



# ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

Syllabus planning for the Academic Year 2019



SUBJECT: BIOLOGICAL SCIENCE

TERM: PRE-TEST

TEACHER'S NAME: MS.MANJAREE GUHA, MS. DEBJANI CHAKRABORTY

NO. OF WORKING DAYS:-21

NO. OF PERIODS AVAILABLE: 03

CLASS: 12

SECTION: A1, A2

MONTH	NO. OF PERIODS	LESSONS	TOPICS COVERED	HOME-WORK	CLASS-WORK
JANUARY					
FEBRUARY					
MARCH					
APRIL	03	CHAPTER-1 REPRODUCTION IN ORGANISMS	ASEXUAL REPRODUCTION , SEXUAL REPRODUCTION, PRE- AND POST- FERTILIZATION EVENTS.	OBJECTIVE QUESTIONS (MCQ,VSAQ,SAQ) TO BE GIVEN ON TOPICS- ASEXUAL REPRODUCTION, SEXUAL REPRODUCTION, PRE AND POST FERTILIZATION EVENTS.	NOTES TO BE GIVEN ON MODES OF ASEXUAL REPRODUCTION, TYPES OF SYNGAMY, TYPES OF POLLINATION.

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

Signature of Teacher : *Manjaree Guha, Debjani Chakraborty*

PRINCIPAL

Submitted on : . 28.01.2019

Academic Co-ordinator : .....

*Susmita Banerjee*  
30/1/19

VICE PRINCIPAL

*6/2/19*



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Syllabus planning for the Academic Year 2019



SUBJECT: BIOLOGICAL SCIENCE

TERM: PRE-TEST

TEACHER'S NAME: MS.MANJAREE GUHA, MS. DEBJANI CHAKRABORTY

NO. OF WORKING DAYS:-25

NO. OF PERIODS AVAILABLE: 22

CLASS: 12

SECTION: A1, A2

MONTH	NO. OF PERIODS	LESSONS	TOPICS COVERED	HOMEWORK	CLASS WORK
MAY	07	CHAPTER -2:HUMAN REPRODUCTION CHAPTER: 4: REPRODUCTIVE HEALTH	<ul style="list-style-type: none"> <li>GAMETOGENESIS, OOGENESIS, IMPLANTATION AND FERTILIZATION</li> <li>BIRTH CONTROL, SEXUALLY TRANSMITTED DISEASE, INFERTILITY</li> </ul>	<ul style="list-style-type: none"> <li>OBJECTIVE QUESTIONS (MCQ, VSAQ, SAQ) TO BE GIVEN ON TOPICS- MALE AND FEMALE REPRODUCTIVE SYSTEM, GAMETOGENESIS, OOGENESIS, IMPLANTATION.