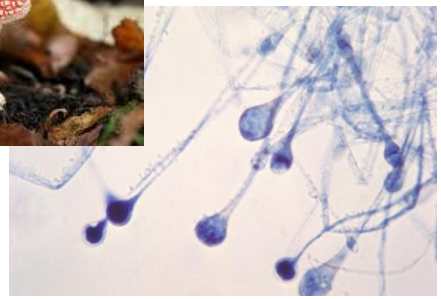
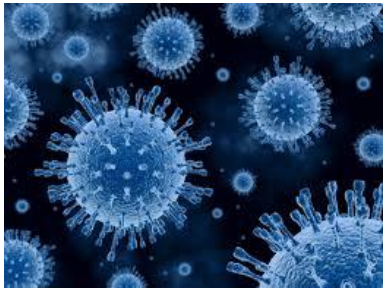
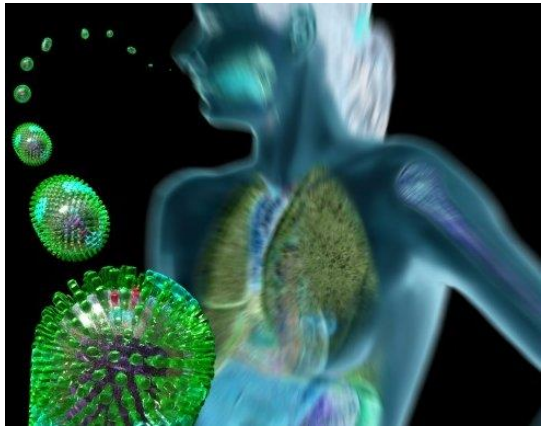



Micro-organisms and Disease



STARTER QUESTIONS

1. What is a living organism?

2. Name the **7 life** processes ?

LEARNING INTENTION;

What are microorganisms

Success Criteria..

I can;

- Name the 7 life processes
- Give the meaning of the word micro-organism
- Name the 4 types of micro-organism
- Compare their sizes and state where they are found

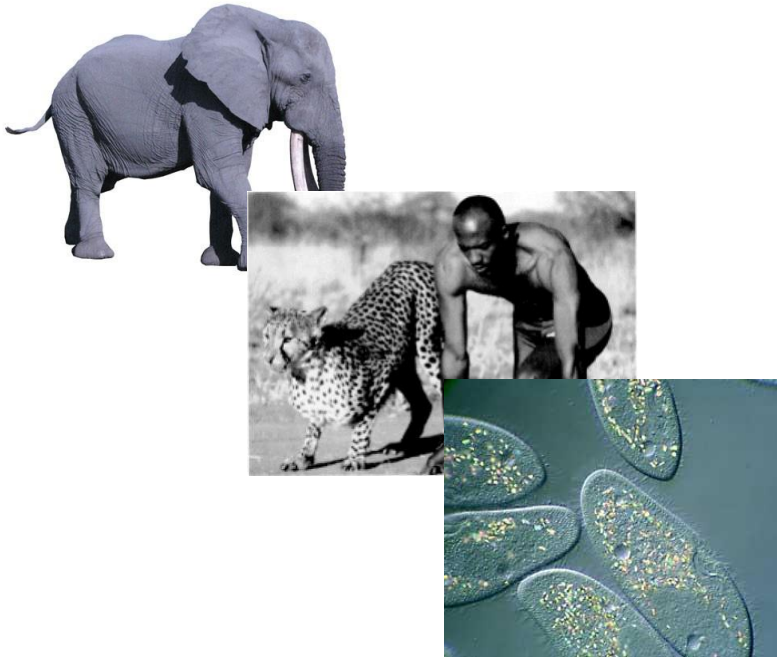
BIOLOGY

THE STUDY OF ????

