



Pakistan School
Kingdom of Bahrain

Pakistan School, Kingdom of Bahrain.

The background features abstract, overlapping green geometric shapes, primarily triangles and polygons, in various shades of green, creating a modern and dynamic feel.

Welcome to new class

Biology Grade 9th



Please remember - just because we are not physically in school, it does not mean learning has ceased. All students are expected to keep up with their learning and communicate with teacher appropriately.

Dear Students of Biology

**ONLINE EDUCATION IS
LIKE A RISING TIDE, IT'S
GOING TO LIFT ALL BOATS**

Rules of the Class:

We are going to start our first online biology class today. I hope we all will enjoy and learn.

- 1) Be on time for all your classes.
- 2) Respect all the participants of the class.
- 3) Do not create any disturbance.
- 4) Pay attention to your teacher.
- 5) Raise hand if you have a question.
- 6) Entre into the class with your actual name.

CHAPTER 1

Introduction to Biology

Objectives

- ▶ At the end of this lesson students will be able to
- ▶ Define Biology and its main divisions.
- ▶ Identify various branches of biology

Biology is the scientific study of living organisms

Word Biology is derived from two Latin words

‘**Bios**’ meaning life

‘**Logos**’ meaning thought or reasoning

So Biology is the study of living things

There are three major branches of biology -

1. Botany
2. Zoology
3. Microbiology

Zoology

is the branch of biology connected with the study of different aspects of animals. Aristotle is known as the father of Zoology.



Botany

is the branch of biology which deals with the study of different aspects of plants. Theophrastus is known as the father of Botany.



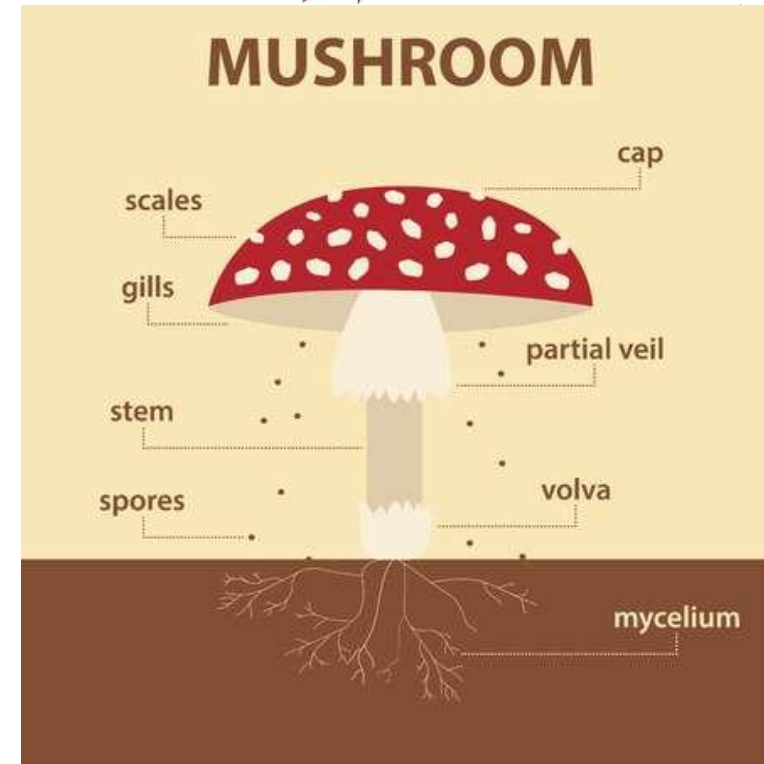
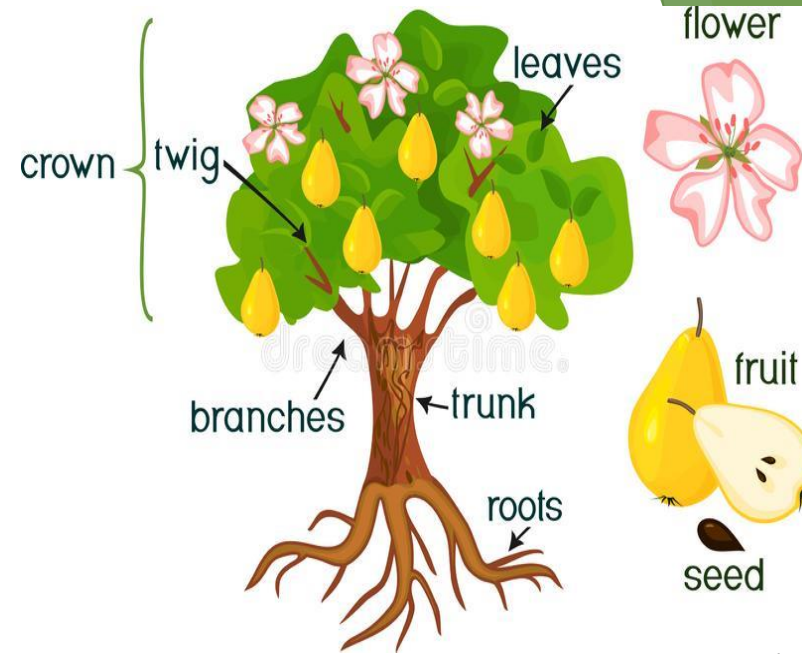
Microbiology

is the branch of biology dealing with the study of different aspects of microorganism e.g. Viruses, Bacteria etc. Leeuwenhoek is known as the father of Microbiology.



