



ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION



Syllabus planning for the academic year 2018

TERM: PRE-TEST

TEACHER'S NAME: MS. DEBARATI MUKHERJEE BHOWMICK, MS. DEBJANI CHAKRABORTY

No. of working days:-50

No. of periods available: 38

Subject: BIOLOGICAL SCIENCES

CLASS: 12

SECTION: A1, A2

MONTH	NO. OF PERIODS	LESSONS	TOPICS COVERED	HOMEWORK	CLASS WORK
MAY	08	CHAPTER 1 : REPRODUCTION IN ORGANISMS CHAPTER 2: SEXUAL REPRODUCTION IN PLANTS CHAPTER 3: HUMAN REPRODUCTION	ASEXUAL REPRODUCTION, SEXUAL REPRODUCTION, PRE- AND POST- FERTILIZATION EVENTS. GAMETOGENESIS, SPOROGENESIS, POLLINATION, POST-FERTILIZATION EVENTS, APOMIXIS AND POLYEMBRYONY. REPRODUCTIVE SYSTEM.	<ul style="list-style-type: none"> OBJECTIVE QUESTIONS (MCQ, VSAQ, SAQ) TO BE GIVEN ON TOPICS- ASEXUAL REPRODUCTION, SEXUAL REPRODUCTION, PRE- AND POST- FERTILIZATION EVENTS. OBJECTIVE QUESTIONS (MCQ, VSAQ, SAQ) AND LONG ANSWER QUESTION TO BE GIVEN ON TOPICS- GAMETOGENESIS, SPOROGENESIS, POLLINATION, POST-FERTILIZATION EVENTS, APOMIXIS AND POLYEMBRYONY. OBJECTIVE QUESTIONS (MCQ, VSAQ, SAQ) AND LONG ANSWER QUESTION TO BE GIVEN ON TOPICS- MALE AND FEMALE REPRODUCTIVE SYSTEM. PROJECT TO BE DONE BY STUDENTS AS HOLIDAY HOMEWORK. 	<p>NOTES TO BE GIVEN ON MODES OF ASEXUAL REPRODUCTION, TYPES OF SYNGAMY, TYPES OF POLLINATION.</p> <p>NOTES TO BE GIVEN ON TOPICS-MICROSPOROGENESIS, MEGASPOROGENESIS, MICROGAMETOGENESIS, MEGAGAMETOGENESIS.</p> <p><u>BRIEFING OF PATTERNS AND METHOD OF ANSWERING THE QUESTIONS (MCQ, VSAQ, SAQ, LAQ) WILL BE INTIMATED.</u></p> <p>EXPLANATION, DISCUSSION AND NOTES TO BE GIVEN ON TOPICS- MALE AND FEMALE REPRODUCTIVE SYSTEM.</p> <p><u>DETAILS OF BIOLOGICAL SCIENCE PROJECT TO BE GIVEN TO THE STUDENTS.</u></p>
JUNE	18	CHAPTER 3: HUMAN REPRODUCTION CHAPTER 4: REPRODUCTIVE HEALTH CHAPTER 5: PRINCIPLES OF INHERITANCE CHAPTER 8: HUMAN HEALTH AND DISEASE CHAPTER 6: MOLECULAR BASIS OF INHERITANCE	<p>GAMETOGENESIS, OOGENESIS, IMPLANTATION AND FERTILIZATION.</p> <p>BIRTH CONTROL, SEXUALLY TRANSMITTED DISEASE, INFERTILITY.</p> <p>MENDEL'S LAW OF INHERITANCE, MONOHYBRID AND DIHYBRID CROSS, INCOMPLETE DOMINANCE, CO-DOMINANCE, LINKAGE, SEX DETERMINATION, MUTATION, PEDIGREE ANALYSIS, MENDELIAN DISORDERS, CHROMOSOMAL DISORDERS.</p> <p>COMMON DISEASES IN HUMAN, IMMUNITY, AIDS, CANCER, DRUG AND ALCOHOL ABUSE.</p> <p>NUCLEOSOME MODEL, REPLICATION, TRANSCRIPTION.