



Renaissance c1500-1700

Rebirth:

The age of Enlightenment & Challenge



Institutions

- Government
- The Church

Attitudes

- Seeking answers and improvements
- Respect for tradition



Communication

- Printing Press
- Royal Society

Factors that play a part in the Renaissance Period



Science & Technology

- Printing Press
- Royal Society
- Microscope



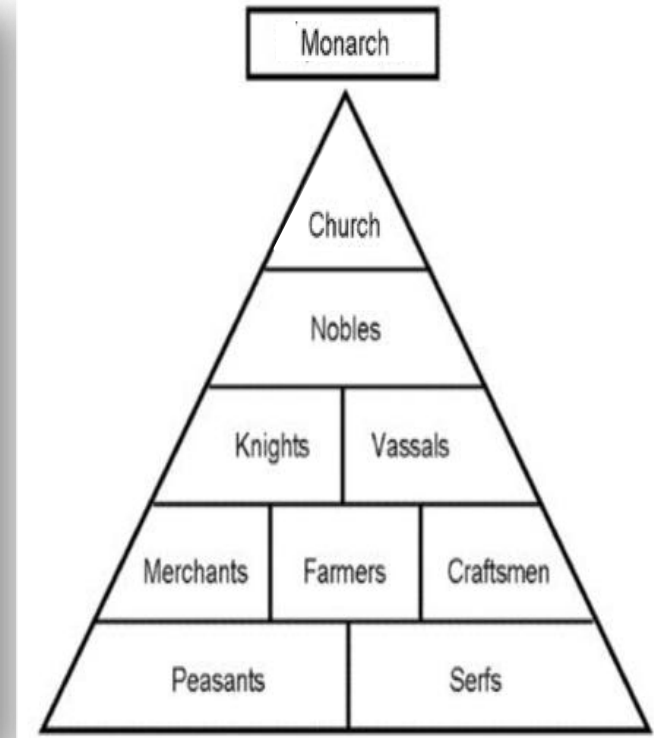
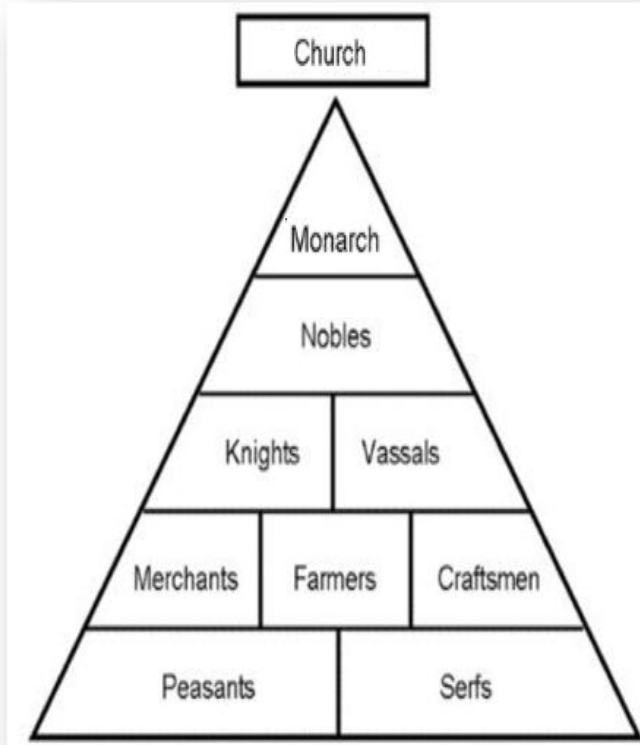
Individuals

- Vesalius – Anatomy
- Harvey – Physiology
- Sydenham - Observation



“By 1700 people were no healthier and did not live any longer than those in the middle ages”.

What can you **infer** from this statement?



