Ian Dawson
Dale Banham

AQA MEDICINE
& HEALTH THROUGH TIME
Teacher's Resource Book

DYNAMIC LEARNING
HODDER EDUCATION

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The Schools History Project

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Since 1978 the Project has been based at Trinity and All Saints University College Leeds. It continues to support, inspire and challenge teachers through the annual conference, regional courses and website: www.schoolshistoryproject.org.uk. The Project is also closely involved with government and awarding bodies in the planning of courses for Key Stage 3, GCSE and A level.

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Contents

Section 1: The Big Story

Rationale	In the past we might have called this section 'Introduction' but we've used a different section title because we want to flag up its importance. It's all too easy to zip past an 'Introduction' to get to the start of the 'real' work on ancient medicine. However, this section is important for two reasons: 1) It enables students to develop an outline understanding of medical history and to see how this outline helps create an answer to the core enquiry. 2) It enables students to focus early on the overall enquiry question, 'Why do people today have better health and live longer lives than people in the past?' Experience shows that, while spending time on an overview seems to make for a slow start, students do better in their exam if they have gained a stronger grasp of the overall story of the history of medicine at the beginning of the course.
Resources	• Student's Book **pages 2–11** • TRB Activity Sheets 1–6 • Dynamic Learning 3: Living graphs and Medical Moments in Time illustrations.
Exam Busters	***Smarter Revision*** • Living graph (Student's Book **pages 6–7**)
Objectives	By the end of this section students should have: • identified how the Development Study on the history of medicine fits into their overall GCSE History course and what it is aiming to achieve • identified the range of concepts and factors used in the Development Study and begun to use some of the language of change and continuity • established a clear outline of medical history, which includes some key individuals, events and theories and is related to AQA's three specified themes: Disease and Infection, Surgery and Anatomy, and Public Health • identified the core question for this unit ('Why do people today have better health and live longer lives than people in the past?') and begun to suggest answers to this question.
New to teaching 'Medicine'? Priority decisions	• Are you going to begin with personal medical stories or go straight into the Big Story activities? • How many lessons on the Big Story are needed to make sure that students develop a strong grasp of the outline? • What level of detail in the outline is suitable for this particular class? • How will students record this outline for future use and how will you use classroom displays to keep it visible?

Introducing the core enquiry for the whole Development Study

This book has been written to answer an overall enquiry as well as covering an exam specification. Our core enquiry is: 'Why do people today have better health and live longer lives than people in the past?' (We know the words 'on average' should be in there but they would take away much of the clarity and punch of the question.)

There are different ways of introducing this enquiry. One option is to do so as part of the activities in the Big Story (Student's Book **pages 2–7**). Another option is to

use a more personal story or stories to open up the core question. This 'personal story approach' could be taken in the very first lesson, or after covering **pages 2–7** and before you move on to **pages 8–9**.

Personal stories are an extremely effective way of drawing students into topics, especially a personal story of your own or from your family, or one from a colleague, your class or a past student. Many teachers know the feeling of abandoning their teaching persona and talking about themselves to a class – suddenly students' attention is deeper and more focused.

However, if you don't feel comfortable with this approach then Activity Sheets 1A–B and 1C provide alternatives – in the form of two stories about other people. If you are an NQT with a new class, think carefully and discuss with colleagues how to approach a story-telling start. With some classes, you might not wish to open up your own story so early and it may be better to play safe and use the stories on Activity Sheets 1A–B and 1C. While surgery appears to be the dominant element in these stories, behind surgery lie factors (see **page 9**) such as science and technology. Can students at this stage suggest how other factors might have helped or hindered medical progress?

The Big Story (pages 2–7)

Establishing a clear outline in students' minds at the beginning of the course is important for exam success. The sooner they develop a sense of the overall story, the more time they have to deepen their overall chronological understanding and knowledge, with less chance of making mistakes in exams by putting periods in the wrong sequence or key developments in the wrong periods. An early grasp of the outline also makes it much easier to understand the full significance of developments in any individual period.

In addition, the core enquiry gives this outline a purpose, establishing some initial ideas about the answer (a hypothesis) to the question, 'Why do people today have better health and live longer lives than people in the past?'

Therefore **pages 2–5** help students create this outline and hypothesis for themselves. **Pages 2–3** are an introduction to the outline so you will spend a lot more time on **pages 4–5**, which enable students to tell the outline story for themselves and relate it to the core question.

Your first step in planning must be to clarify for yourself what constitutes a suitable outline for each class. Plan this in conjunction with a wall display that will be visible throughout the course (assuming that classroom facilities make this possible).

Pages 2–3 present ten clues for students to place in particular periods. This helps identify their assumptions about medicine in each major period and establish some of the major continuities. You can tackle this activity using the Student's Book, or copy Activity Sheets 2A–B to create cards that can be moved around and placed on a timeline.

1) Begin by focusing on the timeline and asking students which non-medical events, people or developments they associate with each period. This will establish a sense of each period.
2) Then move on to placing the clues. Either have small groups organise all ten clues and then compare results as a class. Alternatively, you could give each group two or three clues to concentrate on and then report back to the class on where they think they go on the timeline.

