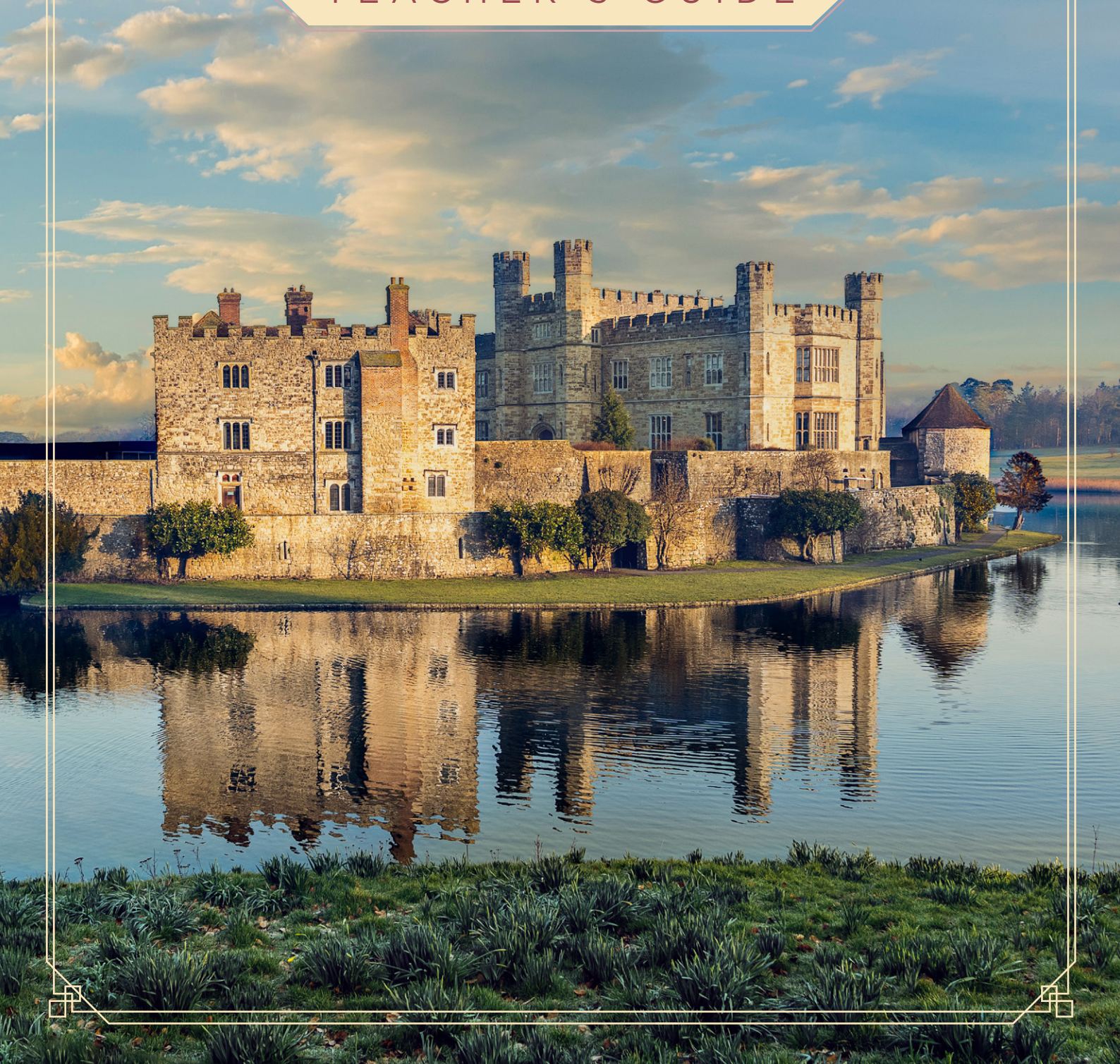




LEEDS CASTLE
LEARNING

The History of Castle Buildings

TEACHER'S GUIDE





About this Booklet

Contents

Introduction to Leeds Castle	3
Building Leeds Castle	4
Investigating Materials and Their Properties	9
Leeds Castle- Home or Fortress?	10
Women in Castle Building	12
Key Defensive Features of a Castle	13
Leeds Castle - Plan of Attack!	14

