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Microbiology and Biotechnology

Biotechnology

Biotechnology

Biotechnology:

Is the use of living things or parts of living things to make something useful



2 uses of Biotechnology in Medicine

2 uses of Biotechnology in Medicine

1. Bacteria and fungi (living things) are used to make antibiotics
2. Bacteria is used to make hormones e.g. Insulin



2 uses of Biotechnology in Industry

2 uses of Biotechnology in Industry

1. Yeast (living thing) is used to make beer
2. Bacteria is used to make special enzymes which are added to washing powders to remove stains

Microbiology

Microbiology

Microbiology

Is the study of micro-organisms (tiny living things) e.g. Bacteria, fungi and viruses



3 common illnesses
caused by viruses

3 common illnesses caused by viruses

1. Chicken Pox
2. The Flu
3. AIDS



3 common illnesses
caused by bacteria

3 common illnesses caused by bacteria

1. Sore Throat
2. TB
3. Food Poisoning

Table 16.1 Effects of bacteria

Useful	Harmful
Decay dead plants and animals	Cause diseases
Make foods such as cheese, butter, yoghurt	Destroy foods, e.g. they cause milk to turn sour
Used in biotechnology	Destroy crops in the fields

Experiment to investigate the presence of micro-organisms in the air and soil

- Expose a petri dish containing sterile nutrient agar to the air.
- Sprinkle soil on a second petri dish containing sterile nutrient agar.
- Do not open a third petri dish containing sterile nutrient agar
- Leave the dishes in an incubator (or a warm place) for a few days.
- Micro-organisms grown onto the first two dishes but not on the third dish.