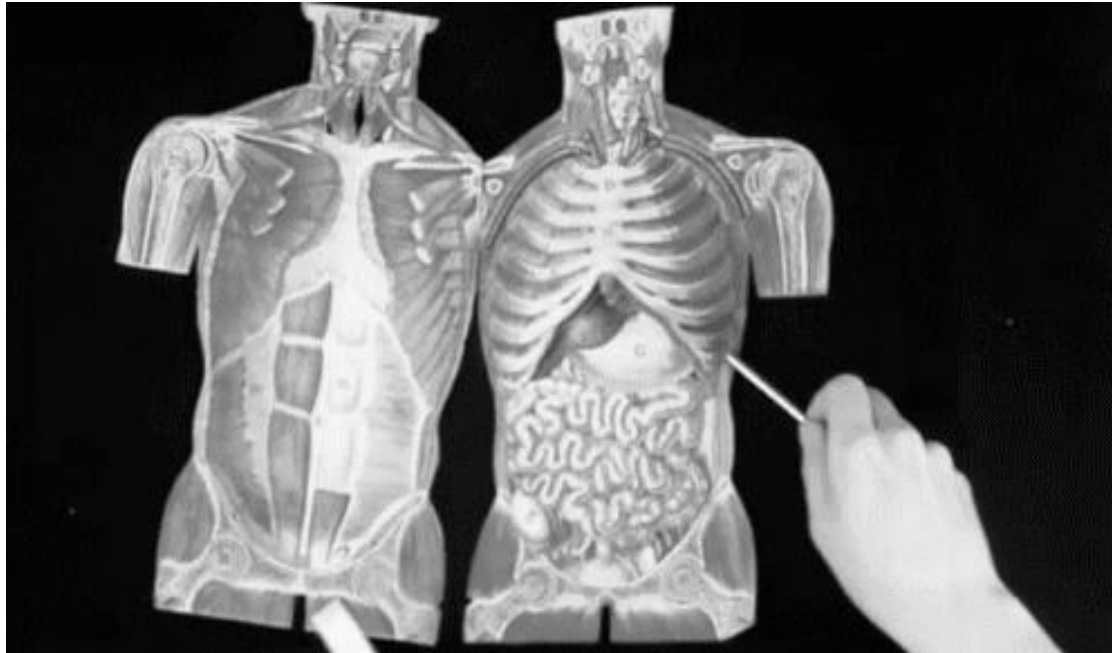
Morphology

a branch of biology that deals with the study of the form and structure of animals and plants