Teacher's Guide

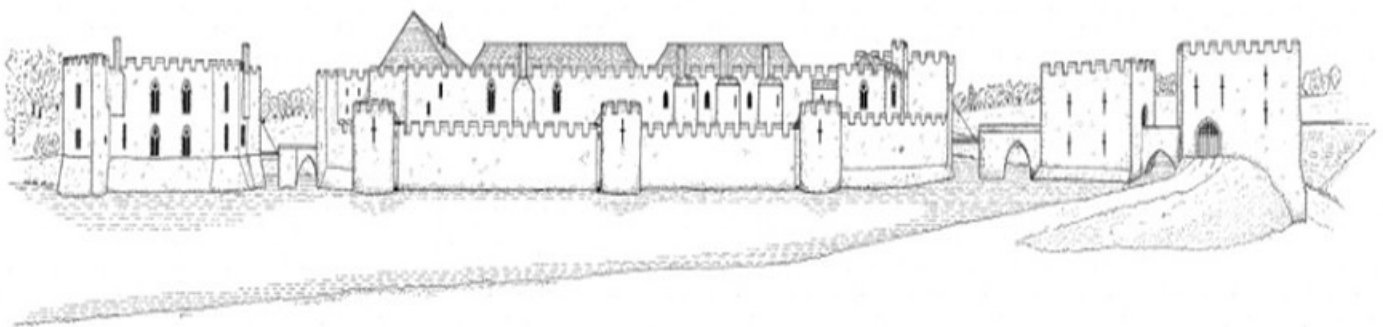
This guide is designed to equip teachers with information specific to Leeds Castle and to provide suggested investigations and activities for classes to use both on their visit to Leeds Castle and back at school.

Whilst these activities are tailored to Leeds Castle, they can also serve as a useful reference when studying castles in general.

This booklet is designed to support a variety of topics, including the defensive features of castles, building materials, homes and living spaces, or other aspects of castle study in different curriculum subjects. Whether you are exploring medieval castles, castles over time, or how castles and their uses have changed through history, this resource offers valuable guidance and inspiration.

The booklet is divided into categories, each with a different learning focus to cover different curriculum topics and areas of study.

Whilst some of these activities are designed to use onsite, where possible they have been designed in such a way that you could also adapt them to use in school after your visit.



Introduction to Leeds Castle

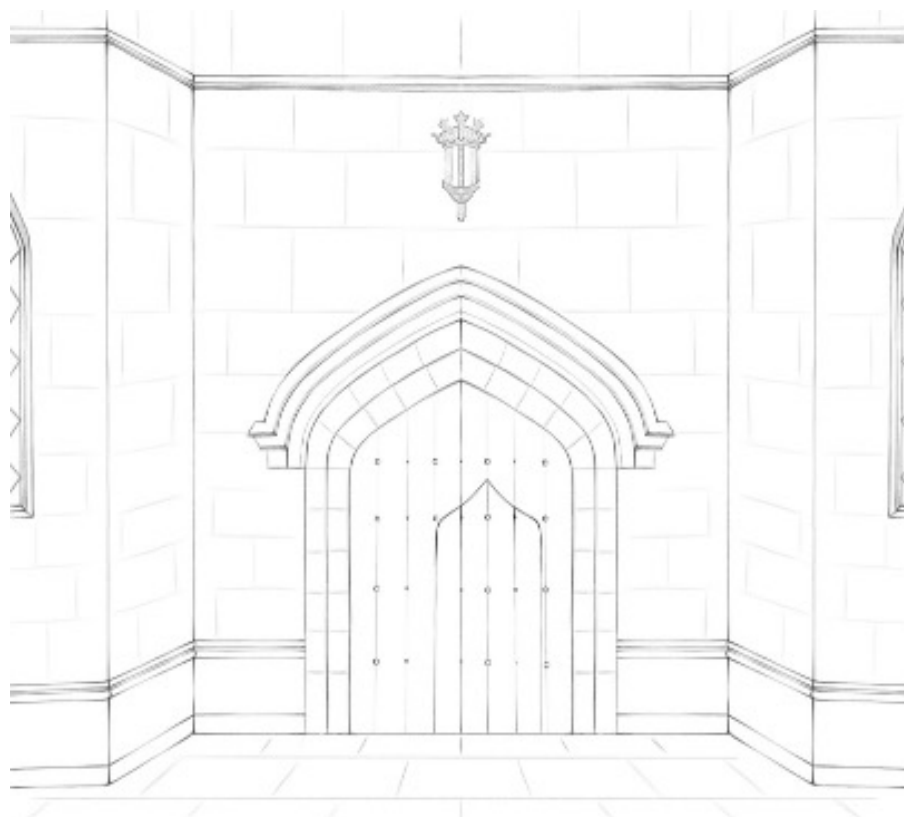
The Normans built the first castles in England after the conquest of 1066. These were simple structures at first made of earth and wood, which could be built extremely quickly. Some castles were built to secure areas and control the local population, others were built as a show of strength and power of their owners.