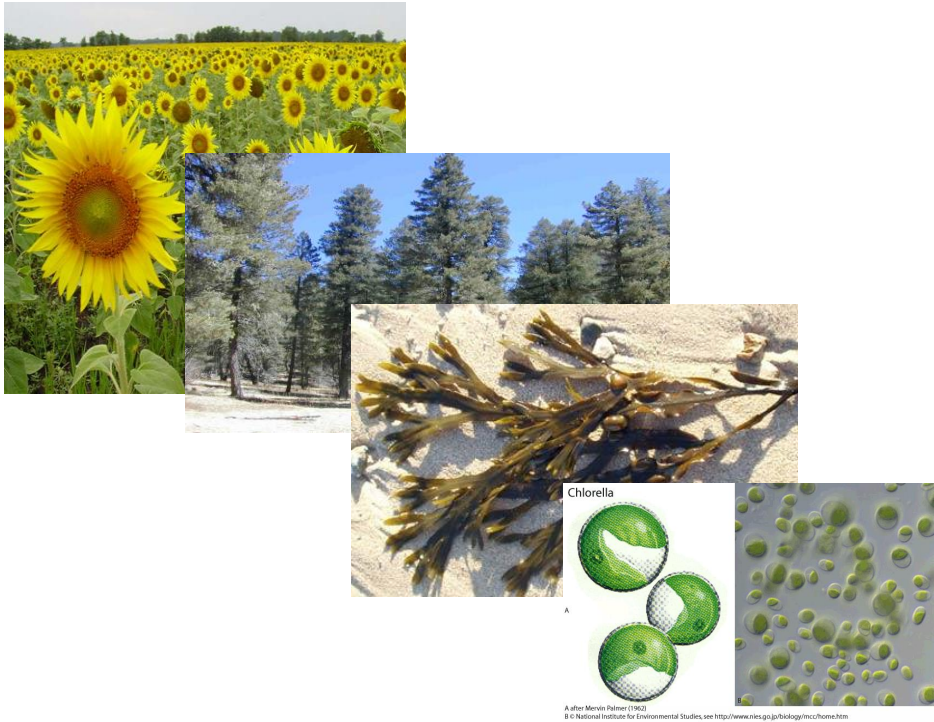
LIVING THINGS / ORGANISMS

What is a Living Organism?

Animal



Plant



A after Mervin Palmer (1962)
B © National Institute for Environmental Studies, see http://www.nies.go.jp/biology/mcc/home.htm

IS IT ALIVE??????

Look at the toy chicken & the horse.

Remember back to the "cells" topic from S1……can you give 7 reasons why you think the horse is a living organism?

Living organisms carry out 7 life processes ….. how many could you remember?