   Here's an answer guide – just in case it helps:

   A Second World War
   B Medieval but used until at least the early twentieth century
   C Ancient Greece but the idea lived on
   D Medieval but the idea was common from prehistory and lasted into the nineteenth century
   E 1948
   F Late 1800s
   G Example from mid-eighteenth century but typical of similar cures throughout history
   H Ancient Greece but also throughout history
   I Early 1800s and before
   J Ancient Rome.
3) Having put the clues into periods, pick out one or two items for discussion to introduce ideas of change and continuity. For example:
   - Could Clues B, G or H have gone in any other period? Lead into ideas about continuity and how long-lasting some ideas were.
   - Do you think everyone after the Romans had facilities such as those in Clue J? Lead into ideas about regression.
   - How long do you think the ideas in Clue C lasted?
   - Which clues suggest the period when there was most progress?
   - Which clues tell us about a really important turning point in medical history?

Move through **pages 2–3** quite quickly – it's a stimulus activity to introduce the more detailed work on **pages 4–5,** which adds more key events, people and developments. From this information stems the main Big Story activity, in which groups of students present an outline answer to the core question by creating and

telling their own outline history of medicine (**page 4**, Activity 1), using the information on the graph.

It is important to get two or three groups to make their presentations (so that students become used to seeing and thinking about the overview) and then discuss what they have in common and what the key features of this overview/answer are. Activity Sheet 6 can be used to sum up these key features.

This approach can be supported by using a simple kinaesthetic overview activity identifying the 'Big Ideas' of each period, such as 'Enquiry' for the Renaissance. This should take no more than fifteen minutes. Some students wear tabards proclaiming a period Big Idea and the rest of the class have to put them into the right chronological sequence and explain in a sentence what each period Big Idea was. For full details see **www.thinkinghistory.co.uk/ActivityBase/MedicineBigIdeas.html**

Pages 6–7 then focus more closely on the three AQA themes (Surgery and Anatomy, Disease and Infection, and Public Health) and set up the first Smarter Revision task – recording the development of each theme as a graph. Students will continue this throughout the course, adding more detail after working on each historical period. How long you spend on this task at this stage will depend on the nature of the class. You could either:

a) tackle the graph-building task outlined in the activity, sending groups of students on a treasure hunt through the five Medical Moments in Time pages (**12–13**, **52–53**, **84–85**, **112–13**, **114–15**) so that each group builds up a different graph
b) focus on starting the graphs at this stage by using **pages 12–13** only (on ancient medicine) to begin the three graphs.

Page 7 gives students the rationale for this activity and suggests different methods of recording the development of the graph. Activity Sheet 3 provides a template graph to complete.

Together, **pages 2–7** provide all the material you need to create wall displays outlining the history of medicine. These displays are an important reference as each period is investigated in more detail. If you use a heading for the display, consider using the core question as the heading rather than simply 'The History of Medicine'. Keep a display board available to update this outline regularly during the course, adding details to this initial pattern and amending the graph tracks.

Helping students understand the context of 'Medicine' (pages 8–11)

You could use **pages 8–11** either before or after you cover the Big Story (**pages 2–7**). They are for brief reference early on in the course but you should revisit them later at least once to reinforce the ideas, certainly at the end of the Development Study. They aim to make clear to students how the Development Study fits into their overall GCSE History course and helps them to identify the main concepts they will use. **Page 10** should help students appreciate that this SHP course is not a mix of randomly chosen bits of content but an introduction to a set of deliberately diverse approaches to history. Understanding how the whole GCSE course fits together can increase students' sense of achievement. You could also use Activity Sheet 5 to get across one of the main transferable skills that comes from studying History.

When you introduce the factors on **page 9** (and Activity Sheet 4), spend a little time exploring the role of factors in the story of medicine. Students need to understand how factors such as 'war' and 'government' can affect the development of medicine. One way to do this is to kit a couple of students out with tabards saying 'War' and 'Government'. Nominate another student to represent 'The development of medicine' and ask him or her to move across a timeline. Then physically show that these factors sometimes accelerate Medicine's progress, sometimes stop progress, and sometimes work together to help or hinder progress. You could also ask students to suggest in which periods they think each factor had the most impact.

Outcomes to look for

1) Students' ability to give a simple but coherent account of medical history using some conceptual language (such as 'change', 'continuity', 'progress', 'turning point') and referring to periods of history.
2) Students' ability to relate the information in the outline to the core enquiry.
3) Students' understanding of what factors are – not simply their names but also their role in affecting events.

