

## ITL PUBLIC SCHOOL

### Active Engagement of Young Minds during summer vacations 2023

#### Class XI

#### BIOLOGY

**Theory:** Practice Assignment sheet based on Ch-1 &2

Completion of NCERT back exercises and NCERT Exemplar questions of chapter 1&2.

**Practical:Practicals to be done in file:**

1. Study of osmosis by potato osmometer.
2. Study of distribution of stomata on the upper and lower surfaces of leaves.
3. Test for the presence of sugar, starch, proteins and fats in suitable plant and animal materials.
4. Separation of plant pigments through paper chromatography.
5. Parts of a compound microscope.
- 6.Specimens/slides/models and identification with reasons - Bacteria, *Oscillatoria*, *Spirogyra*, *Rhizopus*, mushroom, yeast, liverwort, moss, fern, pine, one monocotyledonous plant, one dicotyledonous plant and one lichen.
7. Virtual specimens/slides/models and identifying features of - *Amoeba*, *Hydra*, liverfluke, *Ascaris*, leech, earthworm, prawn, silkworm, honey bee, snail, starfish, shark, rohu, frog, lizard, pigeon and rabbit.

Completion of Investigatory Project as discussed in class.

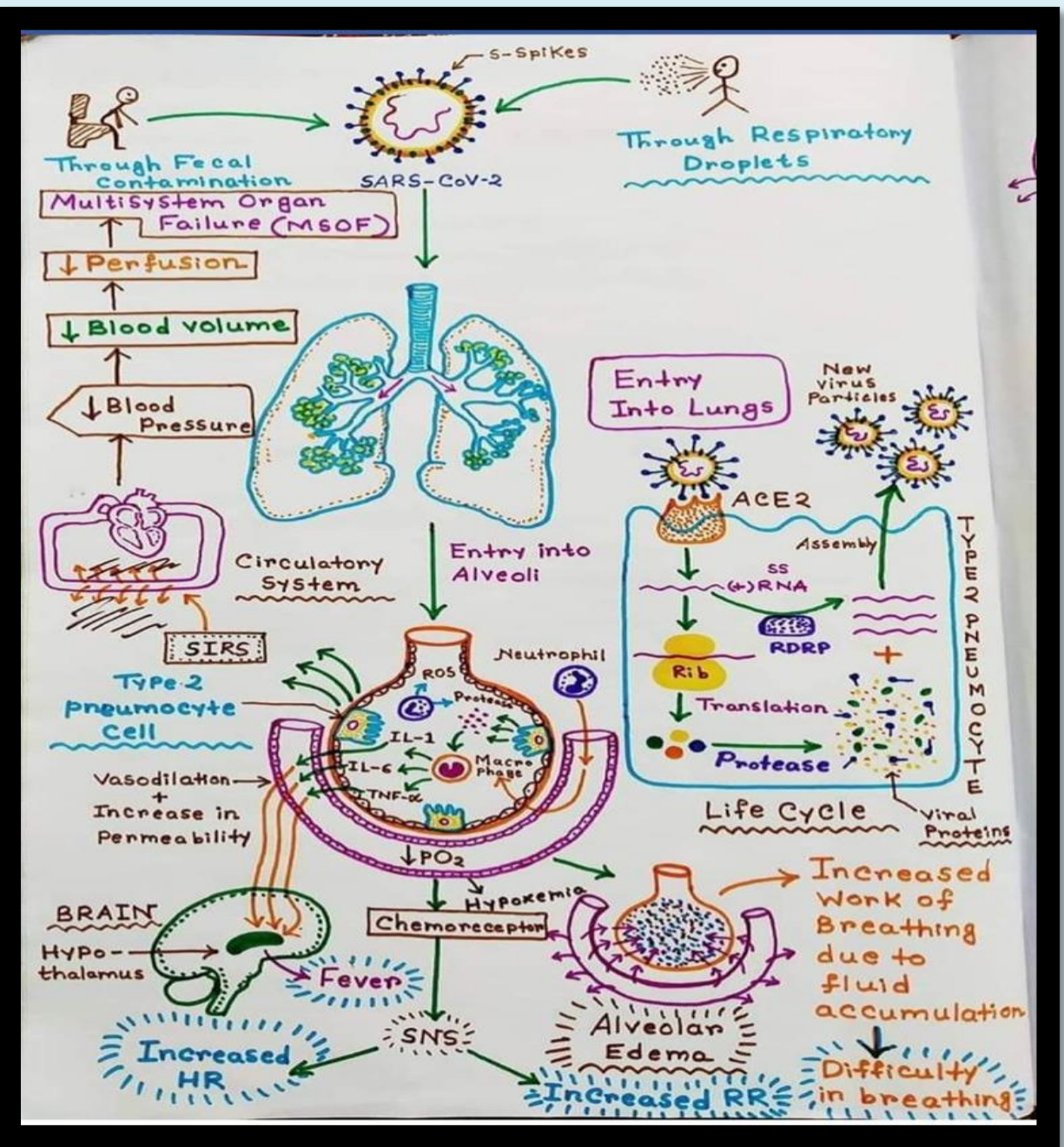
This **research based project** will be assessed during practicals according to curriculum.

