

Timeline

Activity sheet B – Search for the magic bullet questions

1 A 'magic bullet' is a _____ that cures a disease without any _____.

2 a) Before the discovery of modern drugs, malaria was treated using the bark from **cinchona / willow** trees.

b) Malaria is more common in marshy areas because _____ breed there.

3 a) Hoffmann tested his new drug on his father. Today before a new drug can be prescribed by doctors it has to be _____.

b) Match up the boxes to show what different kinds of drugs do.

prevention

a drug that kills micro-organisms

cure

a drug that causes the body to make antibodies

4 a) What do you think our clothing and other fabrics would look like if we had only natural dyes to colour them?

b) Why are some people worried about synthetic dyes that may be used as food colouring?

5 a) Why do scientists stain cells with dye before looking at them under the microscope?

b) The blood cells in Slide 8 have been treated with a blue dye. What evidence can you see that some parts of cells take up more stain than other parts?

The search for the magic bullet

- 6 a) Why is it important that scientists publish their ideas and learn about the work of others?

- b) Why did Ehrlich and his team have to test hundreds of substances to find a treatment for syphilis?

- 7 a) Why are diseases caused by bacteria less likely to be life threatening today than they were in the past?

- b) Antibiotics can be used to treat sore throats and ear infections but not the common cold because they kill **bacteria / viruses**.
- c) Hospital infections such as MRSA are on the increase because some bacteria have **become resistant to / combined with** antibiotics.
- 8 a) The **cytoplasm / membrane / nucleus** of a cell controls its growth and development.
- b) What is cancer?

- c) Name *two* causes of cancer.
- i) _____
- ii) _____
- d) Describe *two* possible side effects of chemotherapy treatment for cancer.
- i) _____
- ii) _____