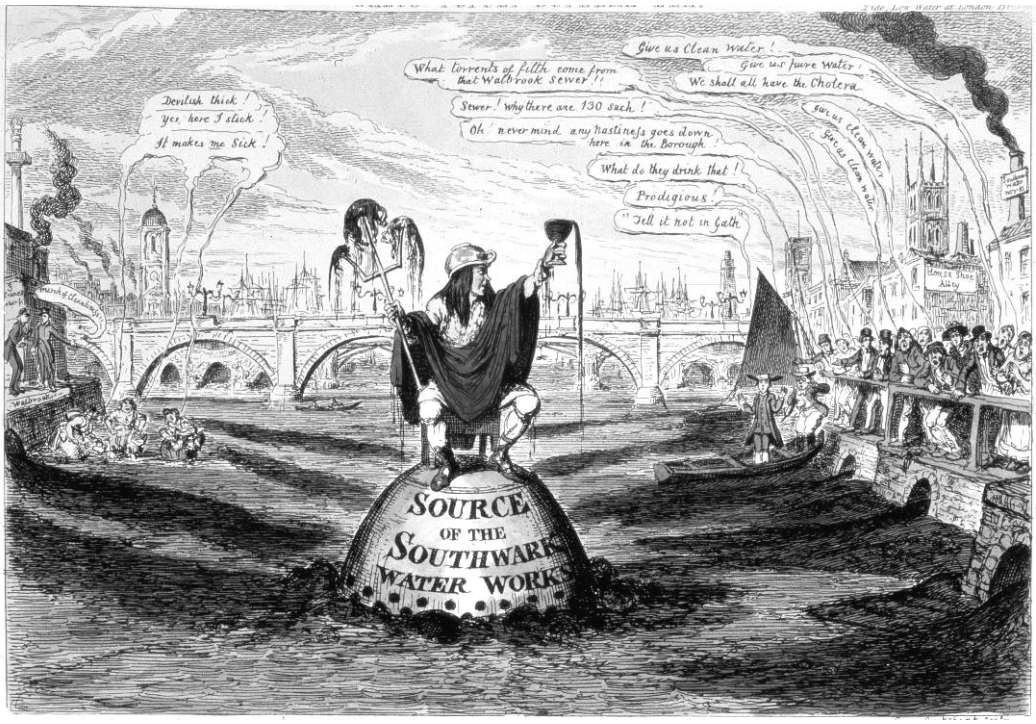
46 What can you learn about public health in the early 1800s? Picture 1

Annotate this picture with:
a) things you can learn about public health in the early 1800s and people's attitudes to it
b) suggestions about how useful or reliable this source is for your enquiry.

A cartoon called 'A Court for King Cholera'. It is a drawing of London published in 1852.

47 What can you learn about public health in the early 1800s? Picture 2

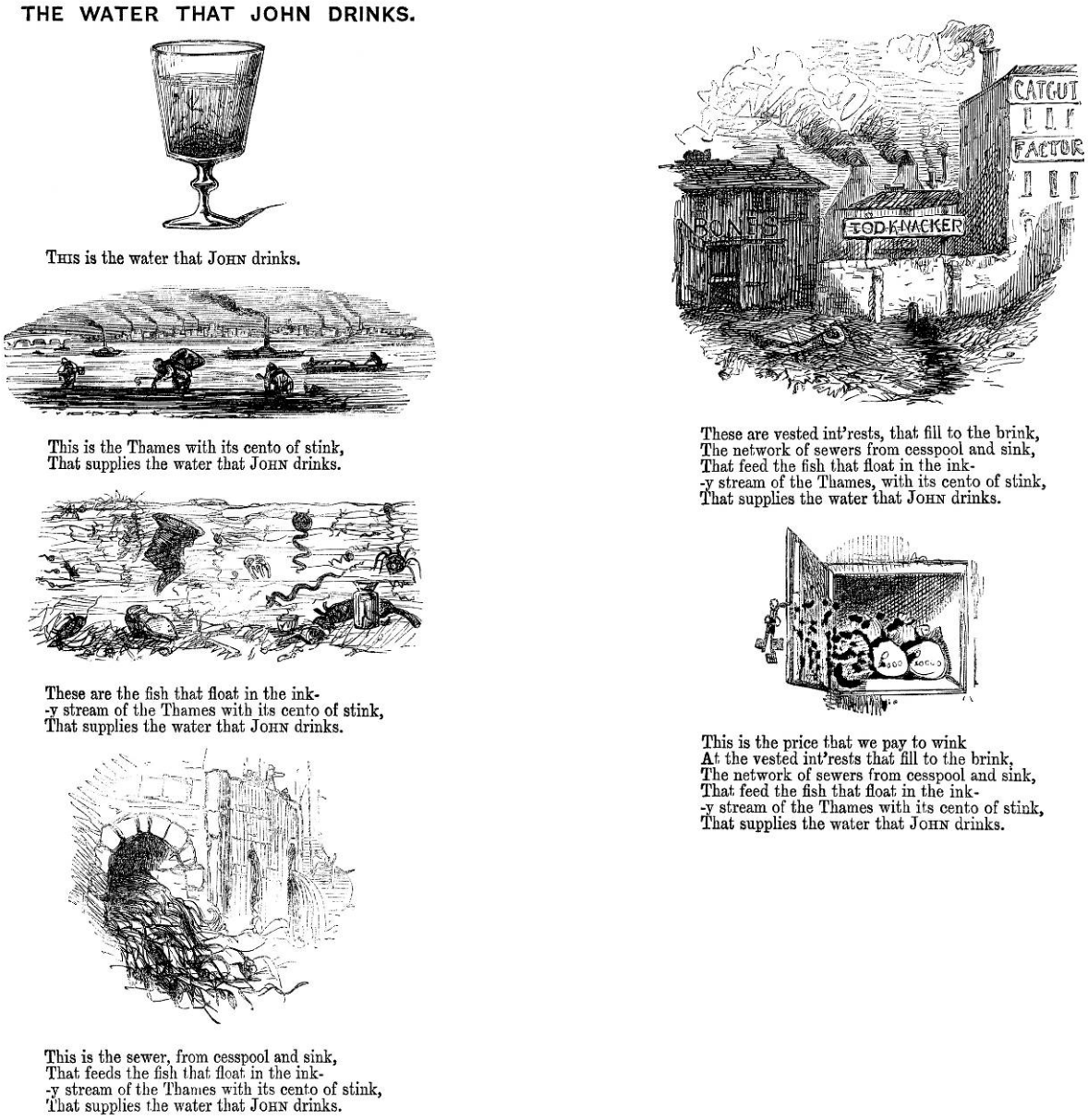
Annotate this picture with:
a) things you can learn about public health in the early 1800s and people's attitudes to it
b) suggestions about how useful or reliable this source is for your enquiry.