During the 12th century many castles were improved and strengthened using stone instead of wood. Later, advancement in warfare technology changed the importance of castles and they became status symbols rather than centres of military importance.

Leeds Castle was first built in stone by a Norman Baron called Robert De Crevecoeur in 1119. Today, all that remains of the Norman architecture is the base of the Gloriette and the vaulted cellar. In the cellar, the round archway leading up to a blocked staircase is typically Norman in style.

With each successive owner, the castle has been rebuilt and redeveloped over a period of nine centuries. The present day castle comprises a 13th century Gloriette, the 19th century bridge and corridors which lead to a 19th century castle. The Maiden's Tower is late Tudor. The revetment wall, gatehouse and barbican are 13th century. Much of the interior of the building contains clever replicas of Tudor architecture including ceiling beams and the wooden spiral staircase that were actually made in the 1920s using recycled antique wood.

To focus on different periods of architecture at Leeds Castle may therefore be seem confusing at first but certain elements can be identified and linked to castle building, design, techniques and materials.



Building Leeds Castle

Organising and building a stone castle was a daunting task that involved enormous outlays of material, manpower, time and money. Stone was quarried as close to the site as possible, but decorative rock was often transported from special outcrops some distance away, increasing costs further. In addition, large amounts of timber were needed for construction of frames, flooring, ceilings and scaffolding. Other expensive materials included lead (for roofing), iron and tin.

At Leeds Castle, the main fabric of the buildings is Kentish Ragstone, which is a difficult material to work with. Some of the ornate mullioned windows are carved from Caen stone imported from France. Shortly after Queen Eleanor of Castille acquired Leeds Castle, her husband King Edward I started considerable building works. In 1284 the constable, John de Ponte, spent £51-9s-6d (approximately £35,728 in today's money) on wooden boards and lead for the construction and repairs. The following year a further £131-6s-6d (approximately £91,149 in today's money) was spent for the same purpose.

Labour costs could be enormous as skilled workers were required for stone castle buildings. Some of the specialists involved would have been the master mason, freemasons, quarrymen, woodcutters, smiths, miners, ditchers, carters and carpenters. Sometimes as many as 2,000 men were conscripted or hired to build a castle. Weekly wages for these workers averaged from four shillings (approximately £139 in today's money) for a master mason to six pence (approximately £18 in today's money) for a woman labourer.

Most of the skilled craftsmen were travelling craftsmen; only the less skilled workers were from the local area. Building work generally took place between February and November, stopping in winter as the cold temperatures would crack wet mortar. Some types of work such as stone cutting and tool making could continue through the winter months.



Key Facts

Kentish Ragstone

This is a hard limestone of the early Cretaceous age (120 million years old). It appears in layers or beds in the Maidstone and Medway areas of Kent where it has been quarried for centuries. Some of the layers contain fossil shells showing that ragstone formed in a shallow sea.

Order of Stone Building Work

1. Quarrymen used hammers, chisels and wedges to break the stone at its fissures.
2. Carters transported the rough stone by road on horse-drawn sledges or carts from Maidstone to the castle site.
3. Masons used saws, hammers and chisels to shape the stone into blocks.
4. Mortar-mixers mixed sand, ground limestone, animal hair and water to make mortar to join the stone blocks together. They brought the mortar to the part being built in leather buckets.
5. Labourers moved the stone blocks using wheelbarrows to the part being built. They used pulley systems to lift the stone up to high levels when required. They also pushed the wheelbarrows up wooden ramps supported by scaffolding.
6. The master mason supervised the building and checked that the walls were straight and level.

Iron Ore

Iron ore could have come from the nearby Weald of Kent where it was mined. It would have been used by the castle blacksmith to create hinges, bars, bolts, screws and nails for the portcullis, as well as tools for other craftsmen such as carpenters and stonemasons.

Order of Iron Working

1. Miners mined iron ore in pits.
2. Carters transported the iron ore to the foundry.
3. At the foundry the iron was extracted from the iron ore using the smelting process.
4. Carters transported the iron to the smithy at the castle site. The blacksmith would beat hot iron into shape at his forge using tongs, a hammer and his anvil to make the items needed at the castle.

Oak

Oak would have been forested locally in great quantities.

Order of Wood Working

1. Woodcutters cut down oak trees in nearby forests using axes and a two-handed saw.
2. Carters transported the trunks to the castle site.
3. Labourers would use a two-handed saw to slice the trunk vertically to produce planks.
4. Carpenters and joiners used squares, measuring sticks and saws to cut the wood into the size and shapes required to make doors, shutters, etc.



