

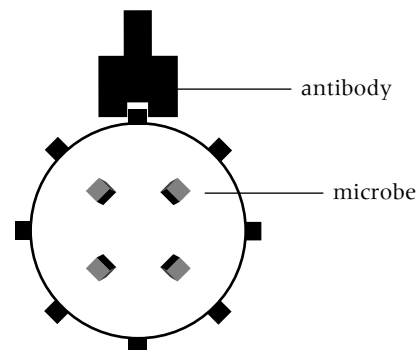
Disease and immunisation

- 1** What is a vaccination?
- 2** The table shows the number of deaths caused by a disease called diphtheria.
- Plot the information on a graph.
 - In which decade do you think the vaccine for diphtheria was introduced in England and Wales?
 - Explain how you worked out your answer to part **b**.

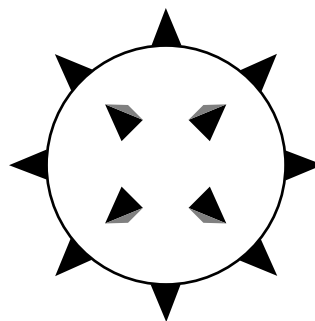
Year	Number of deaths from diphtheria
1910	4920
1920	4875
1930	2706
1940	2721
1950	35
1960	10

- 3** Antibodies are produced by some types of white blood cell. Each sort of antibody needs to be specially made to help kill a different sort of microbe. Each microbe has different shapes on its outside covering. The antibodies attach themselves to these shapes.

- Why do you think it takes time for antibodies to be made once you have been infected by a microbe?
- Antibodies for the measles virus will not work against the chickenpox virus. Why not?
- If you get chickenpox, you will not get it again. Explain why not.



- Draw a diagram to show what shape of antibody is needed to attach to this microbe.



- Babies get antibodies from their mothers through the placenta and through breast milk. These antibodies last for only about 2–3 months in the baby. What benefit do you think they have for the baby?