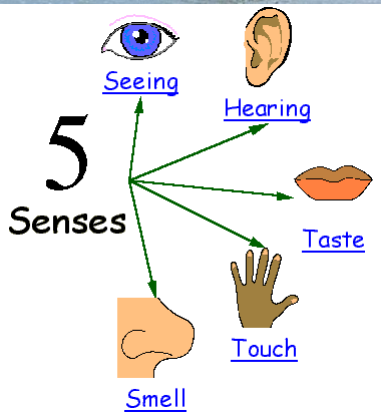
feeding

get rid of waste

movement

reproduce

release energy from food



sense & react to things in surroundings

growth

The 7 Life Processes

Movement
Respiration
Sensitivity

Growth
Reproduction
Excretion
Nutrition

MRS GREN

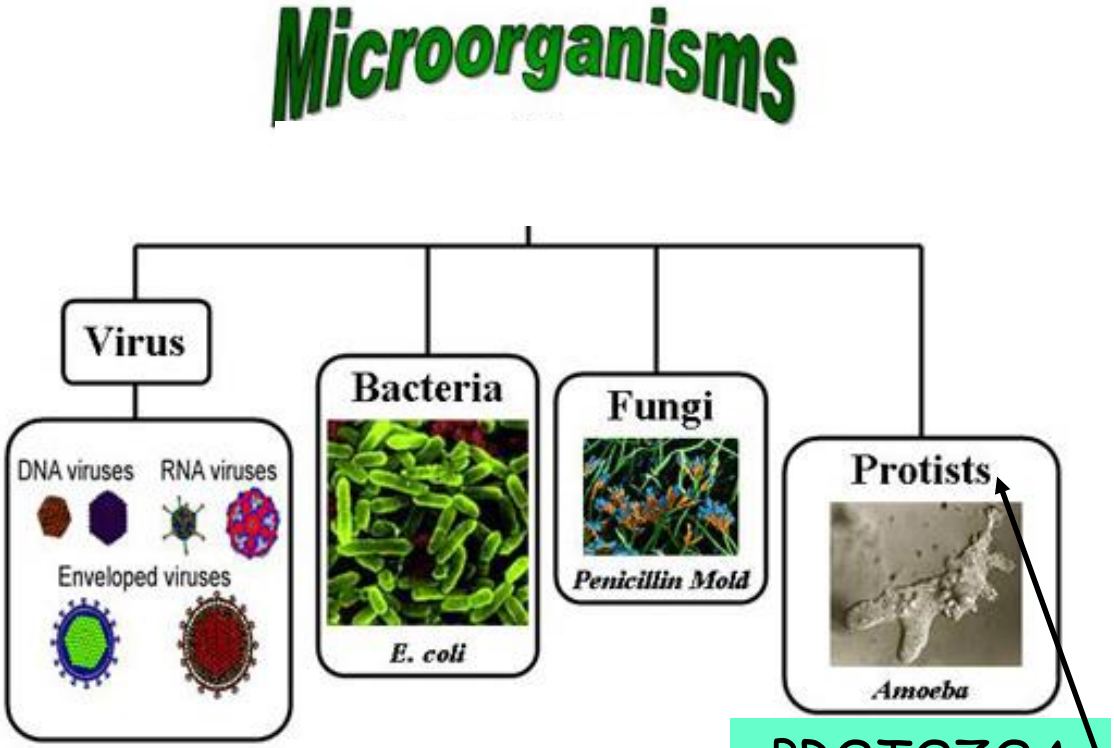
SparkleBox © Copyright 2008, SparkleBox Teacher Resources (SpakleBox KS2 - www.sparklebox2.co.uk)

Plants & animals that we **can see** are **made of many-cells**.

But what are Microorganisms ?