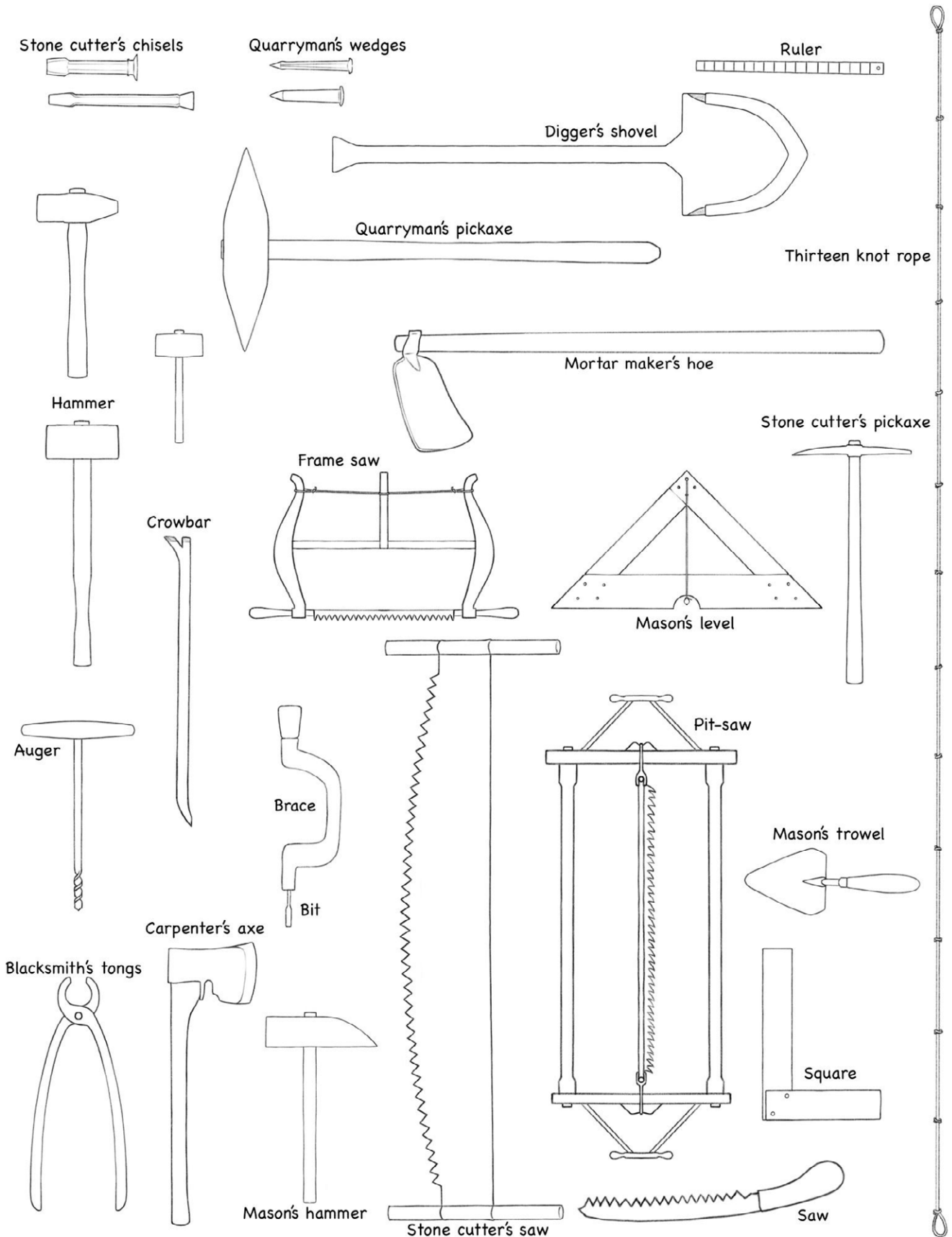
Onsite Activities

- As you look around the castle, point out the different materials it has been built from and consider the role of the different tradesmen in building the castle. For example, you can look at the large wooden front door and wooden window shutters and discuss the role of carpenters in building Leeds Castle. You can also look at the stone from outside the castle, imagine the weight of each piece and consider the time, skills and tools needed to shape each piece of stone individually.

Follow Up Activities

- After visiting the castle, divide your class into 3 groups and allocate each one a different trade, e.g. blacksmith, carpenter and stonemason. Ask each group to identify with their craftsmen and view the castle from their point of view. Pupils can consider the work of their craftsmen and the role they would have played in building Leeds Castle. Encourage them to consider the tools used in their trade and how they would feel working at the castle all day. Think back to your visit and look at photos; ask them to spot the work of their trade and consider which other tradesmen they would have to collaborate with to complete their work.

