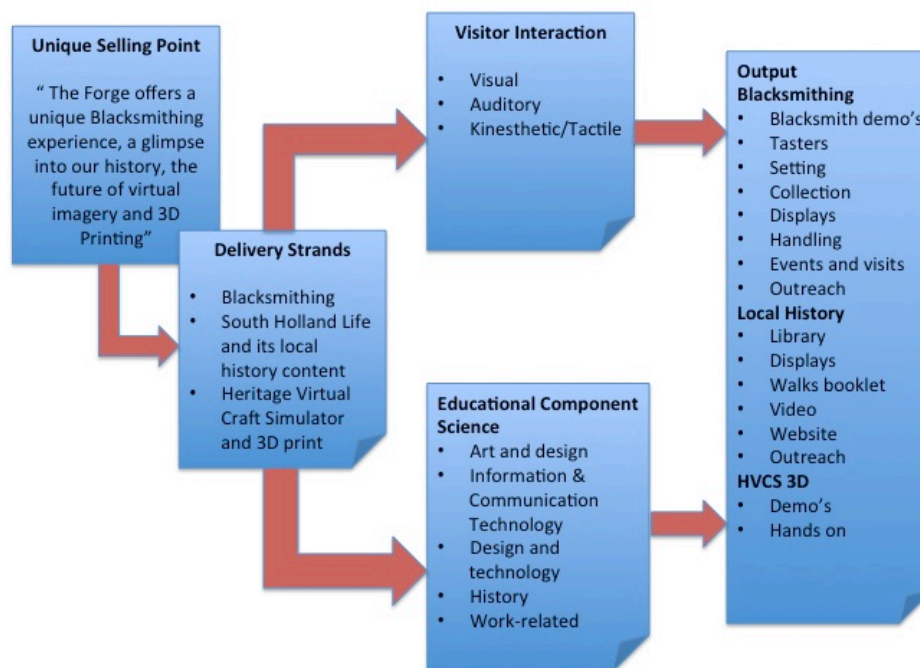


# Chain Bridge Forge - Visitor Interaction and Educational Content

## 1.0 Overview

Visitors to Chain Bridge Forge will interact differently with the Forge, its exhibits/activities. By maximizing this experience we can ensure that the visitor gains the most from his/her visit. Appendix A has the notes from a workshop facilitated by Sarah Oswald of PLB Consulting where we explored the visitor expectations.

This document attempts to explore how we can improve this experience through looking at visitor preferred learning styles and how this can be maximized for the National Curriculum.



## 2.0 Visitor Interaction

This section addresses a number of styles of learning and specifies how the Forge might address these styles and maximize the visitor experience.

The Forge has selected the following styles as their primary communication paths for visitors.

- Visual
- Auditory
- Kinesthetic/Tactile

These channels are described as follows:

- **Visual learners: - learn through seeing...**

These visitors need to interact with the guide's body language and facial expression to fully understand what the Forge has to offer. They may think in pictures and learn best from visual displays including: diagrams, illustrated textbooks, videos and hand-outs. .

- **Auditory learners: - learn through listening...**

The visitors learn best through listening to a Forge guide, discussion or talking things through and listening to what others have to say. Auditory learners interpret the underlying meanings of speech through listening to tone of voice, pitch, speed and other nuances. Written information may have little meaning until it is heard.

- **Tactile/kinesthetic learners: - learn through, moving, doing and touching...**

Tactile/kinesthetic persons learn best through a hands-on approach, actively exploring the physical world around them. They may find it hard to sit still for long periods and may become distracted by their need for activity and exploration.

The Forge meets these learn styles as defined in the table below.

Strands in the Forge	Visual	Auditory	Kinesthetic
Blacksmithing	<ul style="list-style-type: none"> <li>• Blacksmithing demos</li> <li>• View building and artefacts</li> <li>• Video</li> <li>• Interactive Displays</li> <li>• Website</li> <li>• Product</li> </ul>	<ul style="list-style-type: none"> <li>• Sounds of the Forge</li> <li>• Guides conversation</li> <li>• Video</li> <li>• Oral History</li> <li>• Talks</li> </ul>	<ul style="list-style-type: none"> <li>• Blacksmithing Taster</li> <li>• Handling of artefacts and tools</li> </ul>
Local History	<ul style="list-style-type: none"> <li>• Display boards</li> <li>• Video</li> <li>• Website</li> <li>• Social media</li> </ul>	<ul style="list-style-type: none"> <li>• Forge guides</li> <li>• Shared memories</li> <li>• Website</li> <li>• Oral history</li> <li>• Talks</li> </ul>	<ul style="list-style-type: none"> <li>• Historic Spalding Walks</li> </ul>
HCVS 3D Print	<ul style="list-style-type: none"> <li>• Printing process</li> <li>• Product</li> <li>• Website</li> <li>• Educational material</li> </ul>	<ul style="list-style-type: none"> <li>• Talks</li> </ul>	<ul style="list-style-type: none"> <li>• Hands on experience</li> </ul>

