trained blacksmiths. A blacksmith was necessary for the renovation of the Statue of Liberty. Because there were no drawings or charts listing the sizes of support pieces, a blacksmith was necessary on site to make items as they were needed.

## **The Blacksmith Shop**

Matthew bought the property in Haverhill for the shop in 1883, while living in Iowa City. He moved to Haverhill in February of 1883, and set up shop in the one and one-half story building already built on the property. He used the first floor of the building as his shop. His family lived on the second floor for several years until they built the house in the early 1890s.

In the late 19th century, nearly every small town in Iowa had a blacksmith shop. This was because most people depended on horsepower. Blacksmiths were needed to shoe horses, to repair wagons, and to sharpen and repair farm machinery such as plows. Thus, Matthew's shop included areas for each of these activities. On one side of the shop, he had a place to tether horses so that he could shoe them. Overhead, Matthew kept pre-prepared horseshoes for a large number of farmers in the area. The woodworking section has a raised wood floor, saws, and a partially assembled wheel on display. Throughout the shop are tools he used to repair and sharpen other farm equipment.

Matthew, like many other blacksmiths, made many of his own tools. It was very common for blacksmiths to make a tool they needed out of scraps lying around their shops. Examples of these tools are spread through the shop along with tools made in factories. In some of the self-manufactured tools, traces of what they were originally can still be seen. For example, Matthew made a band saw that wraps around two wagon wheels in the wood working section.

The shop appears very much the same as Matthew left it when he died in 1940. The layout and seeming clutter of the shop reflects what he thought was the most efficient way to work. Unlike most other surviving blacksmith shops the Edel Blacksmith Shop is not a reconstruction.

Adjacent to the blacksmith shop is Louis Edel's automobile repair garage. The garage was constructed as a way to expand the business by including car repair. Unlike the shop, no artifacts remain from when it was in use. Matthew and Louis built the garage during World War I. Louis closed it in 1952.

## **Matthew Edel: The Businessman**

Matthew Edel was an innovative inventor as well as a blacksmith. In 1881, he patented a wire grain harvester. This invention, however, was not a success. The same year, a twine grain harvester, was manufactured by Deering Marsh, and proved to be more successful.

After the harvester, Matthew's inventions were smaller and easier to produce in his shop. The tools he invented and patented were intended to make tasks easier. The Perfection De-Horning Clipper and the Perfection Wedge Cutter are two examples of this. Fliers printed to sell these items spoke of how simple they were to use and how smart Matthew was to design such tools.

In addition to being an inventor, Matthew was also an artist. Besides manufacturing tools and doing the other normal duties of a rural blacksmith, he also made iron cemetery crosses. These crosses attest to his ability and skill as a blacksmith. Examples of these crosses remain in the shop and can be seen in the local cemetery one block east.

## **Life in Turn-of-the-Century, Rural Iowa**

As the Edel family grew, it became necessary to build a house. The house, which is still standing, was built in the early 1890s. It is a typical house with five rooms downstairs (parlor, dining room, bedroom, kitchen, and pantry) and four rooms upstairs. The basement was used as a storage area for canned goods, garden produce, and homemade wine and beer. In the winter, the Edel family used coal stoves in the parlor and kitchen to heat the house. They added electricity after 1912, but never indoor plumbing. In place of indoor toilets, they family used the "two-holer" outhouse to the west of the house.

Another structure on the site is the "summer kitchen." This building was probably built about the same time as the house. Summer kitchens were common structures in the late 19th century. They served a variety of purposes. In the summer months, all the cooking and baking, as well as the laundry, was done there. This was to keep the house cooler. The summer kitchen was also where all the canning and the preserving of the garden produce was done.

When the Edels built their house, families had to provide their own food. The option of buying dinner at a grocery store or restaurant did not exist, especially in rural areas. This meant that families had to have large gardens and their own livestock. The Edel family grew potatoes and other garden vegetables. They also had cherry trees, walnut trees, apple trees, and grape vines in the yard. They raised chickens and probably a cow.

In addition to producing their own food, rural families had to make their own clothing, soap, and tools. Being self-sufficient required a lot of work. Children were required to help out around the house and yard. The Edel children weeded and helped with pest control in the gardens. Matthew liked to call this "earning their keep." The only daughter, Mary, learned to cook and sew, and took over these tasks for the family when her mother died in 1915.

The Edel family was very talented musically. Each member played an instrument: clarinet, violin, trombone, piano; enough instruments to form their own small band. Often, the family was asked to play together at community dances.

## **The Town of Haverhill**

When the Edels lived in Haverhill, it was a thriving town. All the community's needs were provided within walking distance. The church, school, post office, grocery, lumber company, bank, hotel, creamery, dance hall, and blacksmith shop/automobile garage served all of the community's needs. According to the 1990 Census, the population had decreased to 144. Many of the businesses in town have closed.