</li> <li>SHORT ANSWER TYPE QUESTIONS TO BE GIVEN ON TOPICS- BIRTH CONTROL, SEXUALLY TRANSMITTED DISEASE, INFERTILITY.</li> </ul>	<ul style="list-style-type: none"> <li>EXPLANATION, DISCUSSION, AND NOTES TO BE GIVEN ON TOPICS- MALE AND FEMALE REPRODUCTIVE SYSTEM, GAMETOGENESIS, OOGENESIS, IMPLANTATION.</li> <li>EXPLANATION, DISCUSSION, AND NOTES TO BE GIVEN ON TOPICS- BIRTH CONTROL, SEXUALLY TRANSMITTED DISEASE, INFERTILITY.</li> </ul>
JUNE	15	CHAPTER-5: PRINCIPLES OF INHERITANCE CHAPTER 8 : HUMAN HEALTH AND DISEASE CHAPTER 6 : MOLECULAR BASIS OF INHERITANCE.	<ul style="list-style-type: none"> <li>MENDEL'S LAW OF INHERITANCE, MONOHYBRID AND DIHYBRID CROSS, INCOMPLETE DOMINANCE, CO-DOMINANCE, LINKAGE, SEX- DETERMINATION, MUTATION, PEDIGREE ANALYSIS, MENDELIAN DISORDERS.</li> <li>COMMON DISEASES IN HUMAN, IMMUNITY, AIDS, CANCER, DRUG AND ALCOHOL ABUSE</li> <li>NUCLEOSOME MODEL, REPLICATION, TRANSCRIPTION.</li> </ul>	<ul style="list-style-type: none"> <li>OBJECTIVE QUESTIONS ON (MCQ, VSAQ, SAQ) AND LONG ANSWER QUESTIONS 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</li> <li>OBJECTIVE QUESTIONS ON (MCQ, VSAQ, SAQ) TO BE GIVEN ON COMMON DISEASES IN HUMAN, IMMUNITY, AIDS, CANCER, DRUG AND ALCOHOL ABUSE.</li> <li>LONG ANSWER QUESTIONS TO BE GIVEN ON TOPICS- NUCLEOSOME MODEL, REPLICATION, TRANSCRIPTION.</li> </ul>	<ul style="list-style-type: none"> <li>EXPLANATION, DISCUSSION, AND NOTES TO BE GIVEN ON TOPICS- BACKCROSS, TESTCROSS, MULTIPLE ALLELE, LINKAGE, PEDIGREE ANALYSIS.</li> <li>DISCUSSION AND NOTES TO BE GIVEN ON- IMMUNITY, ELISA, AIDS, CANCER, DRUG, AND ALCOHOL ABUSE</li> <li>EXPLANATION, DISCUSSION, AND NOTES TO BE GIVEN ON TOPICS- NUCLEOSOME MODEL, REPLICATION, TRANSCRIPTION.</li> </ul> <p style="text-align: right;"><u>LAST DATE OF PROJECT SUBMISSION- 13. 06.2019</u></p>