Traditional Tools Used In Castle Building



Investigating Materials and Their Properties

Leeds Castle offers a wide range of natural and man-made materials and the opportunity for pupils to study them in context. The castle can be used to introduce children to materials such as Kentish Ragstone, limestone, cobble-stones, mortar, plaster, iron, oak, tarmac, glass and a huge range of furnishings and fabrics within the castle rooms. Pupils can investigate materials in a multi-sensory way during your visit to Leeds Castle; looking closely at them, touching some of them, comparing them and then recording their observations.

Children can see how different materials have been worked and used. Kentish Ragstone and limestone have been used as large building blocks, as well as being carved into the more ornate window frames and fireplaces. In the grotto, children can see how a range of shells, minerals, wood and other materials has been used to create a magical atmosphere. Inside the castle, sumptuous fabric has been used to adorn selected walls instead of wallpaper.

They can also see examples of modern materials replacing more traditional ones and explore the technical discoveries behind these changes. For example they can compare the cobble-stones of the gateway with the tarmac of the causeway nearby and think about some of the reasons why one has succeeded the other as a choice of material for paving.

In the field of conservation, there is evidence of chemical change caused to materials, for example by mosses, algae and lichen living in the cracks of the Ragstone. The acids they release chemically weather the minerals in the stone. Pupils will be able to find many other examples of weathering on site.



Onsite Activities

- Encourage the children to closely observe the materials used to build Leeds Castle, and consider why these were chosen for their purpose. The best place for the children to observe these materials is around the gatehouse and revetment walls surrounding the castle. The buildings in the Fairfax courtyard are made from brick and offer examples of more modern building methods. The children may also like to investigate the elaborate use of shells in the grotto. This can be accessed via the maze – so allow time for getting lost!
- Nominate photographers to photograph as many different materials as they can. These can be used back at school in follow up activities or as quiz cards to reinforce the children's understanding of materials. Alternatively they could be used as part of a labelled wall display which could be extended each time a class member finds a new material.
- If you have paper and pencils or crayons with you children can take 'rubblings' from some of the building materials using plain paper and a soft pencil or crayon. Rubbings show uneven surface texture and any patterns that might be difficult to see otherwise.

Follow Up Activities

- Ask pupils to use their photographs and observations of the castle to compare materials used to build the castle with those used to build the school. This could evolve into a discussion on why some traditional materials have been replaced with modern ones. This also has a relationship to the decline in traditional craft skills such as stonemasonry.
- Using descriptions, rubbings and photographs of materials at the castle, ask children to quiz each other and guess the material by its description. Do a blind fold quiz to guess the materials of different objects from around the school or home.



Leeds Castle - Home or Fortress?

Leeds Castle has evolved over its 900-year history from being a Norman stronghold, royal residence, prison and aristocratic family home to now a heritage site. Part of the castle was even used as a hospital during the Second World War.

In 1119 the first stone castle was erected on two islands; the main fortification, known as the Keep, was on the second smaller island, and the domestic buildings that supported everyday life were located on the larger island, known as the Bailey. The two islands were linked by a drawbridge over the water that could be drawn up to protect the Keep if the castle was ever under attack.

In the 13th century, King Edward I and his queen, Eleanor of Castille, acquired Leeds Castle, beginning its century's long use as a royal palace. Features such as a 10m high revetment wall, reinforced by D-shaped bastion towers, were constructed to ensure the safety of the royal residents.

From 1517 to 1523, Henry VIII transformed Leeds Castle from a fortified stronghold to a magnificent royal palace. Major alterations were made so that he and his first wife Katherine of Aragon could visit the castle in comfort. An upper floor of apartments was added to the Gloriette and reserved for the exclusive use of the Queen.

In 1522 nearly 300 years of royal ownership came to an end, and Leeds Castle has since been in private ownership. With no royal treasury to use for repairs and alterations, the fortunes of the castle relied solely on the fortunes of the owners, which were varied.

Leeds Castle suffered major damage in 1665 when its then owner, Sir Thomas Culpeper, leased the castle to the government as a place of detention for Dutch prisoners of war. Lodged in the Gloriette, the prisoners set fire to their accommodation, causing destruction which would not be repaired until the 19th century.



By the 18th century Leeds Castle had become a Georgian mansion, and parkland was first laid out at this time. In 1821, the Wykeham Martin family decided to demolish the main house and replace it with one in the Tudor style. This is the 'New Castle' you can see today.

During the 1930s, Leeds Castle was owned by Lady Baillie and became one of the great country houses of England and a centre of lavish hospitality for leading statesmen, European royalty and film stars.

When war erupted in 1939, Lady Baillie did her best to continue life at Leeds Castle as normal. The house parties continued although the family moved into the Gloriette and the New Castle was used as a hospital. Many of the ill-fated expeditionary forces repatriated after the retreat from Dunkirk were treated at Leeds Castle, and it was also used for the rehabilitation of severely burned pilots.