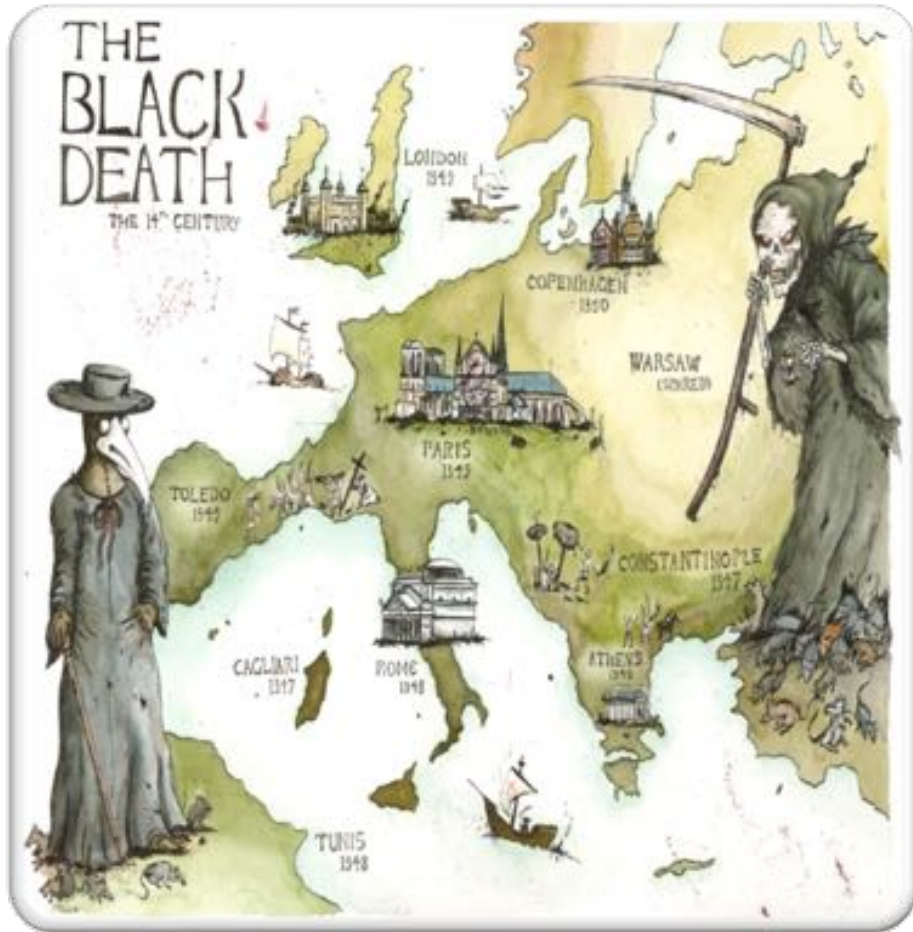
Spot the difference in the structure of society in the Renaissance period...

What impact might this change have on medicine in this next period?

None of this was overnight... It was made possible due to this new Renaissance attitude. It did of course take time for everyone to adopt it, some people liked continuity.



What major event took place in the Middle Ages that might have made people at the very least, begin questioning the church?



Following the Black Death of 1348, survivors were paid higher wages because employers had to attract workers. Some people spent this extra money on educating their children which in time triggered the Renaissance – “Knowledge is power”

Those Greeks asked questions and challenged old ideas. Maybe it's important to challenge tradition.



Describe how and why attitudes are beginning to change and what impact do you think this will have on medicine in this period?

The Theory of the Four Humours can't be used to explain certain diseases anymore

We are more curious about the world, so there are lots of new ideas about the causes of disease and illness

Now, many scientists and great thinkers want to better understand the world around them



CHANGE

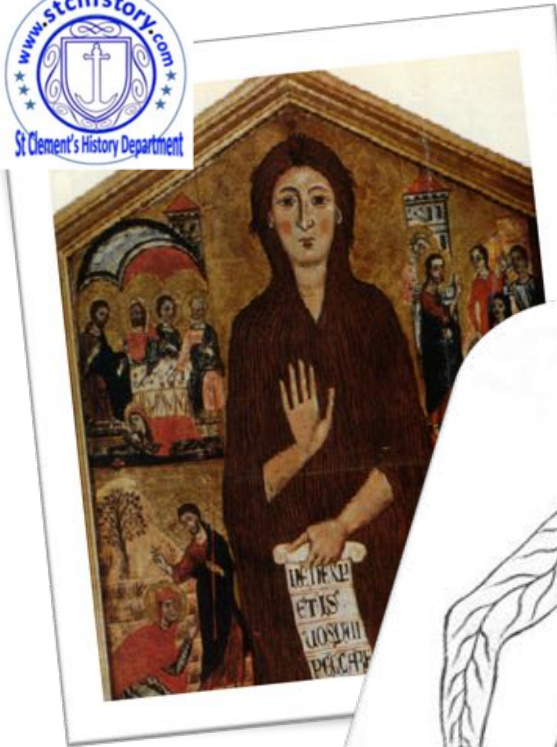
We still rely on remedies and cures from earlier times

We still believe that miasma causes disease

The practice of medicine is the same, even though ideas about medicine are changing