### 3.0 Educational Element as defined by the National Curriculum

The national curriculum provides pupils with an introduction to the essential knowledge that they need. It introduces pupils to the best that has been thought and said; and helps engender an appreciation of human creativity and achievement.

The national curriculum is just one element in the education of every child. There is time and space in the school day and in each week, term and year to range beyond the national curriculum specifications. The national curriculum provides an outline of core knowledge around which teachers can develop exciting and stimulating lessons to promote the development of pupils' knowledge.

The Forge through the strands of Blacksmithing, Local History and HCVS it offers exciting opportunities to explore a practical application of classroom formal lessons. We believe by offering a range of "in school" visits and/or visiting the Forge we can enrich the National

Curriculum and pupil experience. It is also important to ensure that we also attract other young people organisations such as Scouting and Duke of Edinburgh in their need to complete strands of their learning.

The Forge believes it can meet the needs of the National Curriculum as described in the following table.

	<b>Key stage 1</b>	<b>Key stage 2</b>	<b>Key stage 3</b>	<b>Key Stage 4</b>
<b>Age</b>	5–7	7 – 11	11 – 14	<b>14–16</b>
<b>Subjects</b>				
English	Not Available	Not Available	Not Available	Not Available
Mathematics	Practical Measurement	Not Available	Not Available	Not Available
Science	Not Available	Not Available	Not Available	Not Available
Art and design	yes	yes	yes	yes
Citizenship	Not Available	Not Available	Not Available	Not Available
Information & Communication Technology	Not Available	Not Available	Not Available	Not Available
Design and technology	yes	yes	yes	yes
Languages	Not Available	Not Available	Not Available	Not Available
History	Yes	Yes	Yes	Not Available
Physical Education	Not Available	Not Available	Not Available	Not Available
Geography	Not Available	Not Available	Not Available	Not Available
Music	Not Available	Not Available	Not Available	Not Available
Citizenship	Not Available	Not Available	Not Available	Not Available
Work-related				Possible

In complying with the National Curriculum the Forge can offer the following:

- Mathematics

Practical measurement using traditional methods (see Appendix B – Wheel Shoeing)

- Art and design

Both Blacksmithing and 3D printing can be used as vehicles to explore art forms. The Forge is a treasure trove of tools and equipment which provides an interesting real life sketching environment.

- Design and technology

Both Blacksmithing and 3D printing can be used as vehicles to take students through the design to manufacture lifecycle.

- History

The Forge offers a historic building linked to a craft, which was at the centre of the community. Blacksmithing and the later Farrier have been crafts, which have been practised since pre Roman times and can be plotted through this time to the present day.

The Forge website [www.southhollandlife.com](http://www.southhollandlife.com) has a resource of local history information which can be used in local history studies.

Work Experience

The Forge is able to offer limited work experience.

## Appendix A – Notes from Interpretation Workshop

### Audience

#### Primary

Groups	Needs/ interests
<b>Locals</b> <ul style="list-style-type: none"> <li>• Senior Citizens</li> <li>• Adult – Middle age</li> <li>• Retirees (incoming)</li> </ul>	Shared memories Hand on and more activity based content More material (lots of time and have background to become volunteers)
<b>Special interest/ visitors/</b>	Technical interest in the subject and want to find out more
<b>Day/weekend visitors</b>	Develop connection with visitors and within a Spalding context promote Blacksmith/Farrier
<b>Schools</b>	Link to National Curriculum develop to be a resource for teachers and students

#### Secondary

Groups	Needs/ interests
<b>Local immigrants</b>	Probably would have good understanding from the work Blacksmith in the country of origin. However do not develop any special resources until demand is demonstrated
<b>Family</b>	Interactive and Activity sheet
<b>Schools</b>	Develop education packs and materials
<b>Trainees</b>	Develop training materials and Blacksmiths

### 3.0 Key Themes

#### Blacksmith Craft/ Farrier (Shoeing Smith)

- It's key to show how metal is shaped by the application of heat and force.