Anatomy

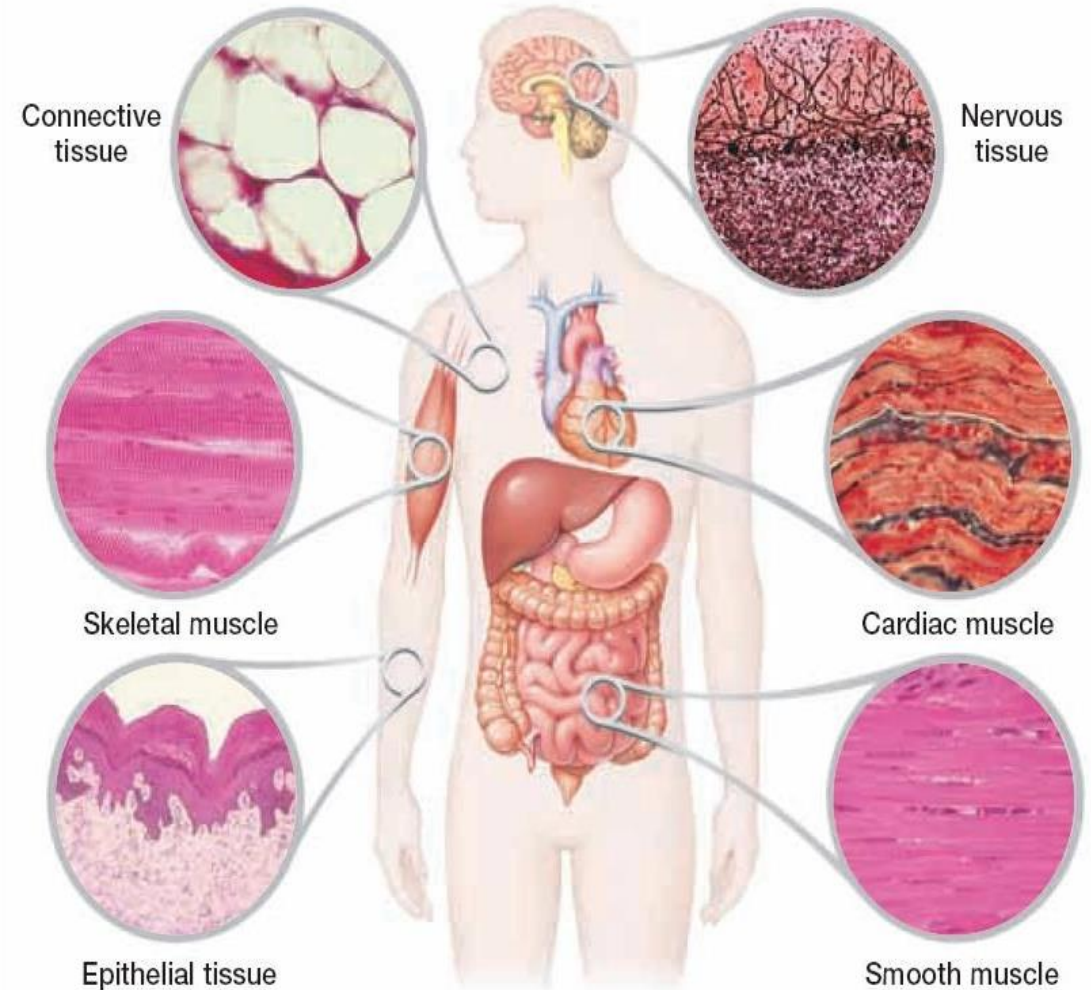
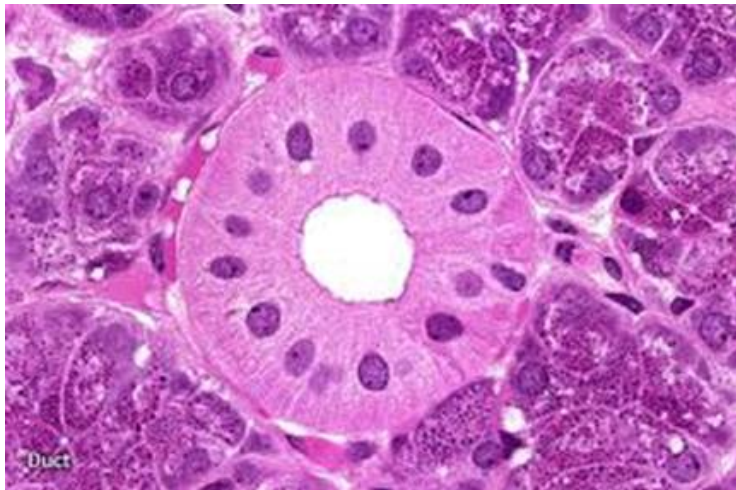
the branch of science concerned with the bodily structure of humans, animals, and other living organisms, especially as revealed by dissection and the separation of parts.



HISTOLOGY

Human Body Tissues

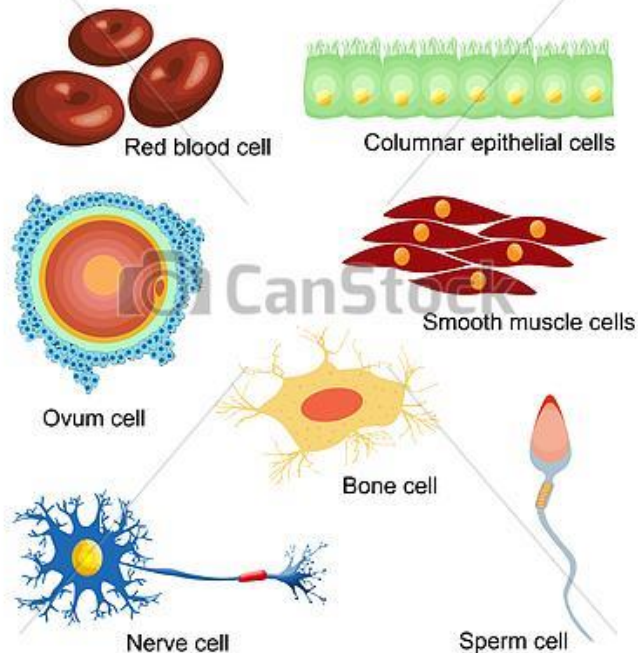
Histology is the study of the microanatomy of cells, tissues, and organs as seen through a microscope. It examines the correlation between structure and function.