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

Signature of Teacher: *Manjaree Guha, Debjani Chakraborty*

PRINCIPAL

Submitted on : 28.01.2019

Academic Co-ordinator : *Susmita Barui*  
*30/1/19*

VICE PRINCIPAL : *6/2/19*



FOR GOD AND COUNTRY

# ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

Syllabus planning for the Academic Year 2019



SUBJECT: BIOLOGICAL SCIENCE

TERM: PRE-TEST

TEACHER'S NAME: MS.MANJAREE GUHA, MS. DEBJANI CHAKRABORTY

NO. OF WORKING DAYS:-45

NO. OF PERIODS AVAILABLE: 29.

CLASS: 12

SECTION: A1, A2

QNTH	NO. OF PERIODS	LESSONS	TOPICS COVERED	HOMEWORK	CLASS WORK
JULY	17	CHAPTER 6: MOLECULAR BASIS OF INHERITANCE CHAPTER 7 : EVOLUTION CHAPTER 9: STRATEGIES FOR ENHANCEMENT IN FOOD PRODUCTION.  PRE- TEST EXAMINATION BEGINS ON 29.07.2019	<ul style="list-style-type: none"> <li>GENETIC CODE, TRANSLATION, OPERON CONCEPT, DNA FINGERPRINTING</li> <li>EVIDENCES OF EVOLUTION, ADAPTIVE RADIATION, MECHANISM OF EVOLUTION, HARDY – WEINBERG PRINCIPLE, ORIGIN AND EVOLUTION OF MAN</li> <li>PLANT AND ANIMAL BREEDING, SINGLE CELL PROTEIN, TISSUE CULTURE</li> </ul> <p>SYLLABUS FOR PRE- TEST EXAMINATION : CHAPTER- 1,2,3,4,5,6,7,8,9</p>	<ul style="list-style-type: none"> <li>LONG ANSWER QUESTION TO BE GIVEN ON TOPICS- PROPERTES OF GENETIC CODE, TRANSLATION, LAC OPERON, DNA FINGERPRINTING</li> <li>OBJECTIVE QUESTIONS ON (MCQ, VSAQ,SAQ) TO BE GIVEN ON- EVIDENCES OF EVOLUTION, ADAPTIVE RADIATION, MECHANISM OF EVOLUTION, HARDY – WEINBERG PRINCIPLE, ORIGIN AND EVOLUTION OF MAN</li> <li>SHORT ANSWER TYPE QUESTIONS TO BE GIVEN ON TOPICS- PLANT AND ANIMAL BREEDING, SINGLE CELL PROTEIN, TISSUE CULTURE</li> </ul>	<ul style="list-style-type: none"> <li>EXPLANATION, DISCUSSION, AND NOTES TO BE GIVEN ON TOPICSORIGIN OF LIFE, CONVERGENT AND DIVERGENT EVOLUTION, INDUSTRIAL MELANISM, FLOW CHART OF HUMAN EVOLUTION</li> <li>EXPLANATION, DISCUSSION, AND NOTES TO BE GIVEN ON TOPICS- PLANT BREEDING, TISSUE CULTURE, MICROPROPAGATION.</li> </ul>
AUGUST	12	CHAPTER 10: MICROBES IN HUMAN WELFARE CHAPTER 11: BIOTECHNOLOGY : PRINCIPLES AND PROCESSES.	<ul style="list-style-type: none"> <li>ROLE OF MICROBES IN DIFFERENT ASPECTS LIKE HOUSEHOLD PRODUCTS, INDUATRIES, SEWAGE TREATMENT, BIOGAS PRODUCTION, AS BIOCONTROL AGENTS, BIOFERTILIZERS.</li> <li>TOOLS OF RECOMBINANT DNA TECHNOLOGY, CLONING VECTORS, PROCESSES OF RECOMBINANT DNA TECHNOLOGY</li> </ul>	<ul style="list-style-type: none"> <li>SHORT ANSWER TYPE QUESTIONS TO BE GIVEN ON TOPICS- ROLE OF MICROBES IN DIFFERENT ASPECTS LIKE HOUSEHOLD PRODUCTS, INDUATRIES, SEWAGE TREATMENT, BIOGAS PRODUCTION, AS BIOCONTROL AGENTS, BIOFERTILIZERS.</li> <li>OBJECTIVE QUESTIONS ON (MCQ, VSAQ,SAQ) TO BE GIVEN ON- RESTRICTION ENZYMES AND CLONING VECTORS.</li> </ul>	

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Signature of Teacher : *Manjaree Guha, Debjani Chakraborty*

