

YEAR PLAN 2018 – 2019
Grade IX BIOLOGY

The academic year is divided into **two** sessions

Session One: June 2018 to October 2018

Session Two: November 2018 to March 2019

Continuous assessments: June, July, ,September, November, December, January, February

Summative Assessment I: October 2018

Summative Assessment II: March 2019

Please check the **index page** in the notebooks for Continuous Assessment marks.

Enduring Understanding:

- To realize the importance and effect of the interrelationship of life and that any change can cause an imbalance.
- To understand united we stand, divided we fall.

Objectives:

- To acquire the knowledge of the economic importance of plants and animals.
- To develop an understanding of the inter-relationship between sustainability and environmental adaptations.
- To develop sensitivity in personal attitudes to environmental issues.
- To emphasize on the different systems and the functions in the human body.

Project for SA I

- To research and develop butterfly garden in and around Paludarium

Project for SAII

- To find out the new types of microbes and parasites and their effects in the human body.

Session One: June 2018 to October 2018

Duration	Topics	Specific Learning objectives	Activities	Resources
June	Economic Importance of Bacteria and Fungi.	<p>(i)Bacteria: To be able to understand and explain</p> <ul style="list-style-type: none"> • Useful role of bacteria in fields of medicine, agriculture and industries. • Harmful role of bacteria in spoilage of food, diseases in plants and animals, Bio weapons, Denitrification. <p>(ii)Fungi</p> <ul style="list-style-type: none"> • Their role in bakeries, breweries, cheese processing. • Mushroom Cultivation 	<ul style="list-style-type: none"> • Growth of bread mould on a piece of bread covered under a bell jar. Observe the hyphae and spores. • Draw the diagrams of a bacterial cell and fungi • Write a brief note on the different types of bioweapons used in the world. 	Bio visual Charts Text book RatnaSagar http://www.microbeworld.org/types-of-microbes/microbial-mergers/fungi-and-bacteria
July	Digestive System	<ul style="list-style-type: none"> • To identify the organs and functions of the Digestive system 	<ul style="list-style-type: none"> • Conduct different food tests for sugar, starch, protein and fats. Observation and inferences in tabular form in the record book. • Identification of sugar, starch and protein with reagents. • Give a briefing about the malnutrition faced by the tribal people. • Study the parts of the human alimentary canal and the associated parts. • Draw and label the parts of the human digestive system. 	Videos Bio visual Charts Text books RatnaSagar, YP Purang http://www.who.int/topics/nutrition/en http://www.enchantedlearning.com/subjects/anatomy/digestive/
July	Movement and Locomotion	<ul style="list-style-type: none"> • To recall the functions of human skeleton • To identify types of- joints: immovable, slightly movable, freely movable • Muscles and location • To explain lever mechanisms 	<ul style="list-style-type: none"> • Model of human skeleton, study of various bones, Parts of axial and appendicular skeleton, Types of joints in our body. • Study of different types of movable joints in man. 	Model of Human skeleton http://biology.clc.uc.edu/courses/bio105/bone.htm
August	Skin- the jack of all trades	<ul style="list-style-type: none"> • To describe- the structure and functions of skin • Derivatives of the skin • Heat regulation of body 	<ul style="list-style-type: none"> • Study the skin with the help of the bio visual chart. • Draw a diagrammatic sketch of the vertical section of human skin. 	Bio visual chart Text books RatnaSagar, YP Purang http://www.mydr.com.au/skin-

				hair/skin-biology-and-structure
September	Diseases: cause and Control	<ul style="list-style-type: none"> To be able to categorize diseases- Diseases caused by bacteria, protozoa, parasitic worms Viral diseases 	<ul style="list-style-type: none"> Collect information from the Internet & Newspapers about the occurrence and symptoms of recent bacterial and viral diseases. Seminar presentation. 	Newspaper Text books RatnaSagar, http://en.wikipedia.org/wiki/Disease
October		<ul style="list-style-type: none"> First summative assessment 		
		Session Two : November 2018 to March 2019		
Simultaneous revision of grade 9 portions (whole syllabus) to prepare students for the Board examination to be held in March 2019.				
November	Respiration in Plants	<ul style="list-style-type: none"> To illustrate the process of respiration in plants Glycolysis, Kreb's cycle and their significance To differentiate aerobic and anaerobic respiration with chemical equations 		
November	The respiratory system	<ul style="list-style-type: none"> To define respiration and types of respiration To identify the organs involved in respiration To explain mechanism of breathing To describe heat production during the process 	Experiments to prove: <ul style="list-style-type: none"> Water is lost while breathing. Carbon dioxide is given out in breathing. Action of diaphragm during breathing. 	Text books RatnaSagar, YP Purang http://www.youtube.com/watch?v=hc1YtXc_84A
December	Aids to health	<ul style="list-style-type: none"> An understanding of the use and action of the following- vaccination, immunization, antitoxin, serum, disinfectants, penicillin, sulphonamide drugs, and First aid. 	<ul style="list-style-type: none"> To bring the immunization chart and study the various vaccines given at different age groups Study and make a report of the chemical ingredients in various disinfectants,antiseptics etc. 	Living Science RatnaSagar http://www.who.int/topics/immunization/en/
		Grade 10		
January	Structure of Chromosomes, Cell cycle and	<ul style="list-style-type: none"> To identify the different stages of cell cycle. To understand the significance of mitosis and meiosis. To understand the structure and function of chromosomes. 	<ul style="list-style-type: none"> Observation of permanent slides. Biovisual charts of chromosomes. 	Cell biology by karp
January	Human Evolution	<ul style="list-style-type: none"> To have a basic understanding on human evolution and theories of evolution. 	<ul style="list-style-type: none"> Investigate evidences of natural selection. 	Concise Biology I.C.SE,CLASS 10
February	Pollution	<ul style="list-style-type: none"> To identify- types of pollution, sources of pollution, major pollutants. 	<ul style="list-style-type: none"> Discuss and write a report on any one type of pollution. Include cause, effects and solutions. 	Living Science RatnaSagar Newspapers http://www.cpcb.nic.in/
<i>Revision of grade 9 topics(whole syllabus) to prepare students for the Board examination to be held in March 2019</i>				
<p><i>Concise biology Selina publishers 9 and 10.</i> <i>Name of facilitators: Mrs.Juhi Sivakumar, Mrs.Renuka Sundaram and Mrs.Anandhi Krishna</i> Approved by the Principal</p>				