Organisms that are so small you **can only see them using a microscope.**

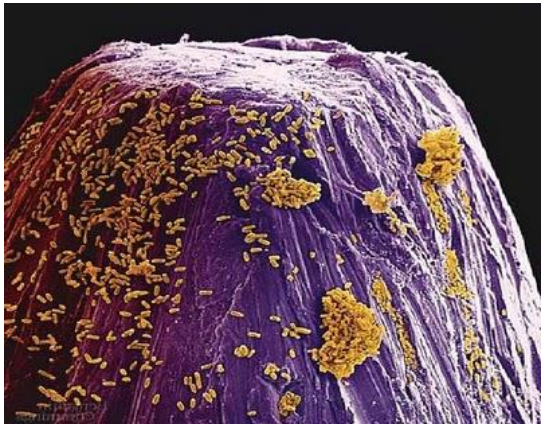
There are 4 different types



PROTOZOA & ALGAE

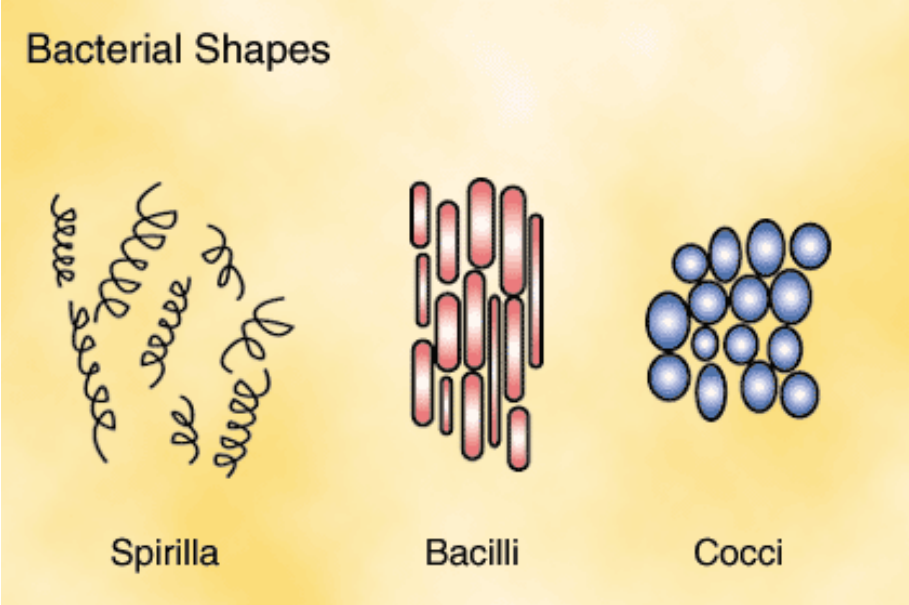
Bacteria

Single celled organisms that are **found EVERYWHERE**!



They are so small that **if 100 were lined up** end to end they would **only measure 1mm**

Bacteria on a pin head



They come in many different shapes

They reproduce very quickly

Fungi

Fungi are non-green **plant-like organisms** that **cannot make their own food.**

Large Fungi

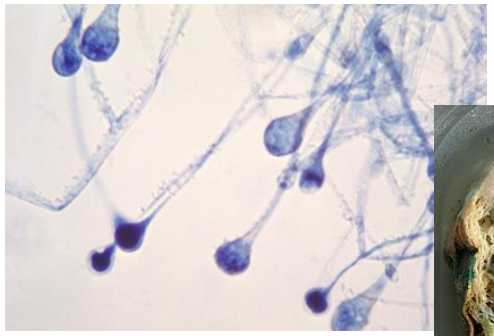
Bracket Fungi

Mushrooms

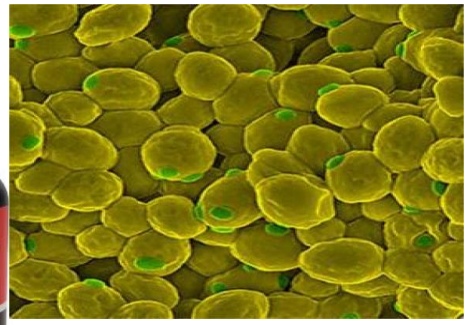
Some fungi are micro-organisms

Microscopic Fungi

Bread mould



Yeast



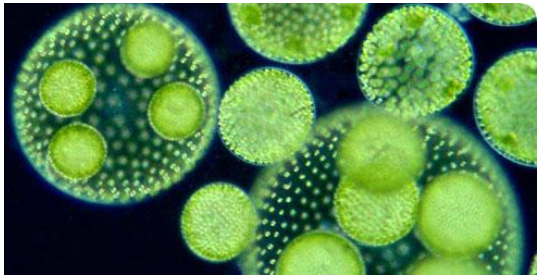
Protists

single celled organisms that live in pond water

Algae

plant-like organisms that contain chlorophyll and can make their own food

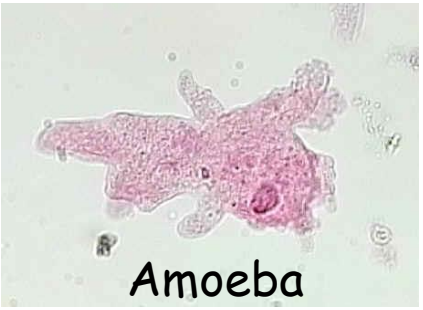
Chlamydomonas



Volvox

Protozoa

animal-like organisms that feed on other micro-organisms.