</p>	<ul style="list-style-type: none"> OBJECTIVE QUESTIONS (MCQ, VSAQ, SAQ) AND LONG ANSWER QUESTION TO BE GIVEN ON TOPICS- MALE AND FEMALE REPRODUCTIVE SYSTEM, GAMETOGENESIS, OOGENESIS AND IMPLANTATION. SHORT ANSWER TYPE QUESTIONS TO BE GIVEN ON TOPICS- BIRTH CONTROL, SEXUALLY TRANSMITTED DISEASE, INFERTILITY. OBJECTIVE QUESTIONS (MCQ, VSAQ, SAQ) AND LONG ANSWER QUESTION TO BE GIVEN ON TOPICS- MENDEL'S LAW OF INHERITANCE, MONOHYBRID AND DIHYBRID CROSS, INCOMPLETE DOMINANCE, CO-DOMINANCE, LINKAGE, SEX DETERMINATION, MUTATION , PEDIGREE ANALYSIS, MENDELIAN DISORDERS, CHROMOSOMAL DISORDERS. OBJECTIVE QUESTIONS (MCQ, VSAQ, SAQ) TO BE GIVEN ON TOPICS- COMMON DISEASES IN HUMAN, IMMUNITY, AIDS, CANCER, DRUG AND ALCOHOL ABUSE. LONG ANSWER QUESTION TO BE GIVEN ON TOPICS- NUCLEOSOME CONCEPT, TRANSCRIPTION. 	<p>EXPLANATION, DISCUSSION AND NOTES TO BE GIVEN ON TOPICS- MALE AND FEMALE REPRODUCTIVE SYSTEM, GAMETOGENESIS, OOGENESIS, IMPLANTATION.</p> <p>EXPLANATION, DISCUSSION AND NOTES TO BE GIVEN ON METHODS OF PREVENTING CONCEPTION, SEXUALLY TRANSMITTED DISEASES.</p> <p>EXPLANATION, DISCUSSION AND NOTES TO BE GIVEN ON BACK CROSS, TEST CROSS, MULTIPLE ALLELE, LINKAGE, PEDIGREE ANALYSIS.</p> <p>DISCUSSION AND NOTES TO BE GIVEN ON TOPICS- IMMUNITY, ELISA, AIDS, CANCER, DRUG AND ALCOHOL ABUSE..</p> <p>EXPLANATION, DISCUSSION AND NOTES TO BE GIVEN ON TOPICS- NUCLEOSOME CONCEPT, TRANSCRIPTION.</p> <p><u>LAST DATE OF PROJECT SUBMISSION- 14.06.2018.</u></p>
JULY	12 PRE-TEST EXAMINATION BEGINS ON 25.07.2018.	CHAPTER 6: MOLECULAR BASIS OF INHERITANCE CHAPTER 7 : EVOLUTION CHAPTER 9: STRATEGIES FOR ENHANCEMENT IN FOOD PRODUCTION	<p>GENETIC CODE, TRANSLATION, OPERON CONCEPT, DNA FINGERPRINTING</p> <p>EVIDENCES OF EVOLUTION, ADAPTIVE RADIATION, MECHANISM OF EVOLUTION, HARDY-WEINBERG PRINCIPLE, ORIGIN AND EVOLUTION OF MAN.</p> <p>PLANT AND ANIMAL BREEDING, SINGLE CELL PROTEIN, TISSUE CULTURE.</p> <p><u>SYLLABUS FOR PRE TEST EXAMINATION: CHAPTERS-1, 2, 3, 4, 5, 6, 7, 8, 9.</u></p>	<ul style="list-style-type: none"> LONG ANSWER QUESTION TO BE GIVEN ON TOPICS- PROPERTIES OF GENETIC CODE , TRANSLATION, LAC OPERON, DNA FINGER PRINTING. OBJECTIVE QUESTIONS (MCQ, VSAQ, SAQ) AND LONG ANSWER QUESTION TO BE GIVEN ON TOPICS- EVIDENCES OF EVOLUTION, ADAPTIVE RADIATION, MECHANISM OF EVOLUTION, HARDY-WEINBERG PRINCIPLE, ORIGIN AND EVOLUTION OF MAN. SHORT ANSWER TYPE QUESTIONS TO BE GIVEN ON TOPICS- PLANT AND ANIMAL BREEDING, SINGLE CELL PROTEIN, TISSUE CULTURE. 	<p>EXPLANATION, DISCUSSION AND NOTES TO BE GIVEN ON TOPICS- NUCLEOSOME CONCEPT, TRANSCRIPTION, PROPERTIES OF GENETIC CODE , TRANSLATION, LAC OPERON, DNA FINGER PRINTING.</p> <p>EXPLANATION, DISCUSSION AND NOTES TO BE GIVEN ON TOPICS- ORIGIN OF LIFE , CONVERGENT AND DIVERGENT EVOLUTION, INDUSTRIAL MELANISM, FLOW CHART OF HUMAN EVOLUTION.</p> <p>EXPLANATION, DISCUSSION AND NOTES TO BE GIVEN ON TOPICS- PLANT BREEDING, TISSUE CULTURE, MICROPROPAGATION.</p>