Just a few months before Lady Baillie died in September 1974, she put in place plans to create a charitable foundation to which the castle and grounds would be transferred, so that they could be preserved for future generations to visit and enjoy.

Onsite Activities

- Discuss the functions of a castle and the different roles that Leeds Castle has had over the last 900 years – fortress, royal residence, prison, family home, hospital and now heritage site. Discuss how each role influenced that design of the castle. Next ask the children to identify features that would appear because of the past use of the castle.
- Whilst looking around the castle's exterior, look for evidence of change such as walls having been knocked down, extensions or buildings that look as though they may have been added at a later date. For example, on the barbican you can see the last remaining portcullis as well as evidence of where doors used to be in the form of metal door hinges still attached to the wall.
- Inside the castle, consider the different design features which make the castle a fortress or a home. For example, you could explore the different uses of the windows- small ones are useful for keeping the castle safe from attack, but some were replaced with larger ones over time for a brighter room and scenic view.

Follow Up Activities

- Introduce the idea of buildings being changed over time by discussing with the class any extensions or alterations that the school or their own houses have had.
- Taking the four main roles of the castle, as fortress, prison, home and heritage site, ask the children to design a poster or booklet showing features of these four aspects of the castle's history.
- The class could put together a display board with two headings, 'defensive features' and 'domestic features'. Pupils could contribute sketches of features of the castle under the appropriate category.

Women in Castle Building

It was not typical for women to work as labourers during the Middle Ages, yet there is evidence that some did find employment on construction sites as labourers or tradespeople. Record keeping at the time was inconsistent, however, making it difficult to determine how common this practice actually was.

For the most part, women were considered unsuited to heavy labour, and any form of work outside domestic duties was regarded as improper. As a result, the recording of women earning wages was often deemed socially unacceptable. Even so, historians believe that poorer women frequently worked as unskilled labourers on building sites, carrying water, digging ditches for foundation walls, thatching roofs, and mixing mortar. By contrast, middle-class women who had acquired a skilled trade from their husband or father sometimes worked as carpenters or masons. This usually occurred when they were widowed or otherwise left without male support, and thus needed to earn a living.



Key Defensive Features of a Castle

Medieval castles were carefully designed to protect the people inside from attack. Builders used strong materials, height, and carefully planned architectural features to make castles difficult to enter and easier to defend.

Moat

A moat was a deep ditch surrounding the castle, often filled with water. It prevented attackers from reaching the walls easily, slowed their movement and made it difficult to use ladders or siege equipment close to the castle.

Drawbridge

The drawbridge was a wooden bridge that crossed the moat and provided access to the castle entrance. It could be raised or lowered as needed, allowing those inside the castle to control who could enter and when.

Gatehouse

The gatehouse protected the main entrance and was usually the most heavily defended part of the castle.

Portcullis

A portcullis was a heavy metal or wooden grille that could be dropped quickly from above. Positioned within the gatehouse, it was used to block or trap attackers once they had crossed the drawbridge.

Machicolations

Machicolations were stone projections at the top of walls or towers, with openings in the floor between the brackets. These allowed defenders to drop objects or substances directly down onto attackers at the base of the walls.

Battlements

Battlements were the notched tops of castle walls, made up of solid sections and gaps. They allowed defenders to shelter behind the stone while firing weapons through the gaps at attackers below.

Arrow Slits (Loops)

Arrow slits were narrow vertical openings built into walls and towers. Their design allowed defenders to fire arrows outward while remaining largely protected from incoming attacks.

The Keep

The keep was the strongest and most secure building within the castle. It often served as living quarters and as a final place of defence if the outer walls were breached.

Curtain Wall

The curtain wall linked the towers together and formed the main outer defensive barrier of the castle. It enclosed the castle and created a secure boundary around it.

