MYP 4 Course overview 2019/2020 ***BIOLOGY***

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| **Unit title** | **Key concept** | **Related concepts** | **Global context** | **Statement inquiry** | **Objectives** | **Assessment tasks** | **ATL skills** | **Content** |
| Unit 1***The scientific method***  September, October 2019 | Perspective  | EvidencePatterns | Scientific and technical innovation | Scientific and technological advances enable societies to understand (or at least, to try to understand) the universe | ABCD | Discussion about the scientific method(D)Practical works: analysis of results(C)End-of-unit or chapter tests(A)Examples of design (B) | Communication, Collaboration,Critical thinking,Creative thinking | Elements of the scientific methodExperimental approachHow to design an experimentVariables in experimentHow to understand graphs and tablesData analysis |
| Unit 2***Evolution***November 2019 | Change | EnvironmentConsequencesBalance | Fairness and development | Evolution is a consequence of the unbalanced opportunities provided by natural selection | ACD | End-of-unit or chapter tests (A)Analysis of similarities between various bones: collection and interpretation of data (C)The social impact of evolution (discussion and written piece of work)(D) | OrganizationCollaborationCommunicationInformation literacyCritical thinking | Definition of evolutionEvidence for evolution (fossil record, homologous structures, breeding)Overproduction, variation, natural selection and inheritanceEvolution and sexual reproductionEvolution in response to environmental change |
| Unit 3**The chemistry of life**December 2019January,February,March 2020 | Relationships | Function | Identities and relationships |  There is a strong relationship between the structure and function of biologically important compounds | ABC | Practical work on biologically important compounds and enzymes (B, C) End-of-unit or chapter test | OrganizationCollaborationCommunicationInformation literacyReflection Critical thinking | Biologically important compoundsProteins and enzymesCarbohydratesLipidsNutrition (proteins, carbohydrates and lipids in our diet)Conscious eating and healthy diet |
| Unit 4**INTERDISCIPLINARY UNIT** **Growth of the cells**April, May, June 2020 | Connections | InteractionForm | Identities and relationships | Life is the product of numerous interactions | AB | How to use the microscope (B)End-of-unit or chapter tests(A) | Communication (group work)Collaboration (group work)Reflection | Cells, organellesCell membraneCell to cell communicationTransport through the membraneDiffusionOsmosis |

MYP 5 Course overview 2019/2020 ***BIOLOGY***

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| **Unit title** | **Key concept** | **Related concepts** | **Global context** | **Statement inquiry** | **Objectives** | **Assessment tasks** | **ATL skills** | **Content** |
| Unit 1***The human reproductive system*** September, October 2019 | Development  | Consequences | Personal and cultural expression | Sexual development and its consequences for personal and cultural expression | AD | Discussion about methods of contraception and social issue (D)End-of-unit or chapter tests(A) | Organization Collaboration-working in groups Communication Information literacyReflection: self-evaluation Thinking- Transfer | The basic anatomy of human reproductive systemSexual developmentThe menstrual cyclePregnancy and birth ContraceptionPersonal aspects of sexSexually transmitted diseasesResponsible sexual behaviour |
| Unit 2 **The nervous system and drugs**November,December 2019 | Systems  | BalanceFunction | Orientation in time and space | Orientation in time and space depends on healthy and balanced nervous system | ABCD | End-of-unit or chapter tests(A)Design scientific investigation about learning in humans (B)Learning in humans, data analysis (C)Application of science: pills, drugs or help, written piece of work (D) | Organization-time management CollaborationCommunication Information literacyMedia literacy Reflection: self-evaluation Thinking- Transfer | General plan of the nervous systemNerve cellsNerve impulseThe brain and behaviourThe brain and learningThe brain and sleepDrugs and mental illness |
| Unit 3***Water***January 2020 | Change | Transformation  | Identities and relationship | How and why are transformations of liquid water, ice and vapour crucial for life and the relationship between life and environment?  | ABC | Practical work on properties of water important for living beings(B,C)End-of-unit or chapter tests(A) | Organization-time management CollaborationCommunication Reflection: self-evaluation Creative thinking (design of experiment) | Water: the structureHydrogen bondsProperties of waterThe relationship between the properties of water and life as we know it  |
| Unit 4**Basic ecology**February, March, April, May, June 2020 | Systems  | Environment InteractionEnergy | Globalization and sustainability  | Organisms interact with the natural environment by transferring matter and energy | AD | Discussion about fossil fuels and our future (D)End-of-unit or chapter tests(A) | Organization-time management CollaborationCommunication Information literacyMedia literacy Reflection: self-evaluation Thinking- Transfer | Communities and ecosystemsFood chainsPyramids of energyThe role of bacteriaThe greenhouse effect and the precautionary principleConsequences of a global temperature rise on ecosystemsPopulationsPopulation growth curveBinomial system of nomenclatureNatural classification |