A cartoon published in 1831. It is commenting on where the Southwark Water Company in London got its water from.

48 What can you learn about public health in the early 1800s? Picture 3

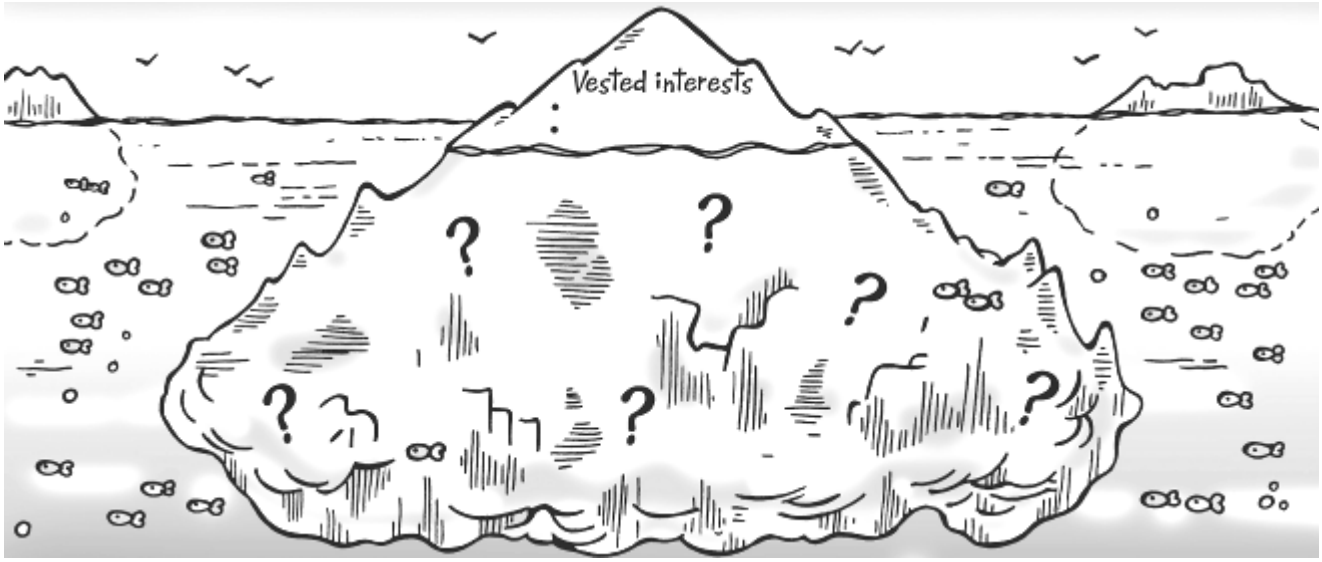
Annotate this picture with:
a) things you can learn about public health in the early 1800s and people's attitudes to it
b) suggestions about how useful or reliable this source is for your enquiry.



'The Water that John drinks', a cartoon from Punch *magazine, October 1849.*

49 Why wasn't anything done to protect people's health in the early 1800s?

Make notes on this iceberg to explain why public health was so poor in the early 1800s:
a) in the section above water – make notes to explain why vested interests opposed reform
b) below the water – add short headings to sum up a range of reasons, using **page 145** of the Student's Book to help you.



50 What roles did the factors play in public health reform?

SCIENCE AND TECHNOLOGY

GOVERNMENT

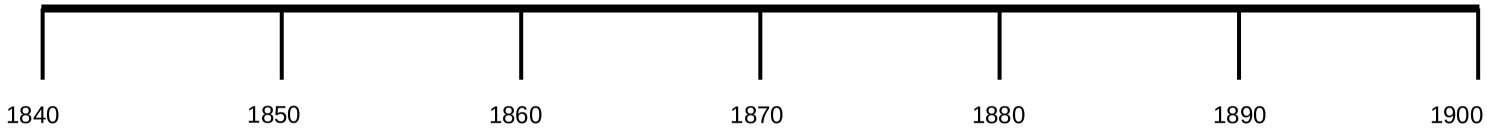
INDIVIDUALS

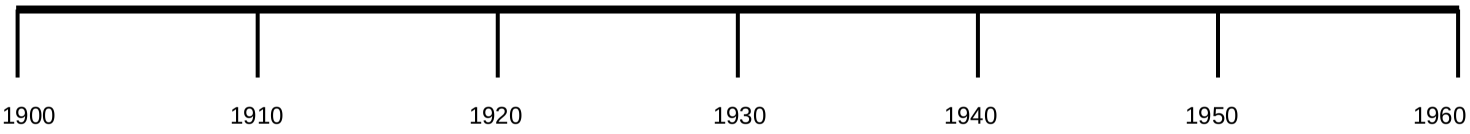
WAR

CHANCE

51 When did public health eventually improve?

Mark on these timelines:
a) the main public health reforms between 1840 and 1960
b) any events that persuaded people that reforms were needed.





