**Medicine in the Industrial Revolution**

Some killer diseases of the time. Look at the Powerpoint and fill in the following.

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| Measles | This disease often killed or blinded children |
| Influenza | Also known as flu, this disease killed thousands in outbreaks |
| Typhoid | Spread by contaminated water and killed thousands |
| Scarlet Fever | The “red” disease which killed many children |
| Smallpox | This disease scarred or killed many people of different ages |
| Tuberculosis | Also known as TB |
| Typhus | Spread by bites from body lice |
| Diptheria | This disease killed or maimed children |
| Cholera | Spread by contaminated water and killed very quickly and painfully |
| Whooping Cough | Children severely weakened by this and often died from other infections. |

Dates and Discoveries about Diseases

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| **Date** | **Person** | **Discovery** |
| 1798 | Edward Jenner | He invented a vaccination for smallpox, giving patients cowpox, because if they had cowpox, they would not be able to receive smallpox |
| 1850-60 | Louis Pasteur | He studied how beer at a brewery was going bad, and found out that micro-organisms were growing or germinating – inventing the idea about germs. |
| 1860’s | Robert Koch | He found out that bacteria caused anthrax, cholera and tuberculosis. He also invente4d a method that could grow the bacteria and then ‘stain’ them so that they can be seen easier. |
| 1880s | Louis Pasteur | He found out that if you give a patient a very small dosage of a disease, the body will be able to cure it by itself, but not if the deadly full dosage is received. He found this out, mostly by luck, with chicken cholera in the air; it was in such a small dosage that it wouldn’t kill a chicken, but protect it from getting the disease again. |

Describe how Jenner went about developing a vaccine for Smallpox and say why do think that many people thought that Edward Jenner’s methods were wrong?

Jenner offered smallpox inoculation to his patients. He was surprised to see that most people declined the inoculation. He learnt that if someone had cowpox, they would not be able to receive smallpox. Jenner thought that if he inoculated patients with cowpox, they would not receive smallpox. Because cowpox was only a mild disease, it wasn’t a threat to give it to patients. People thought Jenner’s methods were wrong because giving an 8 year old child first one disease and then another one, just as an experiment wasn’t really that sane.

**Surgery before the nineteenth Century**

Why was surgery so dangerous before this time and had a low success rate?

Surgery was dangerous before this time because:

* No anaesthetics were used, so patients would have to be held down while the surgeon worked, also, the job had to be done very quickly because the patient could die from shock. Also, because the job had to be done so rapidly, it was not as thorough as it is now.
* No antiseptics were used because people didn’t know about germs. A lot of patients died from infections after the operation.
* No blood transfusions were used because people hadn’t invented them yet. If the job wasn’t done quickly then the patient would die for blood loss.

**Final Assessment Task – Who was the Greatest - Pasteur, Lister or Simpson?**

Read the Information about Simpson, Lister and Pasteur in particular. Decide which one you think was the most influential in the development of medicine during the industrial Revolution.

Intro for Freddy’s favourite singer’s obituary. 

[Michael Jackson](http://www.guardian.co.uk/music/michaeljackson), the self-styled King of Pop, who has died suddenly aged 50 after being taken to hospital in Los Angeles, was music royalty – one of its biggest stars and holder, for Thriller, of the record for the best-selling album in history. Eventually, however, his bizarre life-style and personal notoriety eclipsed his talent and his numerous achievements.

You will be writing an obituary for this person to commemorate his life.

* This link is for some current obituaries to show how they are reported. <http://www.telegraph.co.uk/news/obituaries/>

The things that an obituary should have are:

* A photo / drawing of the person.
* **Intro paragraph: …..** died on … at the age of …. He/ she will be remembered for their contribution to the advancement of medical knowledge. Then any other simple info to get people interested in reading on about the life and achievement of this great person.
* **Early life:** Family and schooling and how this might have had an effect on this persons later life and achievements.
* **Professional Life:** Started where – studied where. What were the things this person did that led up to their main achievements
* **Their major achievement/s:** What will this person be known for. What was the situation leading up to their work. Was it chance. Was it the result of a lifetime of work. Was their work recognized in their lifetime or did it have greater effect later on?
* **Family life:** marriage, children. Their death and who they will be survived by.
* **After this:** You need to write a paragraph or two of your own to say why you think this persons contribution was the most important . Here you need to back up your answers with evidence, referring to your research, texts, quotes etc.
* **As ever:** all sources of information need to be documented properly.