Amoeba

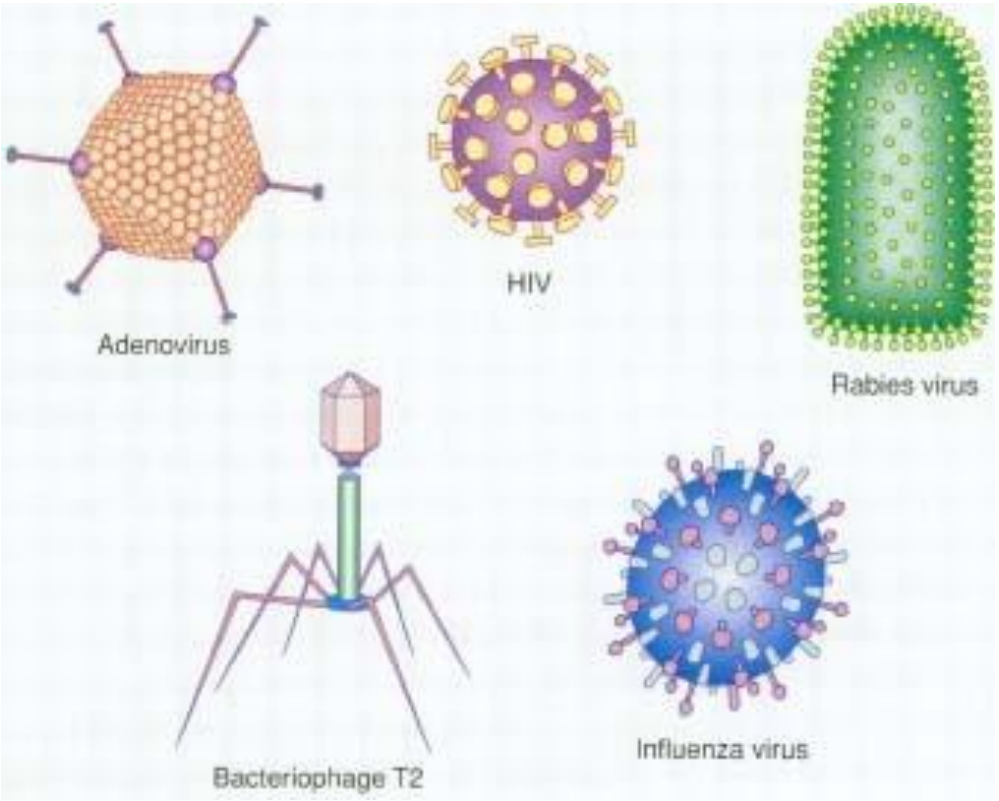
Paramecium

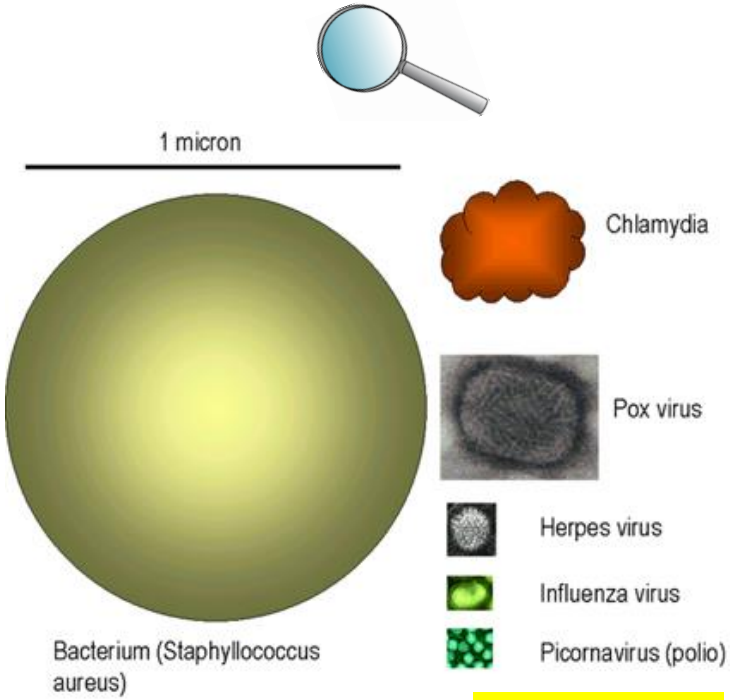
Euglena

Viruses

About 100 times smaller than bacteria

Come in variety of shapes and sizes





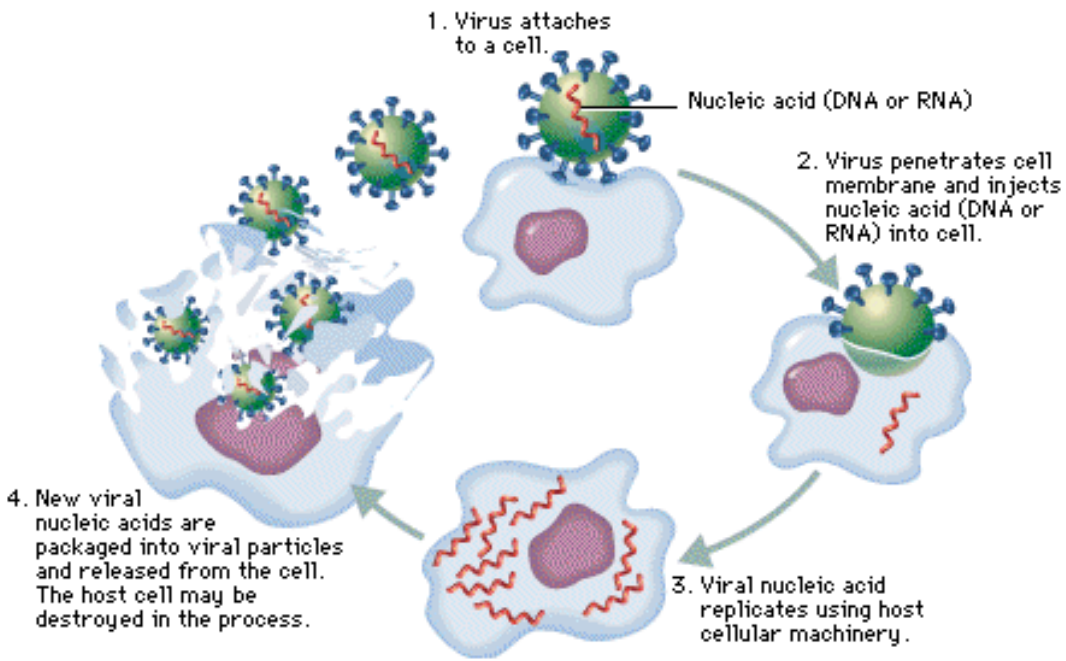
bacteria

viruses

Viruses

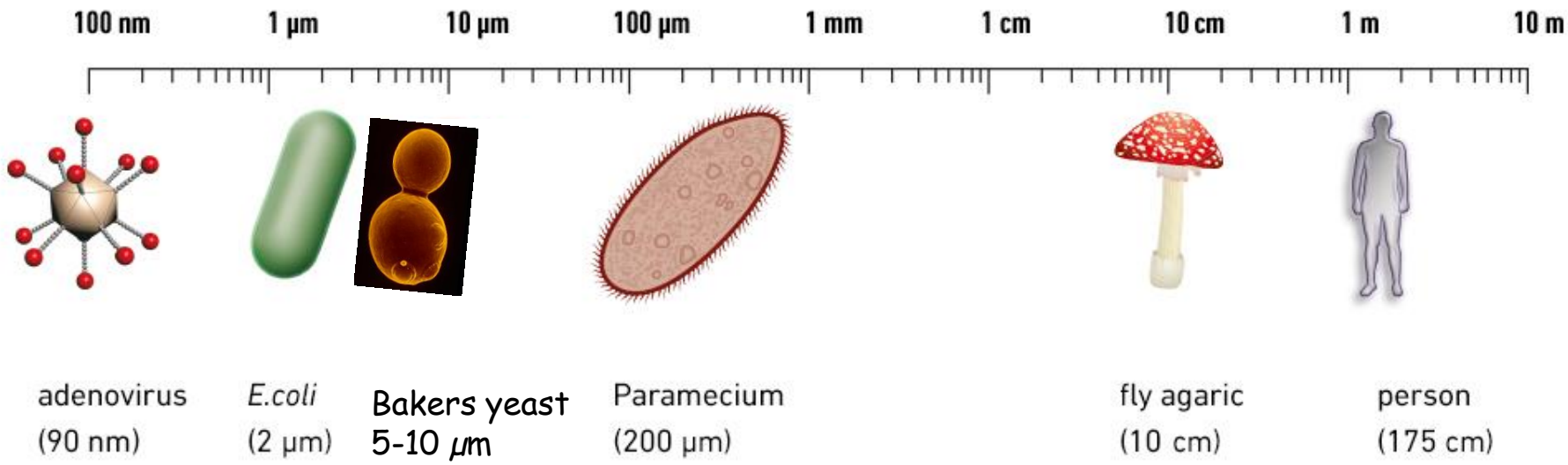