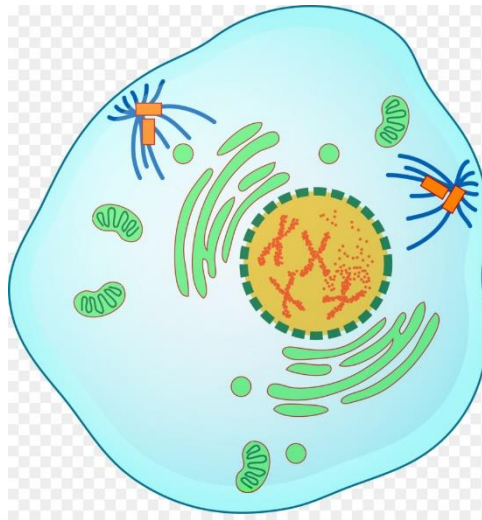
Cell Biology

The study of the structure and functions of cells and cell organelles is called cell biology. This branch also deals with the study of cell division.

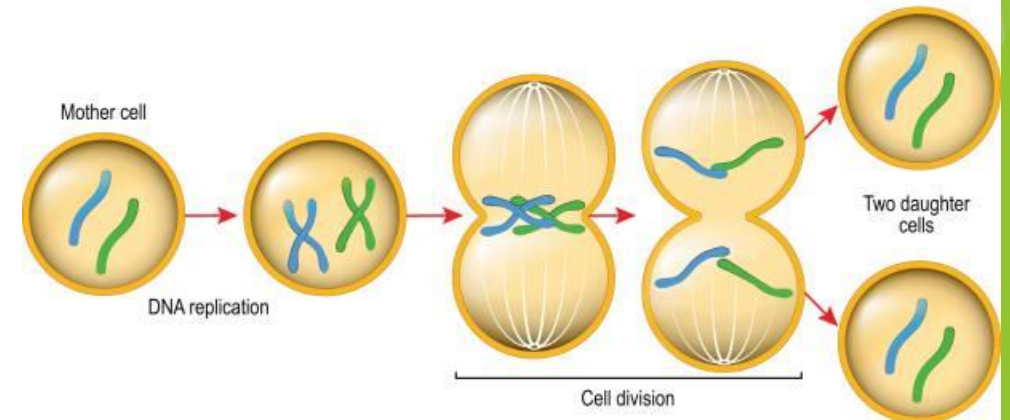
ANATOMY OF HUMAN CELLS



© Can Stock Photo - csp11426712

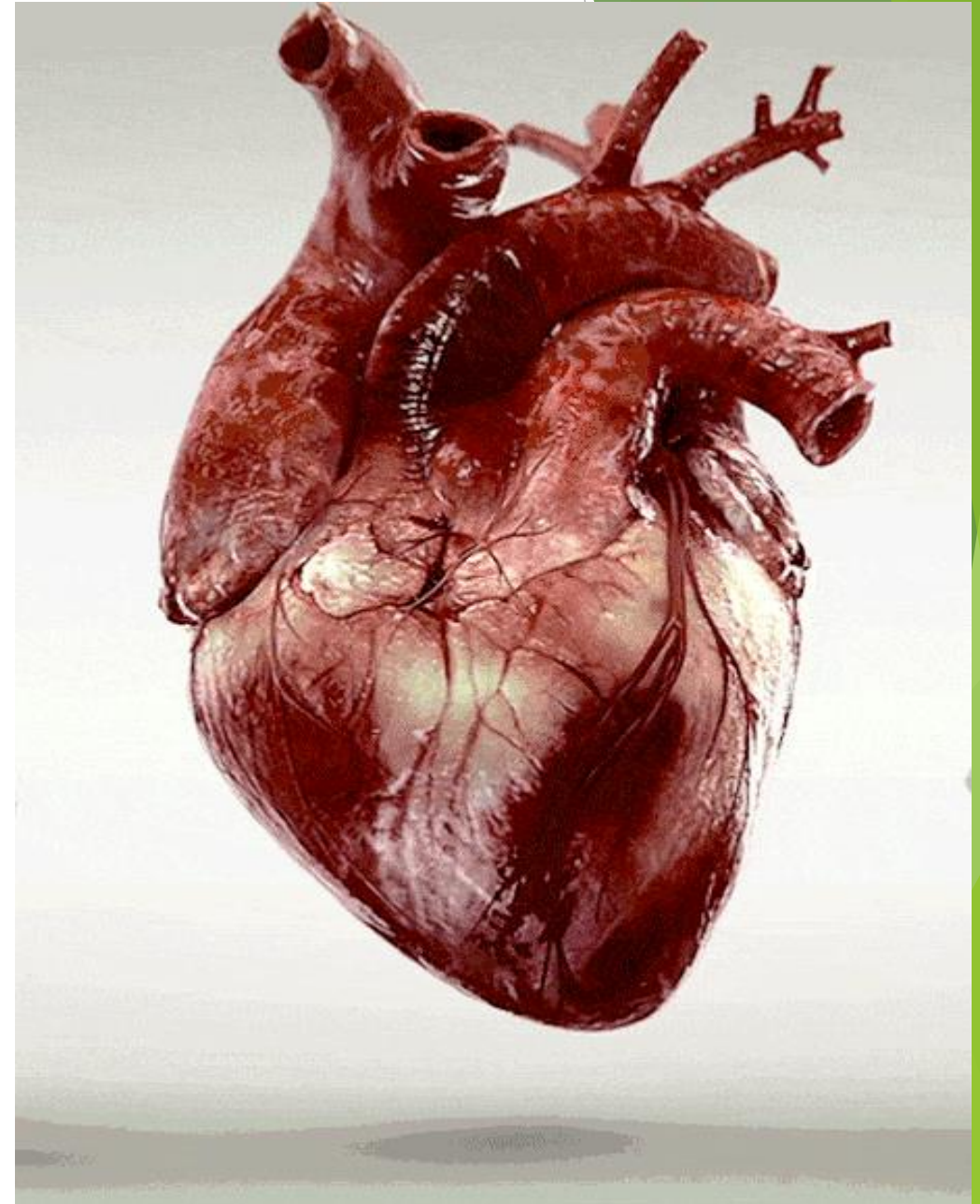


MITOSIS