The project can be done individually or in group of 2 students.

This research based project will help in **Experiential learning** which is a process through which students develop knowledge, skills, and values from direct experiences outside a traditional academic setting.

For the same, **integrate art** in your research by:

1. Preparing **Power point presentation**
2. **Study and use of various media and techniques to the extent of their availability.**
3. Study of **visual resources** (at home and in the surroundings) and means of creative expression
4. **Sketches** - Prepare Sketches to explain mode of spread, life cycle, genome of COVID 19 etc.
5. One of the example of sketch is done for you:



## Assignment Class XI

### Chapter-1: THE LIVING WORLD

1. What are the various features of living organisms?
2. *Brassica campestris* Linn.
  - a) Give the common name of the plant.
  - b) What do the first two parts of the name denotes?
  - c) Why are they written in italics?
  - d) What is the meaning of Linn. Written at the end of the name?
3. Why there is need to standardise the naming of living organisms?
4. Define; Classification, Taxonomy, Identification, Systematics and Taxon.
5. Define Taxonomic Hierarchy. What are the various levels in taxonomic hierarchy?
6. Cats and dogs belong to two different families but are assigned to a same order carnivora . on the basis of whish characteristic they are assigned order carnivora ?
7. Write the systematic position of Man, Housefly, Mango and Wheat.
8. Expand: ICBN, ICZN
9. Name the publication of Linnaeus.
10. Genetics has revealed that the concept of species has a much greater significance in biology than its role as a unit in classification . Justify.

### CHAPTER – 2: BIOLOGICAL CLASSIFICATION

1. What are the two kingdoms in two kingdom classification? Why it is inadequate?
2. Who proposed five kingdom system of classification? What were the main criteria taken for classifying organisms into five kingdoms?
3. Write the characteristic features of kingdom Monera.
4. How bacteria are classified based on their shape?

5. Differentiate photosynthetic autotrophs from Chemosynthetic autotrophs.
6. To what extent is the phylogenetic relationship as a criterion for classification .
7. Biological classification is a dynamic and ever evolving phenomenon which keep changing with our understanding of life forms. Justify the statement taking any two examples .
8. What are Heterocysts? Where they are found?
9. What prompted three domain system ?
10. Write the economic importance of bacteria. (Mention both benefits and harms).
11. Draw a well labelled diagram of *Euglena*.
12. Write a note on chrysophytes, Dianoflagellates, Euglenoids, Slime moulds and Protozoans.
13. What observable features in trypanosome would make you classify in under kingdom protista .
14. What are lichen & mycorrhiza? Explain how both algae and fungi are benefited in Lichen.
15. Write the economic importance of various fungi.
16. What are the various steps involved in sexual reproduction of fungi?
17. Write the scientific name the fungi that causes ?
  - a) Rust of wheat
  - b) Smut of wheat
18. On what basis fungi were classified? Write the features of Phycomycetes, Ascomycetes, Basidiomycetes and Deuteromycetes.
19. What is the causative agent of 'flu' in human? Write the features of viruses.
20. Who gave the name virus? What does it mean?

**21. Who showed that viruses can be crystalised and crystal consists of proteins?**

**22. Name the genetic material of?**

**(a) Bacteriophage**

**(b) Tobacco mosaic virus**

**23. Write briefly about the economic importance of lichen ?**

**24. How mad cow disease is caused ?**

**25 Draw a well diagram of bacteriophage and tobacco mosaic virus ?**