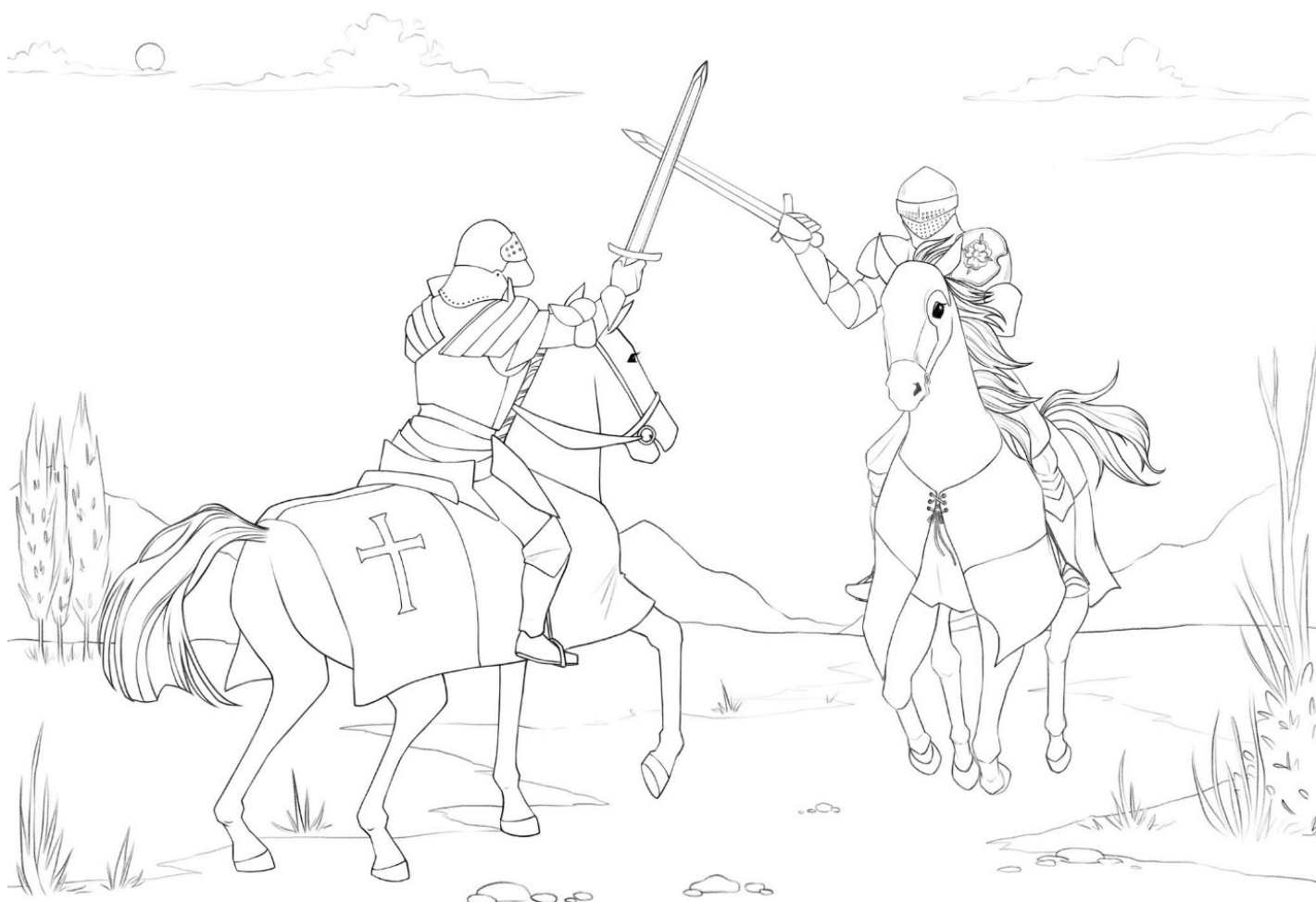
Leeds Castle - Plan of Attack!

The aim of this section is to develop children's understanding of defensive structures of different parts of Leeds Castle, and the way the castle's appearance and role has changed over its 900 year history. Whilst Leeds Castle has changed many times, there are many defences and fortifications that can still be seen.

In the Barbican, you will find a portcullis along with metal door hinges protruding from the wall beside it. This area once housed three entrances to the castle, all of which were heavily guarded. You will also notice and hear running water, which marks the site of a former wooden water mill. The mill was an essential feature for grinding flour and would have require strong protection to prevent theft.

As you cross the drawbridge, there is evidence of where it once raised into place- the stonework in this area appears recessed. Above the drawbridge, you'll spot the machicolations, designed to defend the castle from attackers below.

After passing through the gatehouse, you can see traces of two former revetment walls. On the front of the castle itself, the turrets have arrow slit windows and the roof has battlements, both vital features for the castle's defence.

