Edinburgh in the 17th and 18th centuries was what we now call the Old Town, on and around the Royal Mile. Around the time of the Union in 1707, it was one of the largest cities in terms of population in Britain with a population of around 30,000 – but it did not seem to visitors like a large city. This was because it was high, rather than sprawling, with tenement blocks reaching as high as 14 storeys. Here wealthier middle class people lived alongside the poorest people until the building of Edinburgh’s New Town, which began in 1767.

A good visual source for 17th century Edinburgh is a plan of the city drawn in 1647 by James Gordon of Rothiemay. It clearly shows how packed together the streets were and how high the buildings were. It’s also interesting to note the gardens tucked in behind some of the buildings. A version of this map can be seen online at the National Library of Scotland website http://bit.ly/13eFETb.

Old Edinburgh had a nickname: Auld Reekie – Old Smelly! The city was a very dirty place. Human waste was generally thrown out of windows with a warning cry of ‘gardy loo!’ (‘gardez-l’eau’, or ‘watch out for the water’) to those below. Others built closets (toilets) which jutted out over streets, so that excrement fell directly below, leaving human waste lying in heaps. Visitors were advised to walk in the middle of streets to avoid being showered with rubbish thrown from above. If dealt with at all, sewage was dumped in the Nor’ Loch, where Princes St Gardens is today. This loch also provided a water supply for many. Others queued up at public wells situated at various locations down the Royal Mile. Richer people paid water carriers known as ‘caddies’ to wait in line and collect barrels of water which were then delivered to their homes for a charge. You can see one of these wells at the Netherbow (near the junction with St Mary’s St) on the Royal Mile.

This very densely populated environment provided perfect conditions for the spread of disease, and epidemics of infectious and contagious illnesses periodically swept through the city. Known at the time as the plague or the pest, diseases included typhus (carried by lice), typhoid (spread in water), bubonic plague (spread by fleas on rats) or simply diarrhoea, known as flux. One of the most prolonged and destructive outbreaks was in 1645, when an outbreak began which lasted four years; this may have been either bubonic plague or typhus, or a combination of the two.
It is not known precisely how many people in Edinburgh died in this epidemic, though it may have been around a quarter of the city’s population. The extent of the epidemic is revealed in the city’s financial records, which document the cost of dealing with the sick and paying people to carry out plague duties, such as removing bodies, digging graves, cleansing the homes of plague victims and constructing isolation ‘booths’ on the outskirts of the city – on the Burgh Muir, Leith Links and by Salisbury Crags. Movement into and out of the city and public gatherings were restricted. The official ‘plague doctor’, Dr George Rae, attempted to treat victims in their houses, and was himself protected by a leather suit and a mask with a ‘beak’ packed with herbs. It is said that the authorities tried to contain the spread of epidemics like this by walling up streets - together with their unfortunate plague victims. However it is more likely that the street simply suffered more than its fair share of deaths. The famous ‘Great Plague’ which ravaged London in the 1660s never reached Scotland, probably because of strict quarantine measures.

You can find out more about life in Edinburgh’s Old Town in the 18th century by visiting Gladstone’s Land, a restored 17th century house on the Royal Mile (www.nts.org.uk/Property/Gladstones-Land).

Alongside the unhealthy, overcrowded tenements, Edinburgh in the 18th and 19th centuries was developing as a place of learning and scientific research. In particular Edinburgh developed a reputation for advances in medicine and expertise in human anatomy.

It was recognised by this time that medical students needed first-hand experience of human bodies in order to become properly familiar with human anatomy. Students attended dissections of human corpses: the bodies of executed criminals. As these were in short supply, an illicit trade in fresh corpses developed. Some bodies were dug up from their graves soon after burial, before they had begun to decompose. To guard against this grave robbery, watch towers were built in many of Edinburgh’s graveyards, from where a watchman kept an eye on fresh burial sites. You can see a watch tower in St Cuthbert’s Cemetery, at the west end of Princes St. Wealthier families took more drastic measures, anchoring the bodies to their coffins or by installing cast iron defences around coffins after burial. You can see examples of these in the National Museum of Scotland (www.nms.ac.uk).