52 Why did public health improve further in the twentieth century?

How are you going to go about investigating public health reform since 1900?
Here are some guidelines:

1) Create a hypothesis

Think about why public health reforms took place in the 1800s. List the factor or factors that were most important. Do you think the same factors would be just as important in the twentieth century?

2) Skim-read

Read **pages 158–163** of the Student's Book quickly. Don't stop and take in every detail but find out what the main reforms were in the 1900s. You should pick out three things.

3) Focus on the factors

Create factors cards like those you used for investigating the nineteenth century. Then read **pages 158–163** of the Student's Book and record details on the correct cards. Which factors were most important?

53A What can you learn about surgery in the early 1800s? Source 1

Annotate this picture with:
a) things you can learn about surgery in the early 1800s
b) suggestions about how useful or reliable this source is for your enquiry.

A painting of an operation dating from around 1800.

53B

What can you learn about surgery in the early 1800s? Sources 2, 3 and 4

Annotate these three sources with:
a) things you can learn about surgery in the early 1800s
b) suggestions about how useful or reliable these sources are for your enquiry.

Source 2
The novelist Fanny Burney's account of her mastectomy operation in 1811:

' … when the dreadful steel was plunged into the breast – cutting through veins, arteries, flesh, nerves – I began a scream that lasted during the whole time of the incision – I almost marvel that it does not ring in my ears still! So excruciating was the agony. When the wound was made, and the instrument was withdrawn, the pain seemed undiminished, for the air that suddenly rushed into those delicate parts felt like a mass of small but sharp and forked poignards [daggers], that were tearing at the edges of the wound.'

Source 3

An account by Professor James Syme of amputating a leg at the hip joint. Syme was a surgeon working in Edinburgh in the early 1800s.

'I introduced a narrow knife about a foot long … I cut along the bone. Finally I passed the knife around the head of the bone, cutting the remaining portion of the ligament, and this completed the operation, which certainly did not occupy at the most one minute. [My assistant] relaxed [the tourniquet so] that we might estimate the size and number of the bleeding vessels. It seemed at first sight as if the vessels which supplied so many jets of arterial blood could never be closed … a single instant was sufficient to convince us that the patient's safety required all our [speed], and in the course of a few minutes haemorrhage was effectively stopped by the application of twelve ligatures.'

Source 4
Surgery in St Thomas's Hospital London in 1871, recalled by John Leeson, a medical student at the hospital:

'Ovariotomy was becoming common and one of our surgeons was keen on it. His mortality was round about 80 per cent. I used to dread seeing a notice of the operation, as I knew that in a few days the patient would probably be lying on the post-mortem table.'

'I remember the house-surgeon in the operating theatre with his threaded needles dangling from the front flap of his coat. One of our surgeons lectured on anatomy in an old frock-coat buttoned up to the chin. I see him now, pawing the dissection as he lectured on it. When the coat was past even this work he took it up to the operating theatre. An operation was a dirty job and an outworn old coat was a suitable garment! I see it now, faded with age, stained with blood and spotted with pus.'

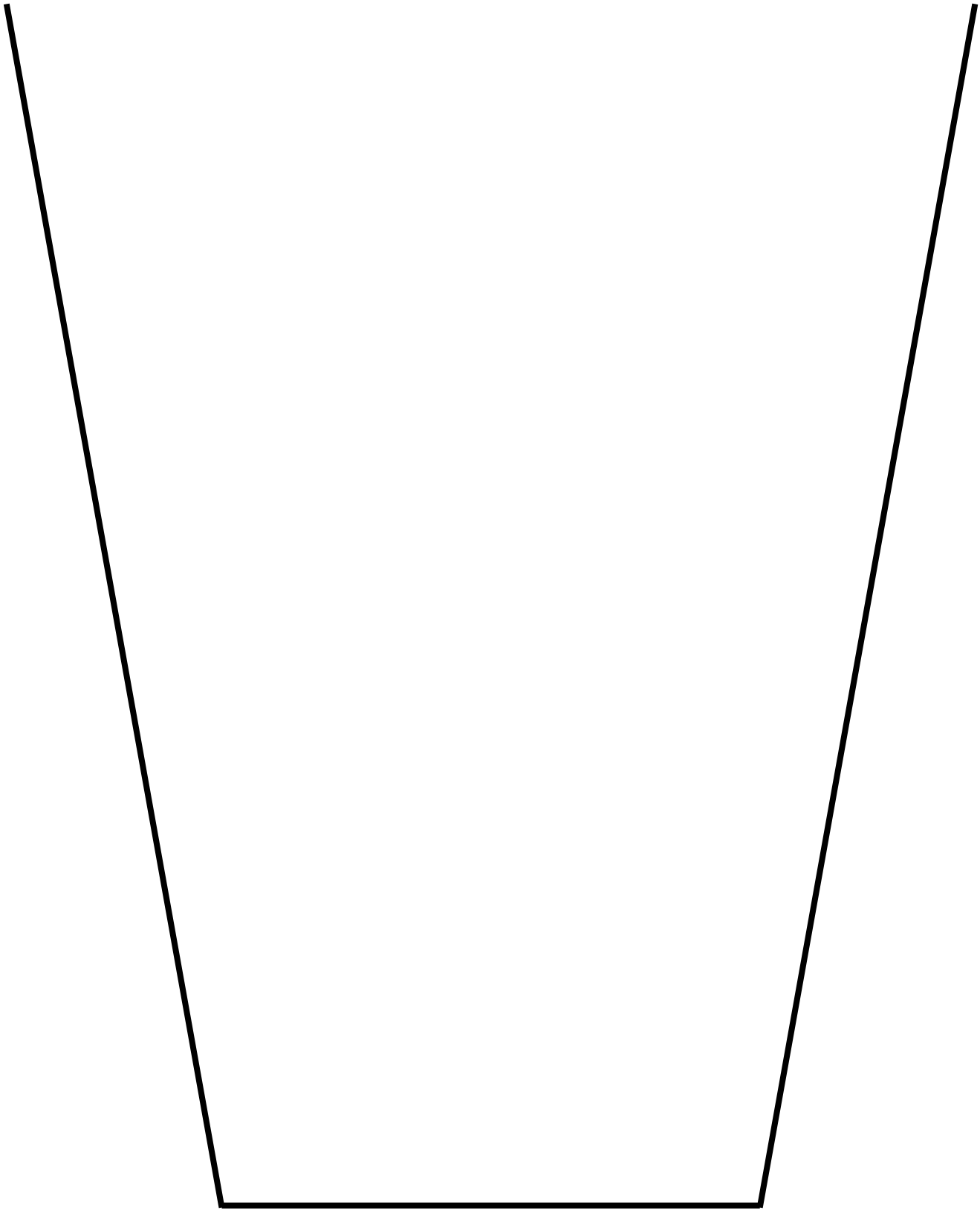
54 Smarter Revision: Freeze-framed photos about changes in surgery