AUGUST	10	CHAPTER 10: MICROBES IN HUMAN WELFARE CHAPTER 11: BIOTECHNOLOGY- PRINCIPLES AND PROCESSES	ROLE OF MICROBES IN DIFFERENT ASPECTS LIKE HOUSEHOLD PRODUCTS, INDUSTRIES, SEWAGE TREATMENT, BIOGAS PRODUCTION, AS BIOCONTROL AGENTS, BIOFERTILISERS. TOOLS OF RECOMBINANT DNA TECHNOLOGY, CLONING VECTORS, PROCESSES OF RECOMBINANT DNA TECHNOLOGY.	<ul style="list-style-type: none"> • SHORT ANSWER TYPE QUESTIONS TO BE GIVEN ON TOPICS- ROLE OF MICROBES IN DIFFERENT ASPECTS LIKE HOUSEHOLD PRODUCTS, INDUSTRIES, SEWAGE TREATMENT, BIOGAS PRODUCTION, AS BIOCONTROL AGENTS, BIOFERTILISERS. • OBJECTIVE QUESTIONS (MCQ, VSAQ, SAQ) TO BE GIVEN ON TOPICS- RESTRICTION ENZYMES, CLONING VECTORS. 	EXPLANATION, DISCUSSION AND NOTES TO BE GIVEN ON TOPICS- ROLE OF MICROBES AS BIOCONTROL AGENTS. EXPLANATION,DISCUSSION AND NOTES TO BE GIVEN ON RECOMBINANT DNA TECHNOLOGY, CLONING VECTORS.
--------	----	--	---	---	---

Teachers are requested to prepare a LESSON PLAN for each Topic to be taught. The Lesson plans are to be submitted along with the monthly planner.

PRINCIPAL


 VICE PRINCIPAL

Submitted on: 24.01.2018.