## Vocabulary

Students should become familiar with these vocabulary words before visiting the Matthew Edel Blacksmith Shop.

**Apprentice:** An individual who, through practice, is learning a skill or a craft from an expert; a type of training.

**Blacksmith:** A person who makes tools and other items from iron, using a hot fire, tongs, anvil and hammer.

**Emigrate:** To move from one country into another.

**Farrier:** Someone who puts horseshoes on horses.

**Forge:** To shape iron into the desired form by a process of heating and hammering; also the place where the blacksmith builds the fire.

**Patent:** A method of protecting an invention from being made and sold by others.

## Pre-Visit Activities

Before your visit, plan some classroom time to try one or more of the following activities.

Talk about museums and collections. Explain that a collection is a group of items assembled in a logical order and gathered because they have some kind of significance. Museums have collections that are studied and exhibited to the public. The collections are used to interpret the past, present, and sometimes the future.

Explain that museums use both two-dimensional and three-dimensional materials (called artifacts) to interpret history. An artifact can tell us much about the people, the time, and the region from which it came. It reveals what materials it is made from, when and where it was made, and how it was used. Sometimes its color and style tell us about popular trends. All of this helps us determine its relative value within the "material culture."

A historic site--such as the Matthew Edel Blacksmith Shop--is one type of museum that focuses on a specific place, person, or event. What places in your town or county would you make into historic sites? Make a list of these places and the persons, places, or events they represent.

Discuss blacksmithing and what you expect to see in a blacksmith shop.

## On-Site Activities

Include these activities in your visit to the Matthew Edel Blacksmith Shop.

As you tour the blacksmith shop, look at (but don't touch!) all the different tools lying on the work benches. Play detective and look for clues as to which tools are examples of factory produced and which were made by Matthew Edel. What are some of the clues?

One of the tools made by Matthew Edel is called a "whatzit." Modern blacksmiths are puzzled by it--they don't know what exactly it could have been used for. Make suggestions and help them solve the puzzle.

Watch a demonstration of a blacksmith at work (but don't get too close!). Notice how many times he has to pound the metal and reheat it. Ask if you can try to pick up the hammer. Imagine pounding with the hammer all day by the hot fire. Would you like to work as a blacksmith?

Do the following scavenger hunt (students should have a pencil and something to record their findings on):

In the blacksmith shop (remember not to touch anything)

1. Find the calendar hanging over the desk. What is the date?
2. Find the cemetery crosses. How many different designs are there to choose from? How many come with leaves? How much did they cost?
3. Find the examples of Matthew's inventions. Read the flier that he published about them. What were they called? How much did they cost?
4. Find the horseshoes hanging on the racks with the farmers' names. How many farmers did Matthew make horseshoes for?
5. Can you find any items that were probably not there when the shop was still open? If so, what are their names?

Outside the shop

1. Walk around the shop and look at the building itself. How many windows are there?
2. Draw a picture of the building. Is it shaped like a typical building or house?
3. Find the coal pile. Why might there be a pile of coal outside a blacksmith shop?

The other buildings

1. Count the number of pumps. How many pump handles are there?
2. Count the number of steps from the porch of the house to the outhouse. Be sure to follow the sidewalk (it used to be bordered by grapes). Would you like to use the outhouse in the middle of an Iowa winter?
3. On the east side of the summer kitchen there is a large storage bin. What might it have been used for?

One block east of the blacksmith shop is the town cemetery. Still marking the graves of the Edel family and other townspeople are iron crosses made by Matthew. How do the iron crosses compare to the stone markers?

## Post-Visit Activities

### Discussion

Ask some of the following questions after visiting the Matthew Edel Blacksmith Shop. After each question we give some suggested answers. Have your students expand on these answers.

- The job of the blacksmith has taken on mythical qualities. Gods, such as Thor, have been associated with iron working and legends have sprung up about mortal blacksmiths. Can you name other jobs, professions, or crafts that have stories like that? (Consider: farmers, carpenters, miners)
- After touring the blacksmith shop and possibly watching a demonstration of forging, would you like to be a blacksmith? Why or why not? What would it be like to live above a blacksmith shop or an automobile repair garage? (Consider: noise, smoke, not much light for both the shop and the apartment upstairs)
- Life in Iowa one hundred years ago was very different than it is today. After visiting the shop, can you name some differences? How does the size of the Edel family compare with your family? (Consider: the Edel family was probably much larger) Do you make your own soap? Do you can your own fruits and vegetables? Do you make your own clothes?
- The Edel family, like many other families one hundred years ago, prepared most of their own food. There were some items, however, that they could not grow in Iowa. Can you name some? (Consider: sugar, tea, coffee, spices) Since they couldn't get in the car and go to Hy-Vee, how might they have acquired these items?