More sinister still were the serial killers William Burke and William Hare, who murdered 16 people in order to sell their bodies to Edinburgh’s medical school under Dr Robert Knox. They were finally caught in 1828. Hare gave evidence against Burke, who was hanged and then dissected in public. Hare and Knox went unpunished. You can find an account of the trial of Burke at www.scran.ac.uk - Burke’s skeleton is on display in the University of Edinburgh Anatomical Museum: http://www.anatomy.mvm.ed.ac.uk/museum/whatson-collections-burke.php

In 1832 the Anatomy Act ensured a regular and legal supply of corpses for medical research by making any unclaimed bodies of paupers available to medical institutions.

Despite advances in medical knowledge, it was only the better off who could afford the services of a qualified medic. Most people in Scotland at this time relied on folk remedies to see them through illness.
Classroom preparatory activities

1. Plague
   a) Show pupils the plan of Edinburgh created in 1647 by James Gordon of Rothiemay, which can be found at http://bit.ly/13eFETb. This could be projected on to a white board. Discuss what the city looks like. What would it be like to live there? How is it different from cities today? How is it the same?
   If pupils are familiar with Edinburgh discuss how the city has changed. What has stayed the same?

   b) Discuss what pupils do today to keep themselves free from illness. Make a list together. This may included things like:
      - Drinking fresh water – and avoiding dirty water
      - Washing hands before eating and after going to the toilet
      - Eating healthy and fresh food
      - Living in a warm, dry home
   Now go through this list and get pupils to come up and put a star beside any items which would have been difficult or impossible in Old Edinburgh of the 1600s.
   Tell them that when they visit the Edinburgh Dungeon, they will experience a story about what happened when a plague hit the city in 1645.

2. Medical advances
   Tell pupils that perhaps because it was such an unhealthy place, by the 1800s, Edinburgh was where a lot of medical discoveries took place. In order to learn about the human body, medical students needed real dead bodies to practice on, and these were in short supply.

   Explain that when they visit the Dungeon, they’ll find out about two men called Burke and Hare who came up with an unusual way of providing the medical school with bodies. Can pupils guess what it might be from the following poem?

   Up the close and doon the stair
   Ben the hoose wi’ Burke and Hare
   Burke’s the bully, Hare’s the thief
   And Knox the boy who buys the beef.

   You may need to check that pupils are familiar with the Scots words:
   Close = passageway or narrow street
   Doon = down
   Ben the hoose = inside

As you visit

1. As pupils enter the attraction, remind them of the poem. Challenge pupils to find out who Burke, Hare and Knox were and what they did.

2. Ask them to look out for what happened to one street of people which was hit by plague in the 1600s.

Follow up activities

Guide pupils through the activity sheets.
Activity 1

The first activity requires pupils to draw a picture of a crowded Old Town Street. You could ask them to research tenement buildings in advance for inspiration, and suggest they include the following potential hazards in their drawing:

- Very overcrowded – disease could spread from one person to another
- Human sewage in the streets or being chucked out of windows
- Tiny windows – no fresh air
- Dead animals lying in the street
- Sewage/dead animals in water supply
- Queuing at public well - easy for disease to spread through water;
- Dirty children - no running water so people unlikely to wash much
- Food lying around; no fridges
- Damp houses with leaking roofs
- Smoky fires in rooms – bad for chest
- Rats and mice running around

Activity 2

The second activity requires pupils to imagine that they are in charge of the city when plague strikes. How would they attempt to control the spread of the epidemic and treat the sick? Then pupils look at some of the laws which were actually passed during plague epidemics in Edinburgh.

Activity 3

Finally, pupils look at the story of Burke and Hare, and illustrate the poem to demonstrate their understanding of the story.

Further activities

1. Bubonic plague
   Pupils are often morbidly fascinated by the plague. Get pupils to come up with a list of questions about the plague – for example:
   - What were the symptoms of the plague?
   - What happened to people who had the plague?
   - Does the plague still exist today?
   - How was it treated in the past?
   - How would it be treated today?
   Using the internet or other reference material, pupils could then write a short booklet or digital presentation to trainee doctors, explaining how to recognise and treat the illness.

2. Other epidemics
   We still have plague-type illnesses today, for example: cholera, ebola, influenza. Pupils could research an illness and investigate how it is managed today and what the authorities do to try and prevent it spreading.