#### Local History

- Chain Bridge Forge served the community of Spalding and its industries on the river and in the Farms

- **THIS IS THE LAST WORKING FORGE IN SPALDING** - as being the main / overarching message and also your USP for marketing - will be useful in setting up your briefs for any marketing materials / activity

#### **Chain Bridge Forge**

- **Continues to be part of our lives in Spalding**

#### **People**

- **Tell the story of the people that have worked the forge**
- **Skills passed from father to son if reluctantly sometimes**
- **What the Blacksmiths and others did in and around the forge from day to day for different periods and where they lived**

## 4.0 Methods of telling the Stories

MEDIA	PRIORITY
Stewards	Train so that they can welcome visitors and sufficiently knowledgeable to answer and engage in conversations with visitors. Flexible. Particularly useful when interacting with older members and able to manage space for safe operations
Graphics	Limited number sufficient to explain concept Simple timeline
Film (3 to 5min max)	Provides movement and can be shown when demonstration are not available Flexible and can be regularly updated
Dressing Up	Aprons for dressing up for children. Guides to wear costumes for theme days
Audio/ Oral History	Continue research to gather information. Edit to create sound bit of 30 sec- 1min per topic
Smells	Help create atmosphere
Guide Book (sales)	
Interactive displays links database	Develop a solution to enable virtual access
Exterior Displays	Graphic with embedded moving images
Demonstrations	Train and create a pool of Blacksmith, which are able to demonstrations. Create teaching aids to support. Create a list of expert Blacksmiths
Feedback	Visitor book Pin board for suggestions Feedback sheets
Collections Display	Maintain workshop with no/minimal signs ensure return of authentic feel Develop activity sheet for children
Hands on Objects	Establish actual items which can be handled and look at displaying this on work benches
Seating	Have a limited number of seats which used as required

NOTE: Priorities coloured red are significant priority

## Appendix B – Visit Programme

<b>Date of the Visit:</b>	24 <sup>th</sup> April 2014
<b>Name of Organisation:</b>	6 <sup>th</sup> Form of Copthill School
<b>Person in charge:</b>	Helen Schofield
<b>Telephone No:</b>	
<b>Time of Arrival:</b>	13.00
<b>Number of Visitors</b>	36 children and 4 staff
<b>Chain Bridge Forge Lead</b>	Geoff Taylor – 07960 587724

### On Arrival:

A member of Chain Bridge Forge will meet you at your transport and ensure you are safely parked and help escort you to the Forge. The group will be marshaled outside the Forge on the lower walkway and presentation will be given on a summary of the Forge, activities and Health and Safety.

Note if it is raining then this will take place within the Forge. Prior to the visit we hope you will have divided the group into 4 teams of 9

### Split in Groups:

Each group will be assigned a different area of the Forge.

- Wheel shoeing – objective to understand why and how metal tyres were added to wooden cart wheels. There will also be a practical element of measurement using a traveler rather than a ruler. Blacksmiths didn't use a ruler they used a metal disc called a traveler and counted the number of revolutions to do quite precise measurement. The team will be asked to measure the outside of a cartwheel. See attached worksheet estimated time 20mins.
- Community Room – objective to listen to a short talk about the port of Spalding – See worksheet, estimated time 20mins.
- Forge – Students will watch a demonstration on Blacksmithing and one of the team members will be allowed to be a Blacksmith. See worksheet estimated time 20mins.
- Shoeing Shed – Watch the video 3D Printing and complete Forge Challenges

### Timings:

Each group will have 20 mins at each location. The groups will then rotate.

### End of Visit:

The party will come together in a convenient location and the children will be asked if they have enjoyed the visit and what they liked best.



## Summary of Visit and Health & Safety

### History Summary

This is a unique project about Chain Bridge Forge a Blacksmith workshop which is believed to be 200 years old and was very much part of Spalding and the community. It is believed that the Blacksmith workshop started in the mid 1700's however the current building was in place by 1800. Records show that the earliest known Blacksmith was a Joseph Rose and by 1826 this has changed to a Francis South. Again in 1850's the Forge had changed hands again and was owned by Edward Fisher. We are lucky to have Edward Fisher's Daybook describing the work he was doing and his customers. Much of his work was shoeing horses, serving the farming community and also repairing boats which used the port of Spalding. The Dodd family took ownership in 1898 and three generations of the family have worked it. Geoff Dodd is in his 80's and has amazing recollections of his life and documents which explain the working of the Forge and this must be preserved for future generations. Geoff lives opposite the forge and is actively involved in making this project a success and testament to the family's work. The Blacksmith was often the Mister Fixit in the community and someone you turned to when a horse needed shoeing or a farm implement needed urgent repair and this stretched to fixing boys trolleys for the local children for the price of a Mars bar. Times changed and farming became more complex and there were fewer horses to shoe therefore the role of the Blacksmith had to change and for Geoff Dodd this meant building floats for the local Flower Parade.

