Military and defence systems

War was a feature of life in medieval Europe. Lords and their armies fought one another to gain land and power within their own countries, fought for their kings in battle against other countries and sometimes joined forces to try to replace their king with a new monarch. Armies comprised:

- knights (warriors on horseback), who were usually noblemen with years of training in military skills
- squires (knights in training), who looked after the knight’s armour, weaponry and horse
- other professional soldiers on horseback
- the infantry (foot soldiers), including archers using longbows and/or crossbows
- the cavalry (those on horseback), who were the elite troops of the army.

Arms and armour

In the eleventh century, knights wore chain mail over a leather tunic and often wore an outer garment showing their family coat of arms. Chain mail was made of hundreds of small, interlocking iron rings and, consequently, was heavy.

Knights protected their heads with a chain mail hood and then a helmet, which could be a simple metal strip covering the nose or one that covered the entire face. They also wore chain mail stockings and metal shin guards.

By the fifteenth century, knights were wearing full body armour. This gave them great protection, but because of its weight, it was very difficult for a knight to get back on his horse again if he fell off.

The knight’s weapons comprised a shield, a sword, a lance, a spiked metal ball that hung from a chain, and often a dagger attached by a belt to his arm or leg and hidden under his clothing. The infantry, without protective clothing, fought with axes, javelins and bows.

Archers

English archers favoured the longbow (about 1.5 to 1.8 metres long) and used it very effectively in the Hundred Years War. A good archer could fire one arrow every five seconds and could hit targets up to 220 metres away.

Archers in continental Europe preferred the crossbow. Crossbows were usually heavier than the longbow and had a shorter range. Large crossbows could be used only with the assistance of extra machinery. However, someone could learn to use a crossbow in only a few weeks, whereas it took years before an archer became skilled in the use of a longbow. Crossbows had the advantage of being able to get through a knight’s armour.

Fortifications

Lords relied on stone castles for protection. The main building was the three- to four-storey high donjon (tower) or keep, with walls about three metres thick. To get to the donjon, visitors crossed the drawbridge over the moat (a deep wide ditch filled with water) and then went through the portcullis (an iron grate that could be lowered to prevent entry) into the bailey, a large courtyard, within.

People built one or more walls to enclose their towns and protect them from enemies. Other features of this protection were:

- a moat around the outside of the wall
- city gates from which soldiers could control who entered the town (and also collect payments from traders who wanted to sell their goods there)
- a wall tower on top of the wall to make it easier for people to observe what was happening beyond the town
- a walkway at the top of the wall from where soldiers could take action against would-be invaders
- links to a castle, with its own protective measures, just inside the town walls.

Once armies began to use gunpowder and cannons, builders increased the thickness of city walls to gain more protection.

Siege warfare

To lay siege to a castle (or to a town), an army surrounded it with soldiers, trapping its inhabitants inside. Sieges lasted for months or even years. As source 3 shows, attackers used a variety of methods to try to capture a castle or town by force. In most cases, starvation and disease were the most effective methods of forcing inhabitants to surrender. This gave the attackers the advantage in discussions with the defenders’ leaders, who were often desperate to regain access to food, water and other essential supplies.

Over time, people designed castles with features such as thicker walls, loopholes and the portcullis that aided the efforts of the defenders. The increased use of cannons and gunpowder in the fourteenth century benefited attackers. Sometimes they also achieved their goals through the help of a traitor on the inside who was willing to take a bribe.
A twenty-first-century artist’s drawings showing changes in armour over the period between the early 1100s and the 1400s.