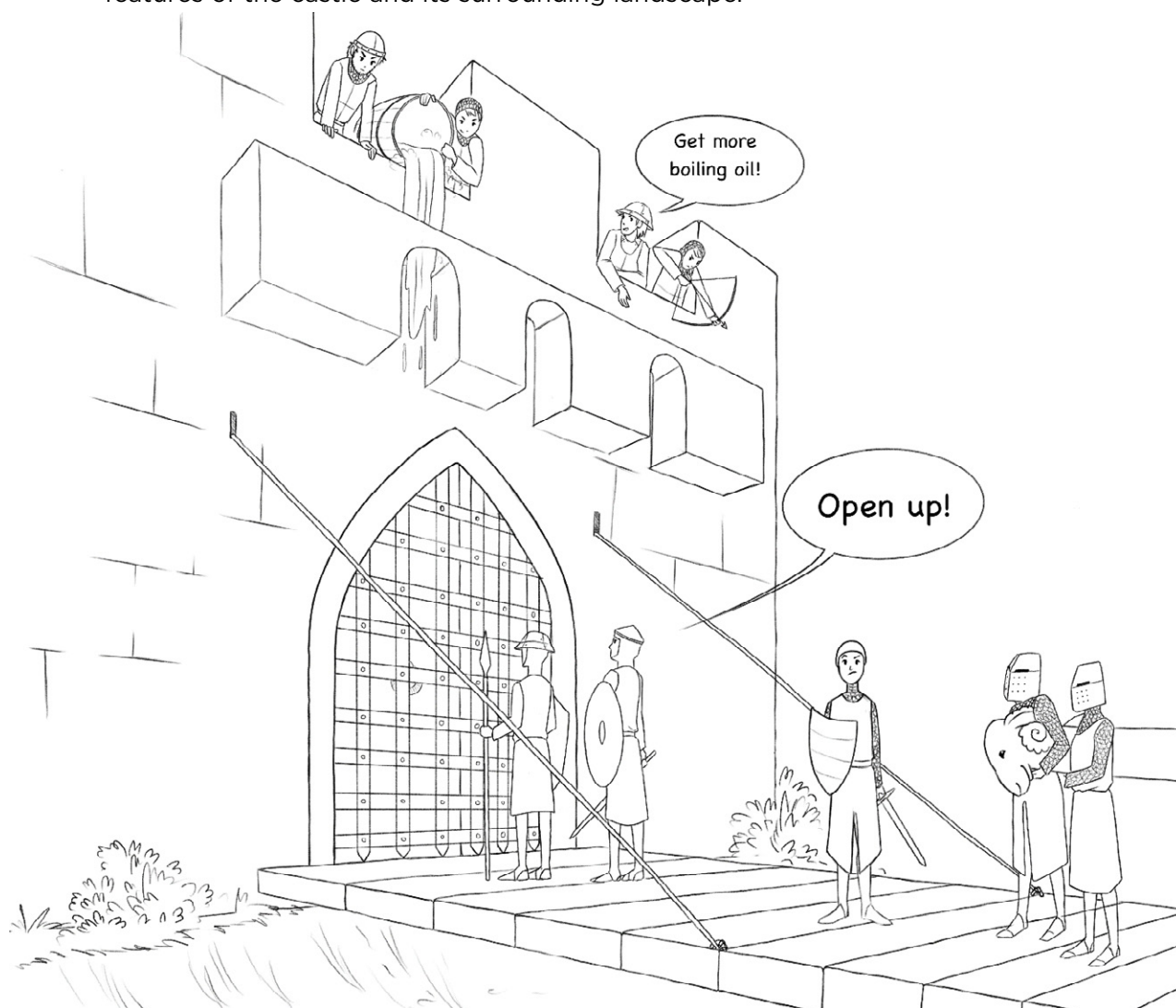


Onsite Activities

- Children will need a little imagination to recreate a medieval scene but should be able to identify strong and weak points for attack and investigate how Leeds Castle's situation provides a natural defence.
- Look at evidence of castle defences and ask the children to decide which parts of the castle are weak to attack and where they would avoid in an attack. Take on the character of a medieval spy and as you travel around the outside and inside of the castle, search for places where you could approach the castle to attack it, discuss which tools you would need and how you might try to gain access to different parts of the castle.

Follow Up Activities

- Use maps to work out and draw routes that attackers may have taken. Take account of the strategic location of Leeds between Dover and London.
- Pupils could make a scale model of the castle and re-enact a siege.
- Write a poem or story about the feelings of a sentry on night duty.
- Devise a plan of attack on the medieval Leeds Castle, taking into account the actual features of the castle and its surrounding landscape.



Explore Our Other Resource Packs

Please visit our website, www.leeds-castle.com, where you will find a variety of other resource packs designed to suit different needs, which can be used alongside this booklet or separately. Our collection includes engaging educational materials, interactive learning tools, themed activity packs as well as creative worksheets and templates.

For information and activities linked specifically to castles you may like to have a look at the following resources on our website:

Castle Features I Spy Trail

Children's Castle Guide

Castle Activity Book - What, Why, When & How

Leeds Castle KS2 Workbook

Medieval Mission Booklet

**Scan to view our
Learning Resources**