Physiology

This branch deals with the study of the functions of different parts of living organisms.



Genetics

It is the study of genes and their role in the inheritance which is the transmission of characters from one generation to the other.

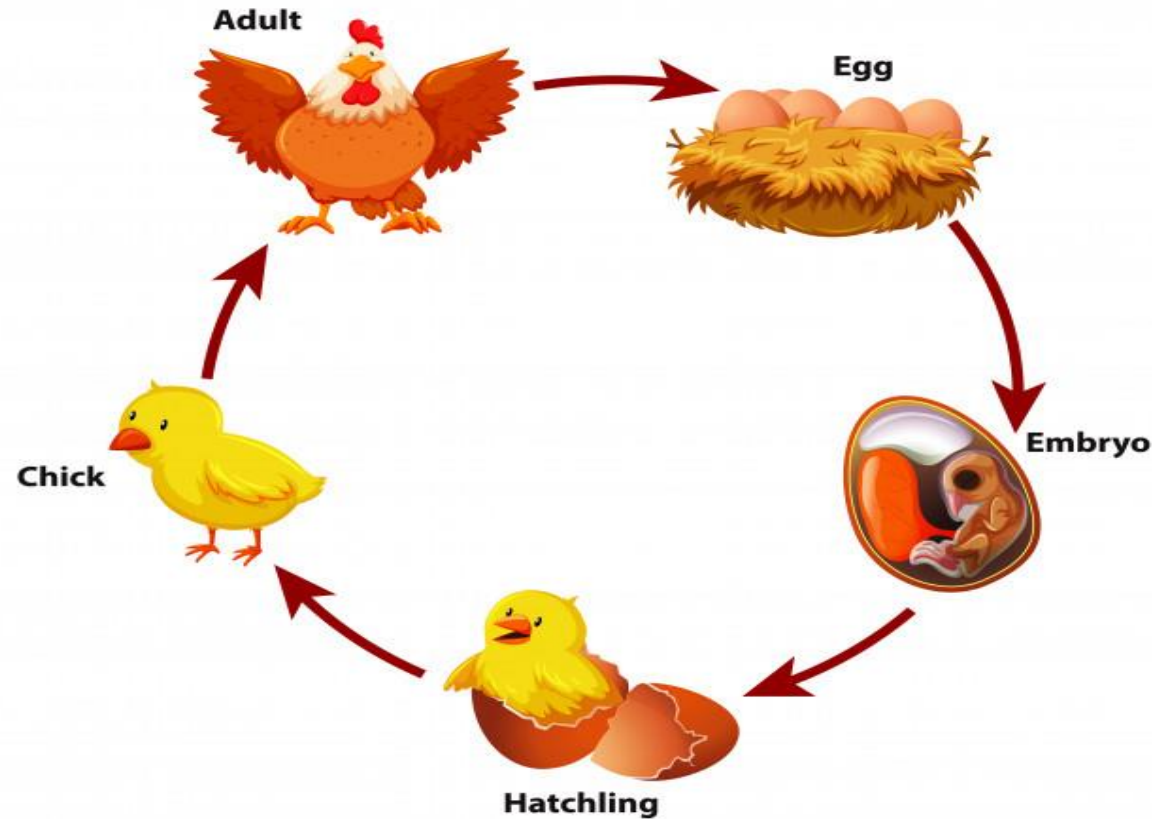


Embryology

It is the study of the development of an embryo to new individual.