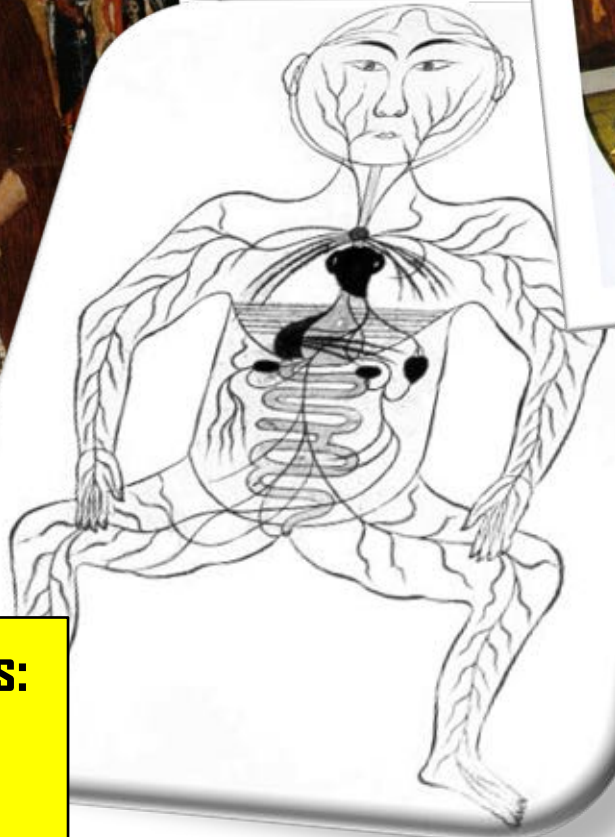


CONTINUITY



Renaissance Art was:

- Three dimensional
- Very detailed
- To scale
- Life like



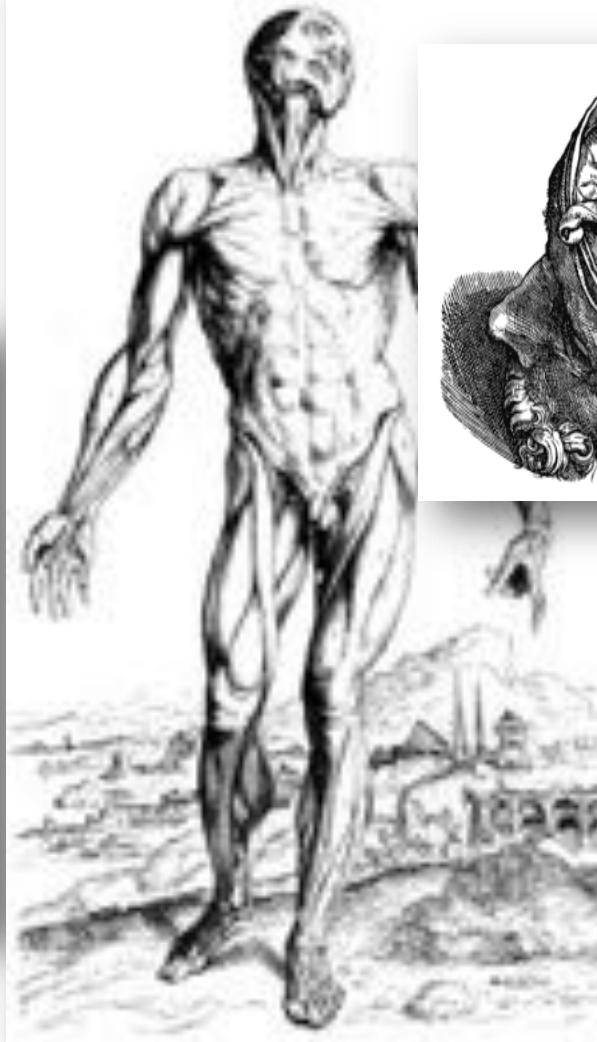
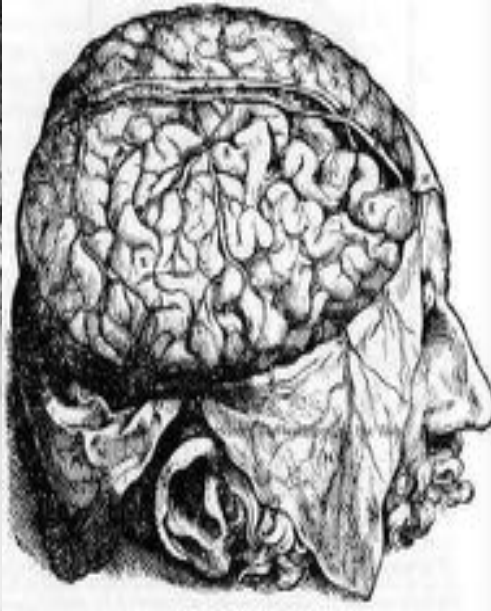
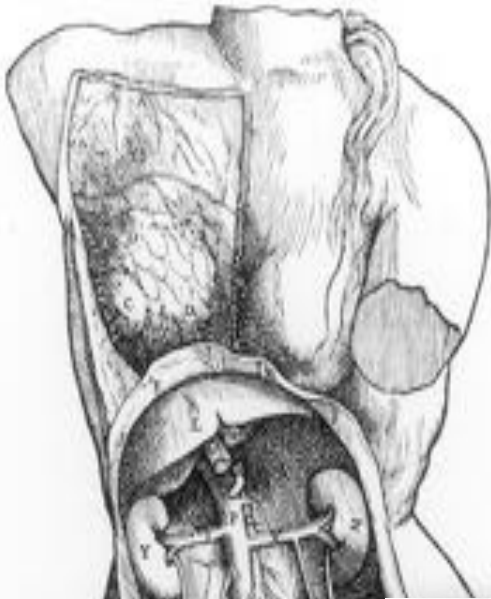
Medieval art was:

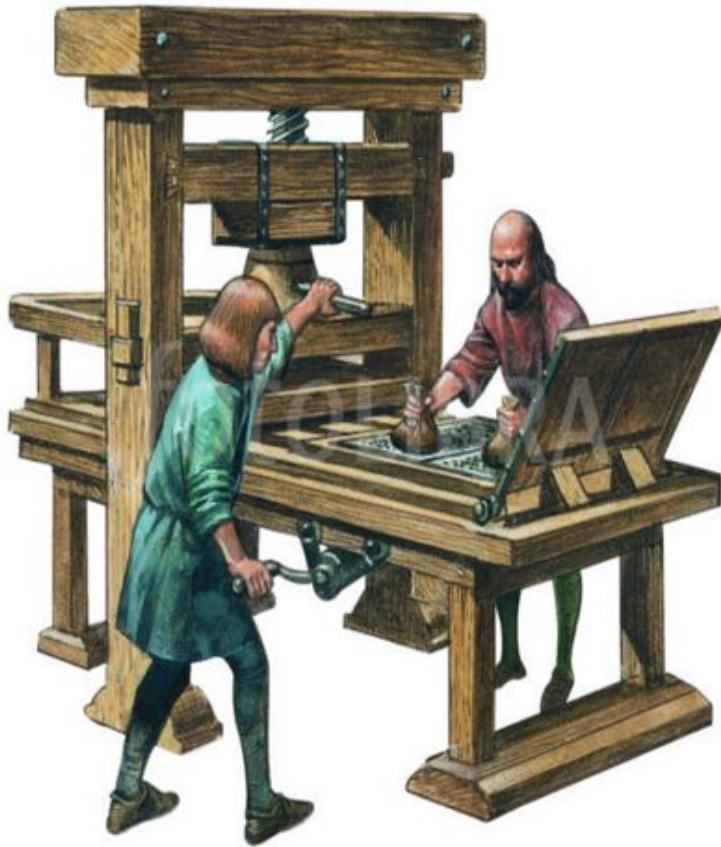
- Two dimensional
- Not very life-like
- Not very realistic
- Out of scale

Improvements: Art

How might this help medicine?

Artists, such as Leonardo Da Vinci were able to work with anatomists, to produce more realistic illustrations. They were also able to produce accurate drawings for medical textbooks.





Invented by Johannes Gutenberg,
a German goldsmith

In the 1450s the printing press was introduced to Europe.

During the Renaissance, there was massive improvements in literacy, more people than ever could read and write which meant new ideas could spread more quickly

For the first time books could be **mass produced** at a more affordable price. It became a realistic proposition to write a book for others to learn from. It was also possible to reproduce accurate pictures

Before then books had to be hand written and drawn, by monks usually.



Improvements: Technology – Printing press

How might this help medicine?... Link Printing Press to Art

What's Humanism?



- A love of learning
- Interested in the old classical scholars
- Human beings can make up their own minds when it comes to discovering the truth of the world

What might this come into conflict with?

- Humanists rejected the Christian view that God is responsible for everything
- They needed to now figure out an alternative explanation



More experimentation began during the 17th Century, partly due to the lessening of Church authority in everyday life. As well as the challenging of Galen thanks to Vesalius. New ideas were starting to gain more support.

Look at the information on this page – write a PEE paragraph on how attitudes changing might help progress in medicine in this period.

People who fell ill during the period 1500 to 1700 were likely to believe the same things about the cause of their illness as their medieval ancestors. Very little really changed in the practice of medicine during this period.