Viruses can only reproduce inside the cell of other organisms (animal, plant or bacterium).

- This is why they are described as NON-LIVING.



To escape, the new virus particles must burst out of the organism's cell. This is why they **always cause DISEASE.**

Microbes are very, very small but they are all different in size

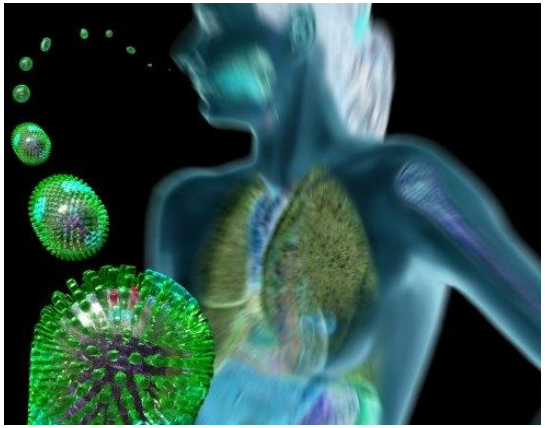


1 cm (centimetre) = 10 mm (millimetres)

1 mm (millimetre) = 1000 µm (micrometres)

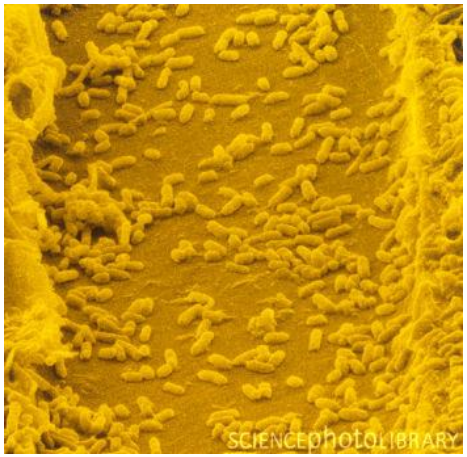
1 mm (millimetre) = 1000000 nm (nanometres)

Micro-organisms are everywhere!!!!



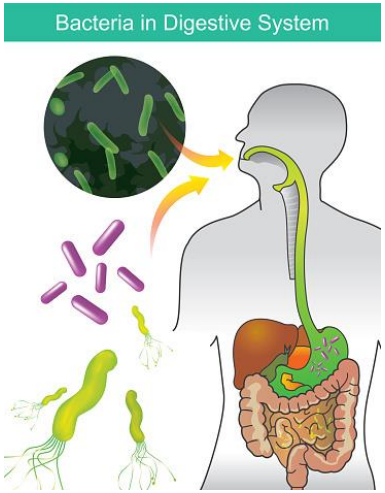
In the air around us

In food and drink



On surfaces

On & in our body



In the soil