Embryo is an unborn or unhatched offspring in the process of development

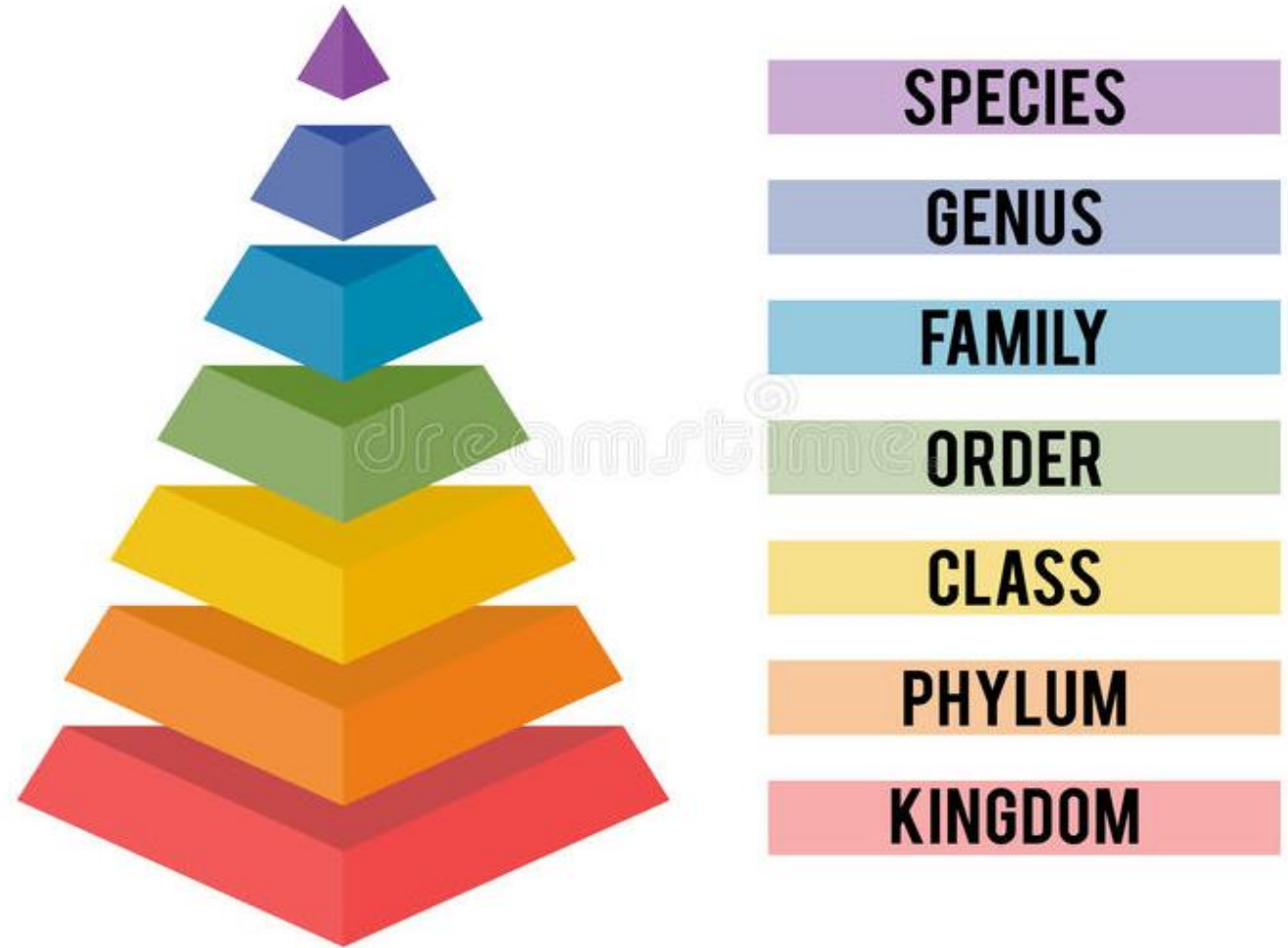
Life Cycle of a Chicken



Taxonomy

It is the study of the naming and classification of organisms into groups and subgroups.