However, all across Europe, enormous shifts were taking place in other areas of daily life. Beautiful art was being created in new styles and with new techniques; beliefs were changing, with new forms of Christianity and a more secular* society developing; and understanding of the surrounding world was increasing with scientific discoveries.

Key word

Secular*

Not religious or in any way connected with spiritual beliefs.

Because of these changes, medical knowledge grew with the changing attitudes of ordinary people. The general population of Europe wanted better answers to the questions about what caused disease. Epidemics of the plague and other killer diseases, such as smallpox, the Great Pox (syphilis) and sweating sickness, could not be easily explained by the Theory of the Four Humours. They affected everybody in the same way and were not cured by traditional humoral treatments, like blood-letting and purging.

There was still a widespread belief in miasmata as a cause of humoral imbalance and disease. A miasma could be the product of rotten vegetables, decaying bodies of humans or animals, excrement or any swampy, smelly, dirty place. However, even this did not provide a satisfactory explanation for the spread of diseases when people took such care to avoid miasma.

Read the above information and **DESCRIBE** attitudes in the Renaissance period. Include in your description the words **CHANGE** and **CONTINUITY**

New ideas and discoveries in the period c1500–c1700

New ideas about disease and illness	Influential individual
In the 16th century, the Theory of the Four Humours was rejected by some radical physicians. Disease was seen as something separate from the body, which needed to be attacked. New chemical treatments started to appear, influenced by the increasing popularity of alchemy.	Paracelsus, a Swiss scientist and medical professor.
In 1546, a new text called <i>On Contagion</i> theorised that disease was caused by seeds spread in the air.	Girolamo Fracastoro, an Italian physician.
In 1628, a new theory was published in Britain, which suggested that blood circulated around the body instead of being made in the liver, as taught by Galen.	William Harvey, an English scientist
A better understanding of the digestive system developed. This meant that people gradually stopped believing disease was caused by eating the wrong things. Urine was no longer seen as an accurate way of diagnosing illness.	Jan Baptiste van Helmont, a Flemish physician.
New microscopes were being developed, which allowed for much clearer magnification. A new book, <i>Micrographia</i> , published in 1665, showed many detailed images, including a close-up drawing of a flea, copied from a magnified image.	Robert Hooke, an English scientist and head of experiments at the Royal Society.
In 1676, the medical textbook <i>Observationes Medicae</i> was published. This theorised that illness was caused by external factors, rather than the four humours.	Thomas Sydenham, an English physician.
By 1683, more powerful microscopes had been developed to allow for the observation of tiny 'animalcules' or little animals in plaque scraped from between the teeth. The images were not very clear, but they were visible. This was the first recorded observation of bacteria.	Antony van Leeuwenhoek, a Dutch scientist (see page 46).



How significant:

Rank these discoveries in an order of significance – **Explain your reasons**

So, due to all these new discoveries and ideas, by c1700:

- the Theory of the Four Humours had been discredited – however, it was still being followed by the general population of Britain
- other ideas about the causes of disease had been discovered (for example, 'animalcules').

Key word

Alchemy*

This was an early form of chemistry. Alchemists tried to turn one material into another: mostly, they were trying to discover a way of making gold.

Why was there little progress in medicine during the Renaissance period?

There were still huge gaps in knowledge

Why was the impact of medical discoveries in c1500-c1700 so small?

The lack of quality medical instruments

The general public believed in the Theory of the Four Humours

Because the general public believed in the Theory of the Four Humours, most physicians stuck to the old methods. They were in the business of healing the sick, not coming up with better methods of doing it. Even those who did look for new ideas still needed to work, and patients did not want to pay physicians to experiment on them.

Copy this diagram and summarise the small paragraph in your own words



Ideas that changed a lot	Ideas that changed a little	Ideas that stayed the same
<p>The Theory of the Four Humours. Very few physicians believed this by the end of the 17th century, though it was still used when diagnosing disease, because patients understood it.</p>	<p>The use of medical books. Physicians carried out more observations of their patients. However, they still relied on texts for looking up symptoms.</p>	<p>Miasmata. The idea that disease was spread by bad smells and evil fumes was constant throughout this period – and even became more widespread during epidemics.</p>
<p>The human body. There was a much better understanding of anatomy.</p>	<p>The influence of the Church. Most people now recognised that God did not send disease. However, in times of epidemics, such as during the Great Plague, religious causes were still considered.</p>	
<p>Diagnosis using urine. Physicians now understood that urine was not directly related to a person's health.</p>	<p>Supernatural. Although astrology was much less popular from 1500, in times of epidemics people still wore charms to ward off the disease.</p>	

How significant:

Rank the ideas in an order of significance – **Explain your reasons**