**Early 1100s**

- Cone-shaped helmet with protective nose strip
- Long chain mail suit with sleeves (called a hauberk)
- It is made of thousands of metal rings
- Large kite-shaped shield
- Padded woollen tunic (called a gambeson)

**Late 1100s**

- Helmet is rounder with wider nose band
- Loose-fitting surcoat worn over chain mail armour to protect it from sun's heat
- Coat of arms identifies the knight
- Hauberk now covers neck and is attached to helmet with leather strips
- Hauberk now includes chain mail mittens. It is getting shorter
- Shield is not as big and is more triangular

**1300s**

- Bascinet helmets worn by late 1300s. Visor can be lifted up.
- The combined weight of chain mail and plate armour is now so great that a knight cannot get up on his own if he falls over.
- Pieces of hammered iron plate are added for protection.
- Shield is smaller and curved for added protection.
- Iron gloves (called gauntlets) protect the hands.
- Hauberk is even shorter.
- Padded stockings with iron braces are worn.

**1400s**

- Whole suit of armour weighs about 25 kilograms, but is more flexible than chain mail armour.
- Lighter helmets, called barbutes, are worn.
- Plate armour (made from hammered iron) covers whole body. Joined with metal rivets and leather strips.
- No need for shield any more
- Chain mail leggings now cover feet
- Iron shoes
**Source 2** A drawing showing changes in the designs of loopholes, from which soldiers fired at their enemies

Merlon  
Crenel  
Loophole

Earliest loophole style  
Crenels narrowed as archery improved  
Later designs

Widened at base to fire down  
Flintlock provided more light  
Crossbow provided a better view and more scope from which to fire.

**Source 4** Description of a siege at Tortona, Italy

Since the city was built on all other sides on sheer cliffs, it was only at one point, where the main defence was a large tower and its moat, that an assault could be managed. The emperor, annoyed that the siege was taking so long, ordered his engines to shatter the tower and directed that a cunning tunnel be bored underground towards it, so that, eventually, with its foundations weakened, it might collapse. But the townsmen — perhaps informed by traitors from our army — built counter-tunnels and caused some of the emperor’s men to be trapped underground and suffocated. The rest gave up the attempt to undermine the tower. Then the emperor threw rotting and diseased bodies of horses and men into the spring from which the town drew its water. The townsmen continued to drink the water, so the emperor had burning torches with flames of pitch and sulphur thrown into the spring and this made the water bitter and impossible for people to drink.

Activities

Check Knowledge and Understand
1. Who were the main people who fought in and what were the weapons they used?
2. What advantages did a crossbow have over a longbow?
3. What features did castles have to help protect inhabitants from their enemies?
4. What do you think attackers would have to be the advantages and disadvantages of

Develop Source Skills
5. Use source 1 to identify:
   a. the main armour changes in each period
   b. the likely reasons for these changes
   c. which changes you think would have been most/least useful to the knight.
6. Read the text and the labels in source 2 to complete a table like the following to list of defence and attack during a siege.

<table>
<thead>
<tr>
<th>Attack methods</th>
<th>Defence method</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7. Use source 3 to answer the following questions:
   a. What were most of the siege weapons
   b. Why would most of them have been made nearby?
   c. Which weapons would have needed so to create a diversion before they could successfully?
8. Use source 4 to identify the tactics used side during this siege.

Use the ebookplus to take an online lesson to help you understand how castles attacked and defended.

Student Workbook 3.6 My home is my castle.

A battering ram was used to try to break down the castle gate. Attackers were protected by a wooden cover draped with wet animal skins.

The ballista was a giant crossbow that fired flaming bolts over castle walls.

The force behind a bolt from a crossbow was so powerful that it could penetrate armour and cause horrific injuries.

Attacks could dig a wooden-lined tunnel under the castle walls. When the tunnel supports were burned, the tunnel and the wall above collapsed.

Missiles could be dropped on attackers through machicolations.

Attacks used self-laying and scaling ladders to try to get over the castle walls. Defenders often used forked sticks to push attackers off the ladders.

The trebuchet, introduced from the Arab world, was a type of counterweighted catapult. It was used to hurl huge rocks weighing up to 90 kg against castle walls, and to toss rotten animal bodies over the walls.

A mangonel was a catapult used to hurl objects [e.g. heads, smaller rocks or piles of dung] over castle walls.