Changes in surgery

Annotate these photographs to show the key features of surgery in the early 1800s and later in the 1800s.

55 Collecting evidence of opposition to …

On this sheet, write down the reasons why opposition to anaesthetics and antiseptics was **not** surprising.

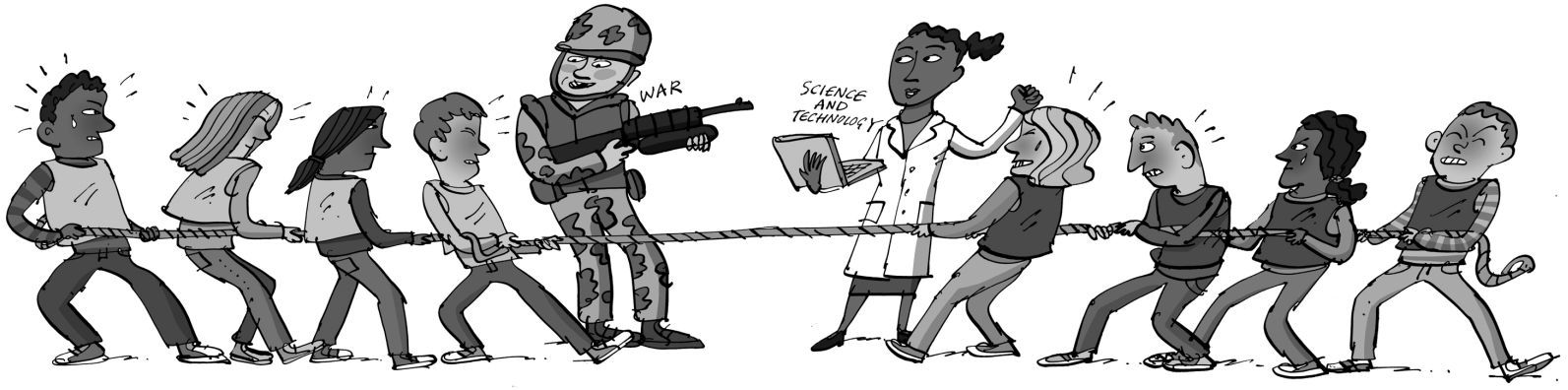


56 Why has surgery improved so much since 1900?

Your task is to:

a) draw lines pointing to the tabards of the people in the teams, and label each one. Read **pages 180–83** of the Student's Book and decide which developments are on each team.

b) decide which of the team members was especially important. Give those team members two or even three ticks.



57 Improve that answer!

Which factor (war or science and technology) has contributed more to the development of surgery in the twentieth century?
Explain your answer. [8 marks]

a) Mark on the answer below the parts that you think are good and note why you have chosen them.
b) Make short notes advising the student on how to improve the answer.

The First World War led to many improvements in surgery. During the war X-rays became widely used for the first time. They were used to find bullets deep in the body. The war also created a need for better ways to carry out blood transfusions. Before the war these were carried out with on the spot donors because doctors had no way of storing blood properly. During the First World War large amounts of blood were needed and this method was not practical. This led to new methods of storing blood being developed. Doctors discovered that tiny cells in the blood could be bottled, packed in ice and stored where needed.

The war also created a need to develop new methods to prevent infection during surgery. By trial and error, surgeons developed new techniques. They cut away infected tissue and soaked the wound with a saline solution. During the First World War surgeons were faced with hundreds of thousands of casualties. This meant that they had to learn fast and had the opportunity to practise new techniques. For example, surgeons developed new techniques for repairing broken bones. They also improved methods of grafting skin which led to the development of plastic surgery. The Second World War also led to improvements in surgery. During the twentieth century there have been big improvements in surgery. War was the key factor that led to change.

58 When did the most important changes take place in surgery?

Use this picture to decide whether the nineteenth century or the twentieth century was the time of the most important changes in surgery. Add all the developments listed on **page 185** of the Student's Book to the scales **and** note down by each one the weighting you have given it (see **page 185** for instructions). Then add up the scores to decide which century saw the most important developments in surgery.