### Detective Work

Here are suggested themes for student research. Their results might be presented in both written and oral reports.

- Investigate what it was like to live in Iowa 100 years ago (*The Goldfinch* is a good place to start). What did your clothes look like? What games did you play? What did your house look like? How many brothers and sisters did you have? Draw pictures of how you dressed in the summer and winter. What are some differences between then and now?
- Look in your tool shed, garage, basement, work room. Examine the tools. How are they different from those you saw in the blacksmith shop? What changes do you see? Would you see a saw made from wagon wheels on "Home Improvement"? Why not?
- Much of what we know about Matthew Edel's life comes from family history. Your family has a history too. Talk to your parents and other family and friends. Find out when your family moved to Iowa. Where did they come from? Why did they come? Who came first? Where did they live? Where did they work? What types of stories do family members tell? Be sure to write all of this down, even if you and your parents were the first family members to come to Iowa. Someday

someone in your family will want to know this bit of history. (See "Climbing the Family Tree" in *The Goldfinch* vol. 17, no. 1, Fall 1995 for further instructions.)

- When Matthew Edel began working in his shop, farming was done with horses or other forms of animal power. In the United States, this is not usually the case anymore. How has farming changed in one hundred years? How might another 100 years change it? The Amish and Old Order Mennonites still use horses for farm work. What are some differences between their lifestyles and the lifestyles of other Iowa farmers?
- Matthew and his son Louis added the automobile repair garage onto the blacksmith shop as a way of expanding the business. Automobile mechanic is just one job that developed from blacksmithing. What other occupations have taken over the duties of a blacksmith?
- Matthew emigrated with his parents and siblings to the United States from Germany in the late 1860s or early 1870s, and then moved to Iowa in 1881. This was during a time when a lot of families were moving, either to a new country, such as the United States, or to a new area, such as Iowa. Why were so many people moving? What new experiences or problems did moving create?

## Doing History

These activities may be used to further explore ideas presented by your visit. You may want to adjust the activities to the students' interests and abilities.

- Matthew Edel was an inventor as well as a blacksmith. He invented small tools to make tasks easier and faster. Invent your own tool to make a task easier. Name it, draw a picture of it, and write a flier to sell it to your friends. Try to make your tool. Does it work like you thought it would?
- The Edel family enjoyed music and they all played instruments. Sometimes they even played at the local dance hall for community dances. What were the dances like? What songs might they have played? See if you can find sheet music or recordings of popular music from then and play it for the class. Do you like this music? Have you heard it before?
- In rural Iowa one hundred years ago many families had to grow their own food. The Edels had large gardens and in the fall preserved food to use in the winter. Does anyone in your family do that? Do you have family recipes passed down from grandmothers for canning, baking, or cooking?
- Imagine you live in a small Iowa town around the year 1900. Write a short story or a play (or pretend you're writing a diary) about your daily life. Include schoolwork, chores, meals, games, and clothes. Then write a similar story, play, or diary set in the present. How are they different? How are they the same?
- Many stories, poems, and movies have been about blacksmiths. Write your own story or poem about a blacksmith or Matthew Edel. Alternatively, read some of the legends and stories about blacksmiths and draw a picture to illustrate one.

## Resources

These materials will help you learn more about the Matthew Edel Blacksmith Shop, blacksmithing, and life in rural Iowa 100 years ago. Some items may only be available through interlibrary loan so allow plenty of time to obtain a resource.

### **Books, Articles, and Videos: 4th-8th Grade**

["Home and Family Life." \*The Goldfinch\*. Vol. 17, No. 3.](#) (State Historical Society of Iowa, School Library)

["Iowa in 1885." \*The Goldfinch\*. Vol. 6, No. 3.](#) (State Historical Society of Iowa, School Library)

["Life on the Iowa Prairies." \*The Goldfinch\*. Vol. 7, No. 2.](#) (State Historical Society of Iowa, School Library)

["One Room Schools in Iowa." \*The Goldfinch\*. Vol. 16, No. 1.](#) (State Historical Society of Iowa, School Library)

### **Books, Articles, and Videos: 9th Grade-Adult**

Council for Small Industries in Rural Areas. *The Blacksmith's Craft*. New York: Macmillan, 1987. (Public Library)

*Haverhill, Iowa Centennial Book*. Haverhill: 1982. (State Historical Society of Iowa)

Hawley, J. E. *The Blacksmith and His Art*. Phoenix: J. E. Hawley, 1976. (Public Library)

Robins, Frederick William. *The Smith: The Traditions and Lore of an Ancient Craft*. London: Rider and Co., 1953. (Public Library)

Weyger, Alexander. *The Modern Blacksmith*. New York: Van Nostrand Reinhold, 1974. (Public Library)