HIERARCHY OF BIOLOGICAL CLASSIFICATION



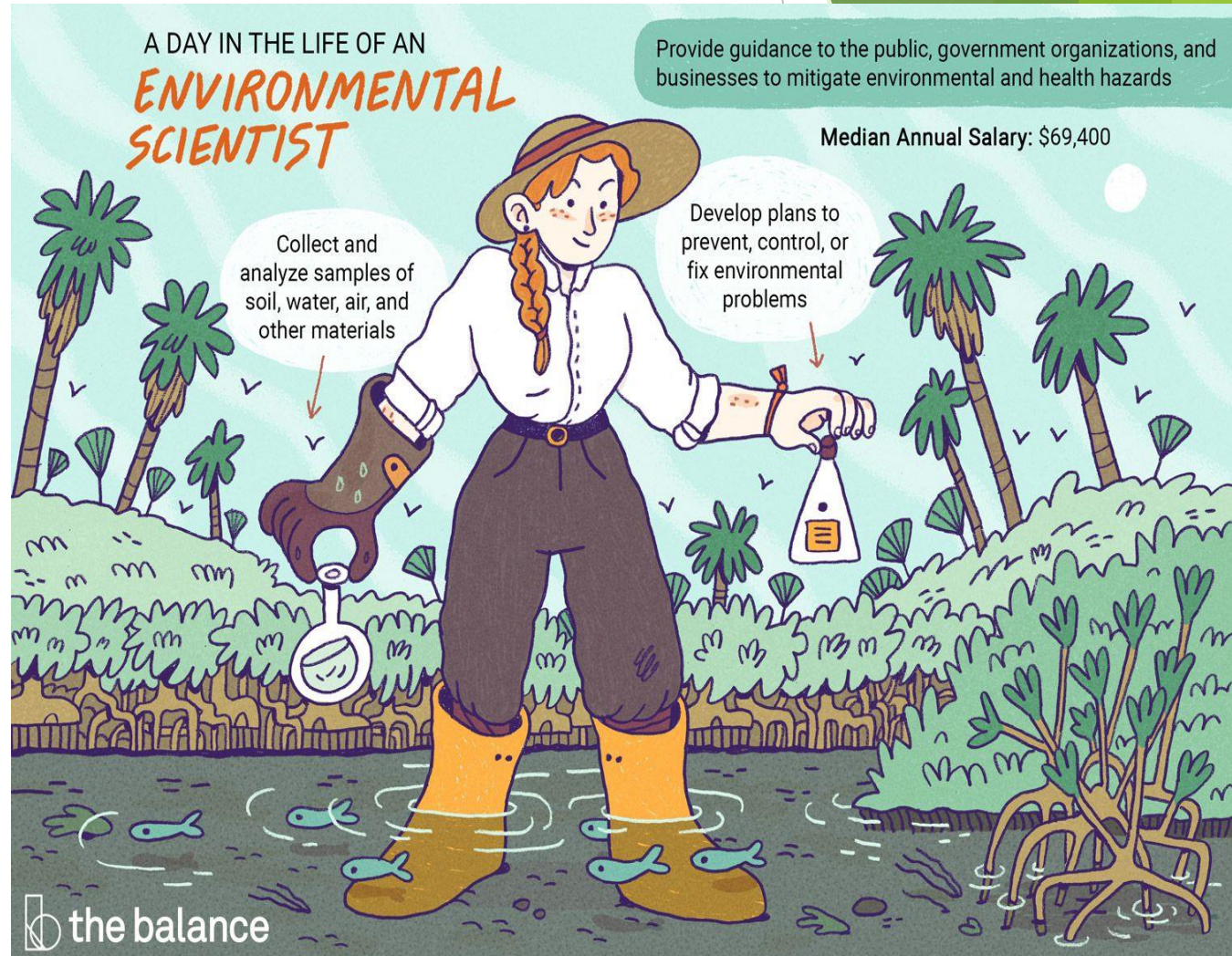
Palaeontology

It is the study of fossils which are the remains of extinct organisms.



Environmental Biology

It is the study of the interactions between the organisms and their environment.