Final weightings total

Nineteenth-century surgery:

Twentieth-century surgery:

59 What really changed hospitals and nursing?

Florence Nightingale's work in the Crimea

The discovery that bacteria cause diseases

Increased public awareness of the need for clean hospitals and qualified nurses

Money raised for Nightingale fund

Mary Seacole's work in the Crimea

Developments in surgery such as anaesthetics and antiseptics

A wider range of operations and treatments carried out so the demand for good nurses increased

Better hospitals and better-qualified nurses

Improvements in engineering and public health

Florence Nightingale set up training schools for nurses. These nurses showed their value, increasing respect for nurses and leading to more women becoming nurses.

Florence Nightingale's books influenced training and the design of hospitals.

60 How did women win the right to become doctors?

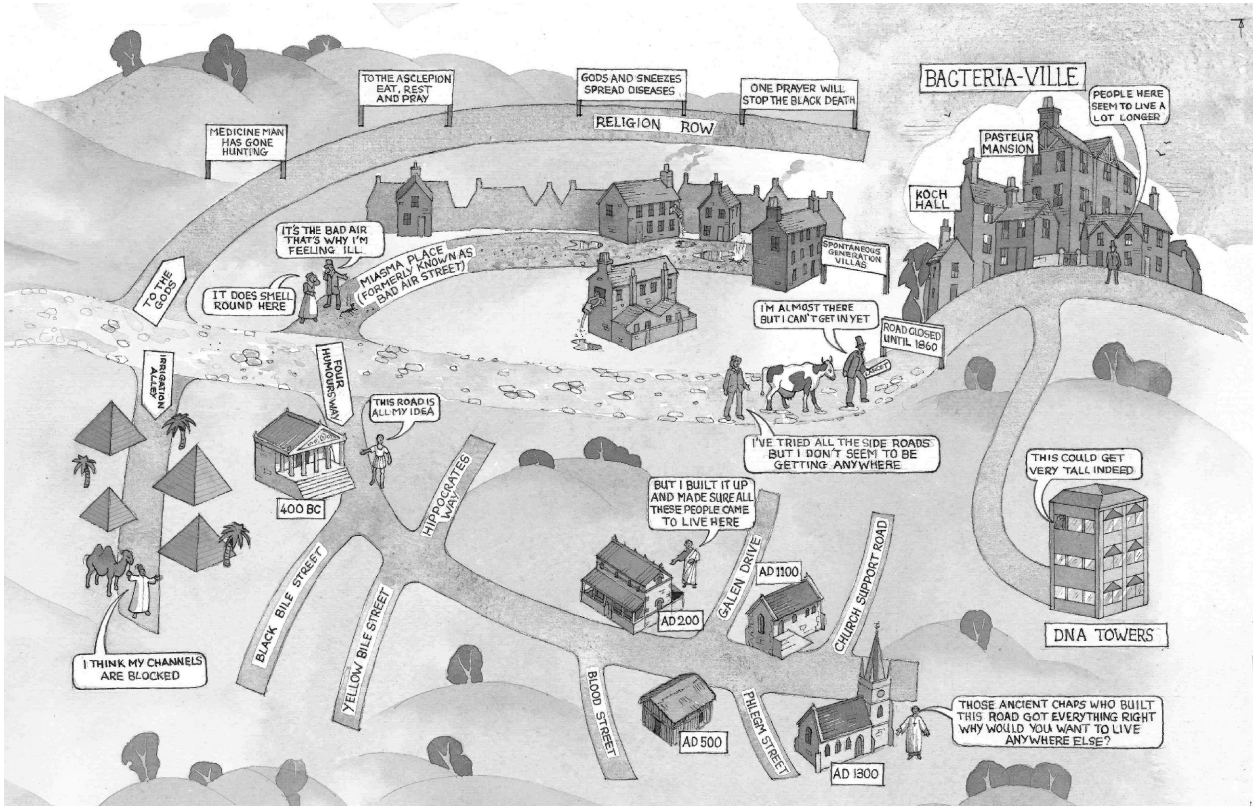
1) Use this sheet to help you complete Activity 3 on **page 193** of the Student's Book. Fill in the right-hand column with the text from boxes E–H in your book – but you need to match them carefully.

Women's actions	**Men's reactions**
Box A During the 1860s Elizabeth Garrett worked as a nurse and then attended lectures at the Middlesex Hospital.	
Box B Elizabeth Garrett passed all the exams to qualify as a doctor. The final step before she could work as a doctor was to become a member of one of the Colleges of Surgeons, Physicians or Apothecaries.	
Box C In 1874 six women, led by Sophia Jex-Blake, completed the medical course at Edinburgh University.	
Box D In 1876 a law was passed opening all medical qualifications to women.	

2) What attitudes did women have to overcome to become doctors?

