

S2 Biology Topic 1 Mighty Microbes Need to Know sheet

- Micro-organisms are organisms which can only be seen under a microscope. Bacteria, fungi and viruses are types of micro-organisms.
- Micro-organisms need food, water, warm temperature and a suitable pH to grow and reproduce.
- The growth of bacteria can be controlled by antibiotics and low temperatures.
- The growth of fungi can be controlled by antifungals and low temperatures.
- Athlete's foot and thrush are infections caused by fungi.
- Cholera, malaria and salmonella are infections caused by bacteria.
- The skin is the body's first line of defence. It is a physical barrier to stop micro-organisms entering the body. Mucus in the nose, throat, eyes and other parts of the body traps micro-organisms. Acid in the stomach kills micro-organisms brought into the body through food.
- Our immune system protects our body from micro-organisms that get through the first line of defence. Antibodies tag micro-organisms and white blood cells destroy them.
- Vaccines are made from 'killed' micro-organisms. They help the body to recognise a particular micro-organism so that when the body is re-infected, the immune response is much faster. It is important to have vaccinations so that vulnerable people in society are protected from disease.
- Like all organisms, micro-organisms produce enzymes. Enzymes are biological catalysts which can be used to speed up processes or make them work at lower temperatures. This can save money and the environment. Enzymes from micro-organisms can be used in biological washing powders, and help to extract juice from apples.

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