The Forge also captures the memories of the people it served and displays this information to the benefit of the community and local schools.

### Activities

A typical visit will last approximately one and a half hours. As space is restricted the group will be divided into teams and rotate around the different activities. Each activity will be led by a volunteer from the Forge and will include:

- Meet a Blacksmith and experience the heat, noise and activities of the Forge in action! The Blacksmith will explain the tools of his trade and demonstrate the processes involved in making an object such as a horseshoe.
- A unique and exciting opportunity to handle a selection of unusual and everyday items made in the Forge from Victorian times onwards, and meet the challenge of identifying the objects and their uses
- Discover how and why Victorian cartwheels were shoed. This activity will include watching some video clips, a question and answer session, discovering how much math's was involved and the opportunity to see a fully shoed wheel!
- Discover the new world of 3D printing
- Take part in Forge Challenges
- Understand life around the Forge/ Port of Spalding in the early 1900's
- See horseshoeing tools and watch video

### Time Table

- **13.00 Arrive at Forge**
- **13.10 Introduction to the Forge and divide into groups**
- **13.20 Start Group work**
- **13.40 First Change**
- **14.00 Second Change**
- **14.20 Third Change**

- **14.40 Forth Change**
- **15.00 Leave the Forge**

## Health & Safety

- Due to space restrictions the recommended number of people for each group visit is thirty
- The Forge is located on the side of the High St which is part of one-way traffic system. Although there is no parking adjacent to the Forge, coaches can drop off immediately outside the building on arrival and there is parking nearby.
- There is a disabled toilet on site available for use by all visitors
- Chain Bridge Forge is a working museum. Care has been taken to deal with potential health and safety hazards but it is a working museum and there will be tools and other objects on open display.
  - Rules
    - If conducting Blacksmithing use the protective clothing provided
    - Ask before you touch as items maybe hot, heavy or sharp. Forge staff will be on hand to help
    - Don't run
    - Enjoy the visit
- We expect all visitors, of all ages to behave responsibly and consider the safety of others at all times

## Disabled Access

- The building is accessible by wheelchair and there is a disabled toilet
- The normal entrance has a large door wide enough to allow wheelchair access directly into the Shoeing Shed where the introductory video can be viewed.
- Access to the Forge Area with the hearth is by a wide wooden walkway which also allows access to a disabled toilet and to a further room which has information about the local community.

## Plan of the Forge



## Wheel Shoeing Activity

The Chain Bridge Forge guide will explain the following:

- The components of a Cart Wheel
- How a wheel was shoed, explaining all the following:
  - Measurement
  - Tyre bender
  - Shoeing Platform
  - Fitting a metal tyre
  
- Practical Work
  - The team will then measure the circumference of a wheel using a traveler:  
Answer.....No of revolutions
  - The team will then translate the number of revolutions to the length between two marks on the ground
  - The team will then take a tape measure and measure the distance between the two marks Answer..... No of cm.
  - The team will take it in turns to turn the handle on the tyre bender

## Blacksmithing Activity

The objective is that the children will be given a demonstration of Blacksmithing from our Blacksmith. They will be told the names of the relevant tools and shown how the metal is heated and fashioned.

The items discussed will be the following:

- Hearth
- Hammer
- Anvil
- Tongs
- Colour of the metal as it heats

Practical

One child from each group will be dressed in Blacksmith clothes as follows:

- Leather apron – to stop hot metal from accidentally burn the person or clothes
- Gloves – To protect the hands
- Safety glasses to protect the eyes
- Hat and scarf will also be provided

We ask the children to wear stout shoes.

The child will hold a piece of metal in the fire till it is red hot. The metal will then be removed by Blacksmith. The child will shape the metal by hitting it with a hammer and bending.

## **Community Room Activity**

In this room the students will listen to a short story of life around the Forge

## **Shoeing Shed Activity**

### **Two Activities in this Area**

#### **1) 3D Printing**

Dr John Murray will explain and demonstrate 3D printing.