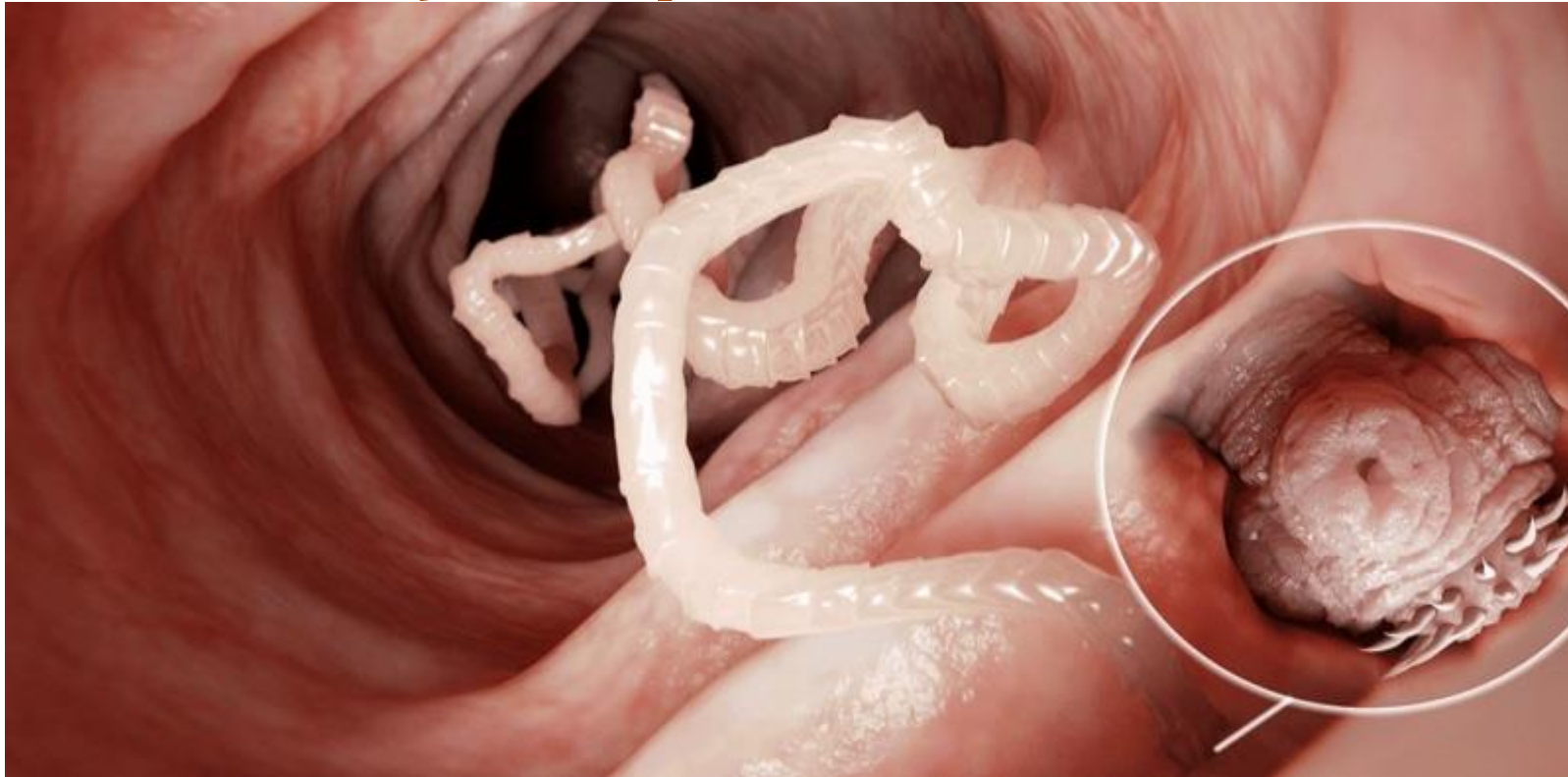
Sociobiology

The branch of biology that deals with the study of social behavior of animals that make societies.



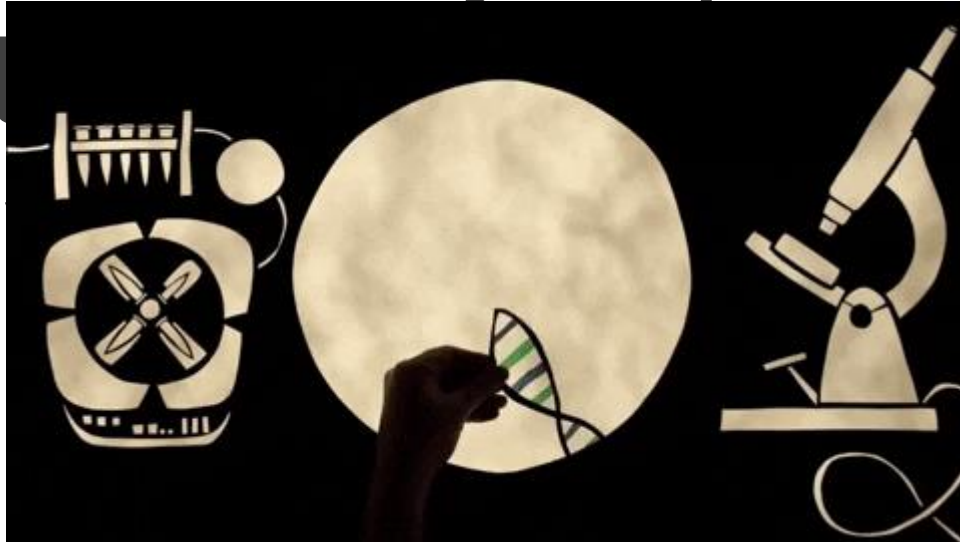
Parasitology

The branch of biology that deals with the study of parasites.



Biotechnology

It is the study of practical applications of science for the betterment of life.



Immunology

Immunology is a branch of biology that covers the study of immune systems in all organisms.



Entomology

It is the study of insects.



Pharmacology

It is the study of drugs / medicines and their effects on the systems of human body



Quiz:

a. What is biology?

- 1. The study of life
- 2. The study of atoms and molecules
- 3. The study of the Earth and space
- 4. The study of fossils

b. Scientists are studying how wolves have shaped the ecosystem in Yellowstone National Park in Wyoming. They have found that an increase in wolf populations affects the populations of so many other living things that the rivers and mountains actually changed as well. In what branch of biology do these scientists work?

- 1. Ecology
- 2. Botany
- 3. Cell Biology
- 4. Anatomy and Physiology

c. Sports physical therapists study the biomechanics of how joints, muscles and bones move during athletic activity. What branch of science do they study?

- 1. Ecology
- 2. Molecular Biology
- 3. Cell Biology
- 4. Anatomy and Physiology

Plenary

Today

We have done definition of

- ▶ Biology
- ▶ Major divisions of biology
as an introduction to Biology

STAY HUMBLE.
STAY FOCUSED.
STAY BLESSED.