**Obituary – Joseph Lister**



Joseph Lister died on the 10th of February 1912 in Walmer, Kent. He will be remembered for his contribution to the advancement of medical knowledge. His discoveries have reduced the death rate from infections from surgery from 46% to around 15%.

Lister was born on the 5th of April 1827 in Upton, Essex, England to a Quaker family. He attended Quaker schools, and there became fluent in both German and French – the two major languages in medical research. As a teenager, he studied mathematics, natural science, and languages at the Grove House School, Tottenham. At the University of London, he earned a bachelor of medicine. He became an assistant surgeon to JamesSyme, and Lister married his daughter. Even though they had no children, they had happy lives, and she entered his professional life fully.

Before Lister’s method was used, the death rate from patients dying from infection decreased from 46% to 15%. He was appointed head of the new surgical building at the Glasgow infirmary. There, he theorized that germs weren’t caused from bad air, but from particles in the air that was living matter. He had no evidence of this, but when, in 1865, Luis Pasteur discovered that decay formed by living organisms in the air, he found that there was a connection between this discovery and his theory. He knew now that bacteria had to be killed before they could get to the open wound and infecting it. Earlier, Lister heard that sewerage was being treated with carbolic acid, so he tried using it as an antiseptic. It worked very well, and in 1877 a great thing happened. In 1877, Lister wired a fractured kneecap, an operation that generally becomes infected and the patient would die, for the first time under antiseptic conditions, and the patient survived. He got many honors from this.

In 1897 he was made the Baron of Lyme Regis. Joseph Lister was an unassuming and shy man. He was deeply religious, and as a young man he joined the Scottish Episcopal Church, humbly believing that God directed him. He didn’t really mind about social or financial success or rewards. His wife died in 1892.

I think that the most important thing that he did was discover and found out how bacteria and infected wounds wound together and also how he used a product that was used to treat sewerage to decrease the death rate from infections after operation.

Sources: <http://web.ukonline.co.uk/b.gardner/Lister.html> http://www.historylearningsite.co.uk/joseph\_lister.htm

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|  | **Achievement level Criterion B: concepts** | **Criterion D: organization and Presentation** |
| Notes and hints | This section is how much you can show the persons role in change – i.e. the advancement of medicine. This means you show an understanding of what it was like before and what this persons achievements led to. To gain higher levels you need to show sophisticated understanding and analysis. | **Audience:** This is for the readership of a new journal entitled “Obituaries of famous people in time”. You will be writing it in the present day to assess the persons role in medicine.  Follow the guidelines above.  Use subtitles if you want  Use captions on photos/ drawings/ cartoons  Use a bibliography  Write clearly. Check spelling and grammar.  **DO NOT COPY** – this must be your own work. Cheating = 0 points and redoing the work. |
| 0 | The student does not reach a  standard described below. | The student does not reach a  standard described below. |
| 1–2 | The application of the concept of  change, is inappropriate. | The information used is not always  relevant; the structure is unclear and  inappropriate for an interview. The  expression is imprecise. |
| 3–4 | The application of the concept of change is sometimes appropriate. | The information used is mostly  relevant; the interview structure  is attempted but is not always  successful. The expression is not  always clear. |
| 5–6 | The application of the concept of change is appropriate but superficial. | The information used is relevant; the  interview structure is appropriate.  The expression is clear and attention  is paid to the audience. |
| 7–8 | The application of the concept of  change, is appropriate and shows some depth. | The information used is always  relevant; the interview structure is  well developed and has a logical  sequence. The expression is clear, concise, effective and appropriate to the audience. |
| 9–10 | The application of the concept of  change, is appropriate and sophisticated. |  |

**Marking Rubric**

Mark

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| Criteria B | Criteria D |
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Teacher Comment

Student Reflection