61 The road to Bacteria-ville

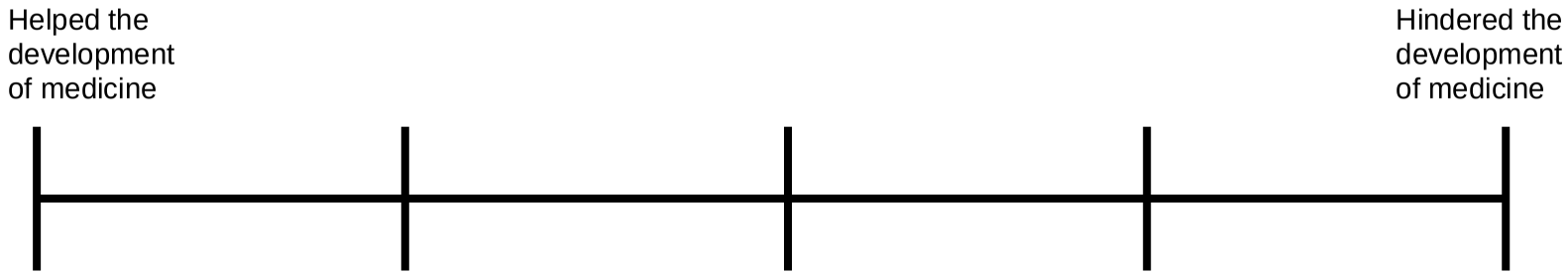
This picture tells the story of the search to discover the cause of disease. Your job is to add your own notes explaining the meaning of as many features of the drawing as possible.



62 How did the factors affect medicine?

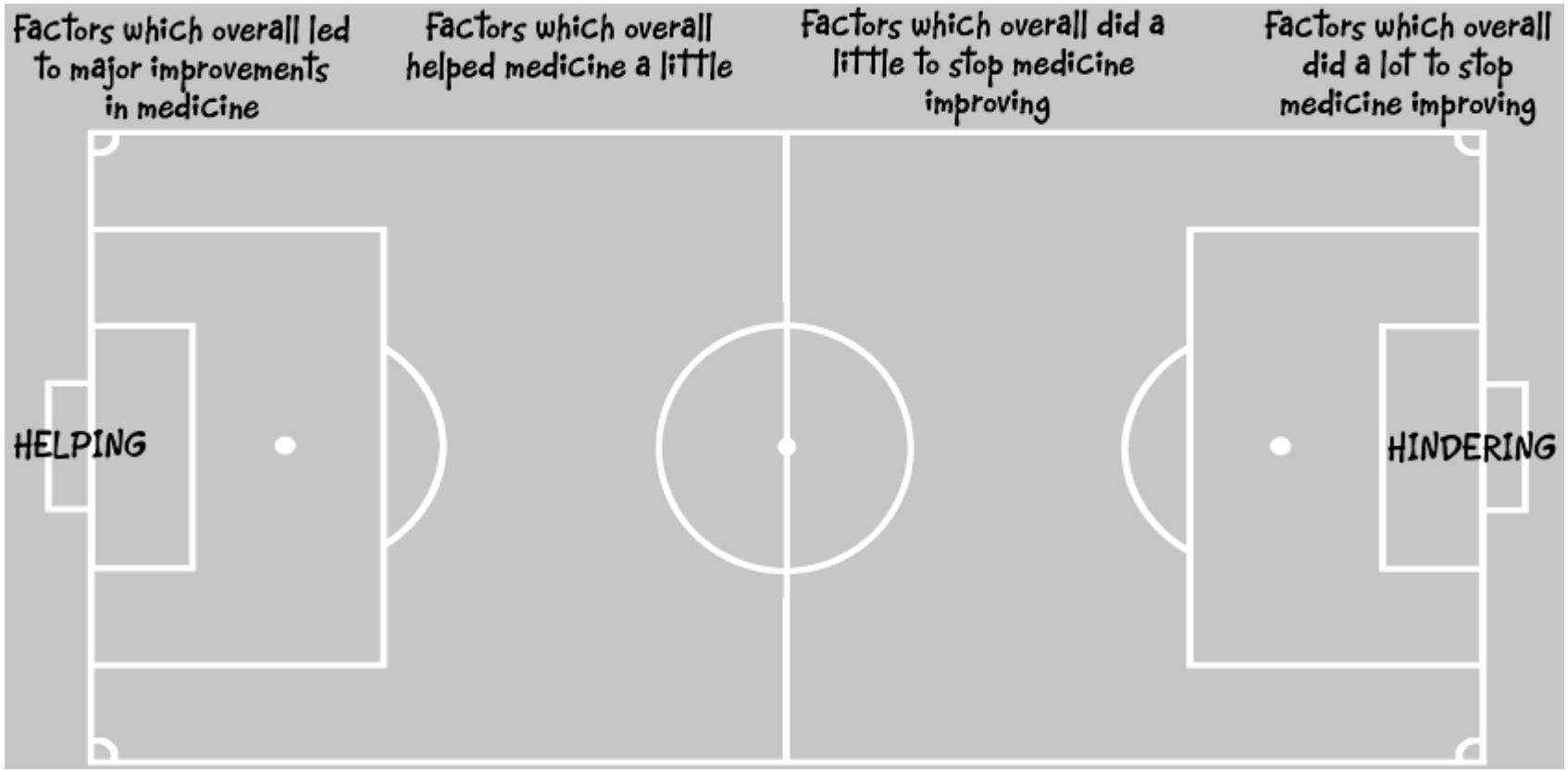
Complete this ‘washing line’ with as many examples of the impact of your chosen factor as possible.
Add extra short notes justifying where you place each example on the line.

Chosen factor:



63 Which factors were most influential?

Record on the pitch the impact you think each factor had on the history of medicine.



64 Which individuals were most significant?

Use these templates to create your own Top Trumps cards for revision.