3. Burke and Hare
   There are many accounts of the trial of Burke and Hare, together with gruesome descriptions of their murders. You can find a selection of material on www.scran.ac.uk, including an account of their trial and a song describing the deaths of three of their victims.
   Pupils could read sections of the account of their trial to find out about specific murders. They could then re-enact the trial, giving eyewitness accounts of what happened. Alternatively, they could scour the reports to compile a list of the victims, and how they were killed.

4. Medical ethics today
   Today’s doctors still need to practice on real bodies – but there is still a shortage. Many people now donate their bodies for medical research after they die. Would you do this? Why or why not?
   Find out more about this. The ‘official’ website is: http://www.hta.gov.uk/bodyorganandtissuedonation/howtodonateyourbody.cfm
   Two members of the public have donated their skeletons to the Edinburgh Dungeon:
   http://bbc.in/1jcP2TI
   Can you design a poster to encourage people to donate their bodies?
Old Edinburgh was a great place to live – if you wanted to catch an illness!

1. Draw your old Edinburgh picture below. Use the health risks to help you.

**Health Risks**
- Very overcrowded – disease could spread from one person to another
- Human sewage in the streets or being chucked out of windows
- Tiny windows – no fresh air
- Dead animals lying in the street
- Sewage/dead animals in water supply
- Queuing at public well - easy for disease to spread through water;
- Dirty children - no running water so people unlikely to wash much
- Food lying around; no fridges
- Damp houses with leaking roofs
- Smoky fires in rooms – bad for chest
- Rats and mice running around
2. Plague!

It’s not surprising that Old Edinburgh was sometimes hit by plague. The worst type was called bubonic plague. If you caught the plague, you probably had about three days to live, though some people did survive.

When the plague arrived in Scotland in 1645, the authorities in Edinburgh had to act fast. Imagine you’re in charge: what would you do to try and stop the plague spreading? Think of three laws you would pass – and why you would pass them.

1. 

2. 

3. 

Did you know?
We know today that bubonic plague was spread by fleas who lived on rats. If you were bitten by an infected flea, you probably had about three days to live!
Here are some of the laws which the officials introduced. Look at each law. Can you work out why each law was passed? Match it to the reasons below.

**Laws**

1. All plague victims must hang a white sheet or cloth outside their house.
2. All markets and fairs are cancelled.
3. All schools are to be closed.
4. Parliament is to be suspended.
5. Huts will be built outside the city for plague victims.
6. Victims in the huts are to be given food.
7. Special cleaners will clean the houses of plague victims and will burn their possessions.
8. All stray cats, dogs and pigs are to be killed.
9. All beggars and vagabonds are to leave town.
10. All children to be kept off the streets.
11. Anyone breaking these laws will be severely punished (branded, hanged etc)

**Reasons for passing each law.**

- To look after the ill people
- To stop the disease spreading
- To make sure that the laws are kept

Do you think all the laws were a good idea? The authorities did their best, but still around 1 in 4 people in Edinburgh died. It took four years for the plague to leave the city altogether.
3. Bodies for sale!

In the 1800s, Edinburgh was where a lot of medical discoveries took place. To learn about the human body, medical students needed real dead bodies to practice on, and these were in short supply. Two men, William Burke and William Hare set up a business selling bodies to Dr Knox at the medical school... but where did the bodies come from?

This poem from the time explains what happened:

Up the close and doon the stair
Ben the hoose wi’ Burke and Hare
Burke’s the bully, Hare’s the thief
And Knox the boy who buys the beef.

Close = passageway or narrow street
Doon = down
Ben the hoose = inside

Discuss:

Who were Burke, Hare and Knox?
What was ‘the beef’?

Draw a cartoon strip which illustrates each part of the poem above.

After murdering 16 people, Hare and Burke were caught. Hare gave evidence against Burke, who was then hanged and his body cut up in public. Hare wasn’t punished – and neither was Knox. Do you think this was fair?

Did you know?
The medical schools paid around £10 for each body. This was the same as a year’s wages for many people!

Life and Death in Old Edinburgh

PUPIL ACTIVITY SHEET: LIFE AND DEATH IN OLD EDINBURGH

Up the close and doon the stair  Ben the hoose wi’ Burke and Hare  Burke’s the bully, Hare’s the thief  And Knox the boy who buys the beef.