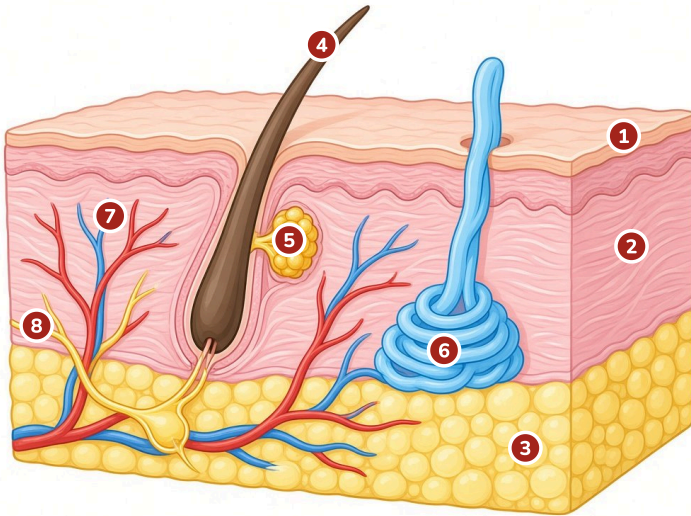




Instructions: No word bank: name the numbered parts from memory or from the module. Number the discoveries in order and write each date. Analyse the source, explain significance, then write full-sentence answers and plan the essay.

1. Name the parts (no word bank)



1 _____ 2 _____ 3 _____ 4 _____
5 _____ 6 _____ 7 _____ 8 _____

Did you know?

- Melanin protects deeper skin cells from ultraviolet light.
- Fingerprints form before birth and are unique.
- Jenner noticed milkmaids who caught cowpox did not get smallpox.
- Penicillin was first mass-produced in the 1940s.

Background

Your skin is your body's largest organ. An adult's skin weighs about 4 kg and would cover about 2 square metres if laid flat. It keeps water in, keeps germs out, helps control your temperature, lets you feel touch, heat and pain, and makes vitamin D using sunlight. You shed about 30,000 to 40,000 dead skin cells every minute; much household dust is old skin!

2. Timeline: order and date

Number the events 1 to 7 (1 = earliest) and write the date of each.

#	Event	Date
1	Semmelweis shows handwashing saves lives	
2	Fleming discovers penicillin	
3	Pasteur's experiments support germ theory	
4	Polio vaccine introduced	
5	Jenner makes the first vaccine	
6	Koch identifies the germ that causes tuberculosis	
7	Smallpox declared wiped out	

3. Source analysis

I noticed that the mould had killed the bacteria growing near it on the dish, leaving a clear ring.

Alexander Fleming, account of discovering penicillin (1929), (paraphrased)

1. What did Fleming notice?

2. Why was this partly luck?

3. Why did it take many more years to use penicillin as a medicine?

4. Significance

Scientist or term	Who or what? Why does it matter?
Edward Jenner	
Louis Pasteur	
Alexander Fleming	
Mary Seacole	
Epidermis	

5. Cause and consequence

1. Explain why vaccinating many people protects those who cannot be vaccinated.

2. Explain one consequence of overusing antibiotics.

6. Longer answers (full sentences)

1. Explain how the skin helps control body temperature, hot and cold.

2. Describe two ways white blood cells destroy pathogens.

3. How did Jenner's vaccine work?

4. Why is hand washing such an important discovery?

5. Explain in your own words: Explain how a vaccine helps your body become immune.

7. Essay question

Essay: 'Vaccines are the greatest medical discovery ever.' How far do you agree? Plan an essay.

Plan: introduction · point for (evidence) · point against (evidence) · conclusion with your judgement.