#### **2) Video explaining Horseshoeing**

Watch a short video about Shoeing a Horse

Explain Horse Shoeing and the tools in the Forge

See the different type of Horse Shoes

Once the video is complete take on the Forge Challenges

## Forge Challenges

### 1) Missing Word

All but one of the following words can be found in the table below.  
Can you find which word is missing?

Answer \_\_\_\_\_

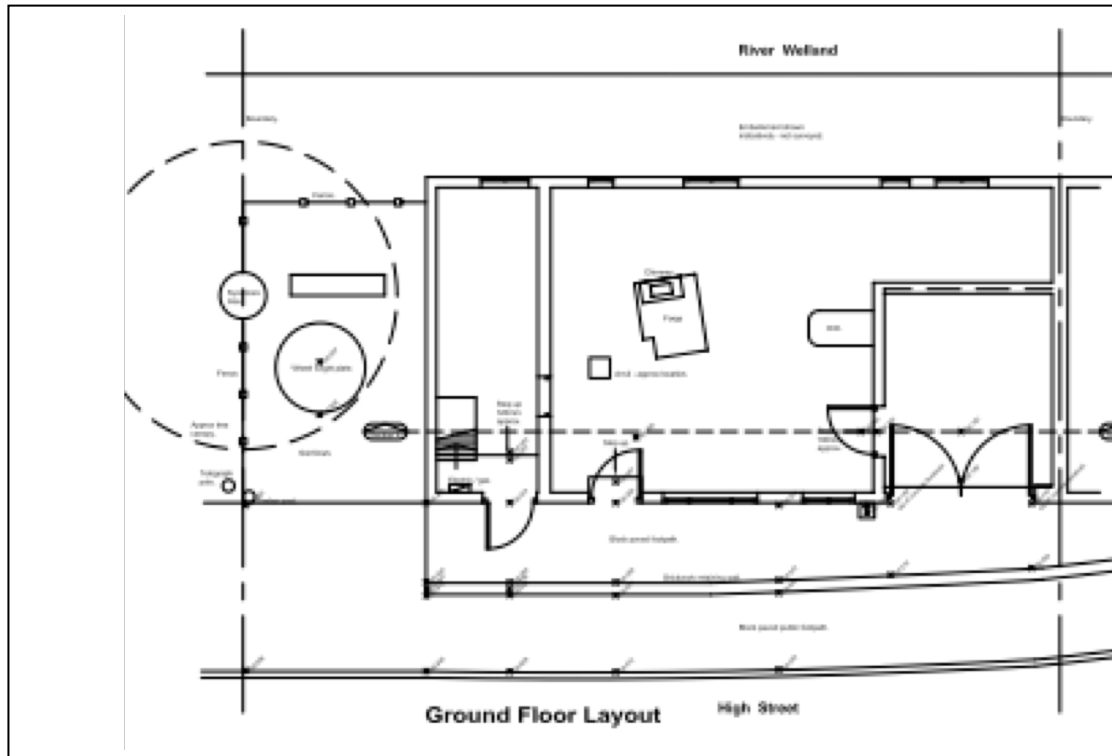
BLACKSMITH, SPALDING, FARRIER, ANVIL, SHIP, HORSE, PLOUGH,  
RIVER, IRON, TOOL, WATER

B	P	S	A	Y	O	Q	F	T	R
V	L	P	P	X	S	A	S	G	S
W	O	A	N	V	I	L	R	P	J
B	U	L	C	M	H	K	I	P	Z
U	G	D	H	K	D	H	V	T	I
N	H	I	O	J	S	W	E	Q	V
I	X	N	R	V	A	M	R	W	L
U	R	G	S	T	B	P	I	O	R
E	L	O	E	Y	B	K	O	T	E
A	M	R	N	W	D	T	I	U	H

## 2) Find the Forge Animals

There are 5 spiders, 5 mice and a pig hidden in the Forge awaiting to be found. (Except on the sales area)

Mark the diagram below with their location. S for Spider, M for Mice and P for Pig.



## Forge Smells

The Forge and the river would have smelt very differently in the early 1900's. Some these smells will be very unpleasant so approach with caution. So your challenge is to open the bottles one at a time and cautiously smell its contents. Each bottle has number. Mark this number against the statement which best meets description.

- 1) The smell of a coal fire in a living room? .....
- 2) Leather polish used to soften leather? .....
- 3) Horse Stables maybe the shoeing shed smelt like this? .....
- 4) The smell of a Blacksmith workshop? .....
- 5) Victorian Street. Heavy use of coal fires resulted in a smell of sulphur and dirt? .....