

Welcome to Thackray Museum of Medicine



MEDICAL INNOVATIONS

This Medical Innovations Trail has been put together for **KEY STAGE FOUR** groups. We hope you enjoy exploring the museum together.

The galleries are full of stories about medical inventions and innovations that have changed, and improved people's lives. This trail will help you to find out more about some of these amazing things.

Before we start there are some important things to note:

Innovation: A new method, idea or product that is designed to improve a situation or solve a problem.

Invention: Something, typically a device, that has been invented to improve a situation or solve a problem.



This sign means there is something for you to watch



This sign means it is time for you to be a detective



This sign means there is something for you to touch



This sign means there is something for you to look at



This sign means there is something for you to think about



This sign means there is an activity for you to do back at school.

DISEASE STREET

Start your journey on Disease Street. This gallery shows us what life was like in Victorian Leeds for people and gives us an idea of how people struggled before some of the medical innovations we will explore later.



Watch the Hannah Dyson Video and join her as she shows you around her street.



Pick a character. What is your character's name?

Why do you think it was so hard for your character to stay healthy on our Hazard Trail?



Name some technologies that we have today that might have helped your character.

Would you have liked to have live on this street? Give at least three reasons for your answer.

VICTORIAN OPERATING THEATRE

SOME PEOPLE MAY FIND THIS GALLERY UPSETTING

This gallery shows us what it was like to have surgery in Victorian times and how medics at the time were trying to help people, despite not having access to the Scientific knowledge we have today.



Watch the Video of Hannah Dyson having her leg operation.



Can you think of a medical innovation that we have now, that could have made Hannah's ordeal easier?

MAKING US WELL, OUTSIDE IN – PUBLIC HEALTH

It was important that people made changes to the way they lived. New public health organisations helped create rules about this to help direct people.



Explore this gallery and discover some of the things that people did to improve living conditions.

Find one way which people improved the quality of their water.

Find one way which people improved the quality of their food.

Find one way which people improved sanitation.

Which of the changes that people made, do you think made the biggest difference to people's lives?

DISEASE DETECTIVES

This gallery explores the key people and discoveries that help us understand micro-organisms (bacteria, viruses etc)– both good and bad ones. Many of these discoveries, led to some of the greatest medical innovations in history.



Watch the **What is a Germ?** video. It is important that we know what germs are and how we can help stop them.

What do you think is the most effective way to stop bad micro-organisms spreading?



Name the four main types of micro-organism.

Find the table that tells you about **Louis Pasteur** and **Robert Koch**

What did Louis Pasteur prove through his experiments?

What are Robert Koch's four Postulates?

List three diseases that the work of Robert Koch helped to fight against.



Look around at the other tables and find the answers to these questions.

What was **Antoine Van Leeuwenhoek** a pioneer in developing?

Who was **Mouldy Mary** and what team did she help with her work?



Explain how Mouldy Mary's discovery was built on Alexander Fleming's original idea.

What does this tell us about the nature of innovation?



Consider the progress of inoculations and vaccines.

Why can it be sometimes difficult to distinguish who made / discovered a medical innovation first?



Powerwall activity

CUTTING EDGE

This gallery shows us in more detail, some brilliant inventions from throughout history, that help us stay healthy.



Find the Kidney Dialysis machine.

What is the role of the kidney in the human body?

Who invented the Kidney Dialysis Machine?

What does it do?



Read Aby's story at the end of the bay.

How did Dialysis help improve Aby's life?

What other innovation in this gallery, helped to improve Aby's condition? (clue- Aby had a Kidney Transplant).



Find the Diagnosis bay.

Who invented the Monoaural Stethoscope?

What is special about the Pinard Stethoscope?

What is the main difference between them and why do you think this change occurred?

What is an Ophthalmoscope used for?

Why are these tools important for a doctor to have access to?

What did Leeds based doctor Clifford Allbutt invent and why is it so important?



Find the X-Ray machine. This bay is all about medical imaging and looking inside the body.

What disease was the first one that x-rays help to fight?

When was the first whole body image taken with an MRI?

What difference did it make to diagnosing a patient?

When is ultrasound scanning most commonly used?

Why do you think this method is favoured?



Find the Birth bay.

What are Forceps used for and why are they important?

What supplement are women advised to take when they start trying to have a baby and during pregnancy?

Which drug, sold between 1957-1962 was responsible for defects or death in around 100,000 babies in the 46 countries that approved usage of the drug?

As a result of this event, what must any modern innovation or treatment go through before it is given to patients?



Make your way to the Voting Wall

Now is the time to place your vote and decide which innovation you've seen in this gallery is the most important.

Which innovation did you choose and why did you choose it?

INNOVATION STATION



Reinvent an object you have seen on your journey through the galleries.

Think about what that object did and how it could be improved upon for a modern audience.

RESPONSE TO CRISIS

Medicine reacts to the world around us and responds to crisis in different ways. This gallery explores some of the positive medical developments that emerged from global crises

Wartime sometimes leads to some key innovations as the large number of people who are injured means that we need to think of new ways of treating people.



Can you find information about the following innovations that came about because of World War One? Tick them off when you find them.

Blood Transfusions

The Thomas Splint

Mobile X-Ray Vans



When you find each of these innovations think about:

What problem did this solve?

What design faults or problems you can think of?

How were these addressed in later versions or techniques?

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What design faults or problems you can think of?

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Find the Bandaging station. Using Bandages to stop blood loss is a vital innovation.

Have a go and see if you have the skills to help someone.

BACK AT SCHOOL ACTIVITY



Produce a poster, play, article, or YouTube video for your chosen innovation, persuading your friends that you have picked the best one.