Signature of Teacher : Debaswati Mukherjee Bhowmick, Sejani Chakraborty


 ACADEMIC CO-ORDINATOR
 St. Lawrence High School



ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION



Syllabus planning for the academic year 2018

TERM: SELECTION

TEACHER'S NAME: MS. DEBARATI MUKHERJEE BHOWMICK, MS. DEBJANI CHAKRABORTY

No. of working days:-57

No. of periods available: 26

Subject: BIOLOGICAL SCIENCES

CLASS: 12

SECTION: A1, A2

MONTH	NO. OF PERIODS	LESSONS	TOPICS COVERED	HOMEWORK	CLASS WORK
SEPTEMBER	10	CHAPTER 12: BIOTECHNOLOGY AND ITS APPLICATIONS CHAPTER 13: ORGANISMS AND POPULATION CHAPTER 14: ECOSYSTEM CHAPTER 15: BIODIVERSITY AND CONSERVATION	BIOTECHNOLOGICAL APPLICATION IN AGRICULTURE, MEDICINE, TRANSGENIC ANIMALS. ORGANISM AND ITS ENVIRONMENT, ADAPTATION, POPULATION ATTRIBUTES, POPULATION GROWTH, POPULATION INTERACTIONS. ECOSYSTEM- STRUCTURE AND FUNCTIONS, PRODUCTIVITY, ENERGY FLOW, ECOLOGICAL PYRAMIDS, ECOLOGICAL SUCCESSION, NUTRIENT CYCLING. BIODIVERSITY, PATTERNS OF BIODIVERSITY.	<ul style="list-style-type: none"> SHORT ANSWER TYPE QUESTIONS TO BE GIVEN ON TOPICS- GENETICALLY ENGINEERED INSULIN, GENE THERAPY, TRANSGENIC ANIMALS. SHORT ANSWER TYPE QUESTIONS TO BE GIVEN ON TOPICS- ADAPTATION, POPULATION ATTRIBUTES, POPULATION GROWTH, POPULATION INTERACTIONS. OBJECTIVE QUESTIONS (MCQ, VSAQ, SAQ) AND LONG ANSWER QUESTION TO BE GIVEN ON TOPICS- COMPONENTS OF ECOSYSTEM, ENERGY FLOW, ECOLOGICAL PYRAMIDS, ECOLOGICAL SUCCESSION, NUTRIENT CYCLING. SHORT ANSWER TYPE QUESTIONS TO BE GIVEN ON TOPICS- BIODIVERSITY, PATTERNS OF BIODIVERSITY. 	<p>EXPLANATION, DISCUSSION AND NOTES TO BE GIVEN ON TOPIC- GENETICALLY ENGINEERED INSULIN, GENE THERAPY, TRANSGENIC ANIMALS.</p> <p>EXPLANATION, DISCUSSION AND NOTES TO BE GIVEN ON TOPICS- ADAPTATION, POPULATION ATTRIBUTES, POPULATION GROWTH, POPULATION INTERACTIONS.</p> <p>EXPLANATION, DISCUSSION AND NOTES TO BE GIVEN ON TOPICS- COMPONENTS OF ECOSYSTEM, ENERGY FLOW, ECOLOGICAL PYRAMIDS, ECOLOGICAL SUCCESSION, NUTRIENT CYCLING.</p> <p>EXPLANATION, DISCUSSION AND NOTES TO BE GIVEN ON TOPICS-TYPES OF BIODIVERSITY.</p>
OCTOBER	06	CHAPTER 15: BIODIVERSITY AND CONSERVATION CHAPTER 16: ENVIRONMENTAL ISSUES	LOSS AND CAUSES OF BIODIVERSITY, BIODIVERSITY CONSERVATION. CAUSES AND CONTROL OF AIR POLLUTION, WATER POLLUTION, SOLID WASTE, GREEN HOUSE EFFECT, OZONE DEPLETION, DEFORESTATION. <u>SYLLABUS FOR SELECTION TEST: CHAPTERS-1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16.</u> REVISION OF ENTIRE SYLLABUS.	<ul style="list-style-type: none"> SHORT ANSWER TYPE QUESTIONS TO BE GIVEN ON TOPICS- LOSS AND CAUSES OF BIODIVERSITY, BIODIVERSITY CONSERVATION, INSITU AND EXSITU CONSERVATION. OBJECTIVE QUESTIONS (MCQ, VSAQ, SAQ) AND LONG ANSWER QUESTION TO BE GIVEN ON TOPICS- CAUSES AND CONTROL OF AIR POLLUTION, WATER POLLUTION, SOLID WASTE, GREEN HOUSE EFFECT, OZONE DEPLETION, DEFORESTATION. 	<p>EXPLANATION, DISCUSSION AND NOTES TO BE GIVEN ON TOPICS- INSITU AND EXSITU CONSERVATION.</p> <p>EXPLANATION, DISCUSSION AND NOTES TO BE GIVEN ON TOPICS- CAUSES AND CONTROL OF AIR POLLUTION, WATER POLLUTION, SOLID WASTE, GREEN HOUSE EFFECT, OZONE DEPLETION, DEFORESTATION.</p>
NOVEMBER		SELECTION TEST EXAMINATION BEGINS ON 01.11.2018.			
DECEMBER					

Teachers are requested to prepare a LESSON PLAN for each Topic to be taught. The Lesson plans are to be submitted along with the monthly planner.

PRINCIPAL


VICE PRINCIPAL

Submitted on: 24.01.2018.

Signature of Teacher : Debarati Mukherjee Bhowmick, Debjani Chakraborty

ACADEMIC CO-ORDINATOR

19/1/18
St. Lawrence High School