Submitted on : . 28.01.2019

Academic Co-ordinator : *Susmita Banerjee*  
20/1/19

PRINCIPAL

VICE PRINCIPAL *for by 6/2/19*





# ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

Syllabus planning for the Academic Year 2019



SUBJECT: BIOLOGICAL SCIENCE

TERM: TEST

TEACHER'S NAME: MS.MANJAREE GUHA, MS. DEBJANI CHAKRABORTY

NO. OF WORKING DAYS:-34

NO. OF PERIODS AVAILABLE: 19

CLASS: 12

SECTION: A1, A2

MONTH	NO. OF PERIODS	LESSONS	TOPICS COVERED	HOMEWORK	CLASS WORK
SEPTEMBER	12	CHAPTER 12:BIOTECHNOLOGY AND ITS APPLICATIONS CHAPTER 13:ORGANISMS AND POPULATION CHAPTER 14:ECOSYSTEM CHAPTER 15:BIODIVERSITY AND CONSERVATION	<ul style="list-style-type: none"> <li>• BIOTECHNOLOGICAL APPLICATIONS IN AGRICULTURE, MEDICINE,TRANSGENIC ANIMALS.</li> <li>• ORGANISMS AND ITS ENVIRONMENT, ADAPTATION,POPULATION ATTRIBUTES,POPULATION GROWTH,POPULATION INTERACTIONS.</li> <li>• ECOSYSTEM-STRUCTURE AND FUNCTION, PRODUCTIVITY, ENERGY FLOW, ECOLOGICAL PYRAMIDS,ECOLOGICAL SUCCESSION,NUTRIENT CYCLING.</li> <li>• BIODIVERSITY, PATTERNS OF BIODIVERSITY.</li> </ul>	<ul style="list-style-type: none"> <li>• SHORT ANSWER TYPE QUESTIONS TO BE GIVEN ON TOPICS-GENETICALLY ENGINEERED INSULIN,GENE THERAPY,TRANSGENIC ANIMALS</li> <li>• SHORT ANSWER TYPE QUESTIONS TO BE GIVEN ON TOPICS-ADAPTATION, POPULATION ATTRIBUTES, POPULATION GROWTH,POPULATION INTERACTIONS.</li> <li>• OBJECTIVE QUESTIONS AND LONG ANSWER QUESTIONS TO BE GIVEN ON TOPICS: ECOSYSTEM-STRUCTURE AND FUNCTION, PRODUCTIVITY,ENERGY FLOW,ECOLOGICAL PYRAMIDS,ECOLOGICAL SUCCESSION,NUTRIENT CYCLING.</li> <li>• SHORT ANSWER TYPE QUESTIONS TO BE GIVEN ON TOPICS- BIODIVERSITY,PATTERNS OF BIODIVERSITY.</li> </ul>	<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 TOPIC-ADAPTATION,POPULATION ATTRIBUTES,POPULATION GROWTH,POPULATION INTERACTIONS.</p> <p>EXPLANATION,DISCUSSION AND NOTES TO BE GIVEN ON TOPIC-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	07	CHAPTER 15:BIODIVERSITY AND CONSERVATION CHAPTER 16:ENVIRONMENTAL ISSUES	<ul style="list-style-type: none"> <li>• LOSS AND CAUSES OF BIODIVERSITY,BIODIVERSITY CONSERVATION</li> <li>• CAUSES AND CONTROL OF AIR POLLUTION,WATER POLLUTION,SOLID WASTE,GREEN HOUSE EFFECT,OZONE DEPLETION,DEFORESTATION.</li> </ul>	<ul style="list-style-type: none"> <li>• SHORT ANSWER TYPE QUESTIONS TO BE GIVEN ON TOPICS-LOSS AND CAUSES OF BIODIVERSITY,BIODIVERSITY CONSERVATION,IN-SITU AND EX-SITU CONSERVATION.</li> <li>• OBJECTIVE QUESTIONS AND LONG ANSWER QUESTIONS TO BE GIVEN ON TOPICS-CAUSES AND CONTROL OF AIR POLLUTION,WATER POLLUTION,SOLID WASTE,GREEN HOUSE EFFECT,OZONE DEPLETION,DEFORESTATION.</li> </ul>	<p>EXPLANATION,DISCUSSION AND NOTES TO BE GIVEN ON TOPICS-IN-SITU AND EX-SITU 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>

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Signature of Teacher : *Manjaree Guha, Debjani Chakraborty*

Submitted on : 28.01.2019

Academic Co-ordinator : *Susmita Banerjee*  
30/1/19

PRINCIPAL

*[Signature]*  
7/6/2/19  
VICE PRINCIPAL



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SUBJECT: BIOLOGICAL SCIENCE

TERM: TEST

TEACHER'S NAME: MS.MANJAREE GUHA, MS. DEBJANI CHAKRABORTY

NO. OF WORKING DAYS:-21

NO. OF PERIODS AVAILABLE: 04

CLASS: 12

SECTION: A1, A2

MONTH	NO. OF PERIODS	LESSONS	TOPICS COVERED	HOMEWORK	CLASS WORK
NOVEMBER	04	REVISION OF ENTIRE SYLLABUS  <u>SELECTION TEST EXAMINATION BEGINS ON 15.11.19</u>	<u>SYLLABUS FOR SELECTION TEST EXAMINATION:CHAPTERS-1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16</u>		
DECEMBER					

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PRINCIPAL

Submitted on : . 28.01.2019

Academic Co-ordinator : .....*Susmita Bandyopadhyay*.....  
30/1/19

VICE PRINCIPAL

*[Signature]*  
16/2/19