

HARMONISED ANNUAL PROGRESSION FOR BIOLOGY.

General Objectives :

- 1) This course, will help learners to acquire basic skills that will enable him/her to solve daily life challenges as well as being self-reliant.
- 2) It aims at inculcating in the learner, the attitude of environmental awareness; maintaining, improving or exploiting it in a sustainable manner.

Specific Objectives for Form 1: -Identification of Biological Systems and their importance.

School:; Class: F1; Number of Didactic Sequences: 15; Weekly workload: 2H Subject: **Biology**

Teacher's Name : ; Qualification :Longivity.....

Term	Week	Categories of Actions	Module/Title /Topic.	Sub Topic/Didactic Sequence	Pedagogic Sequence/Lesson	Digitalization		Duration	Observations	
						Res on-line	Res. used			
1 st Term	Wk.1-3(04-22/09/23)	Appropriating Knowledge of Life and Life forms.	1 The Living World	1.Understanding Biology	-Notion of Biology	Yes		9h	08/09/23. World Literacy Day.	
	-Characteristics of Living things				Yes					
	-Studying and Observation of Living things/Cells and their Types				Yes					
	Wk.4 25-29/9/23				Practicals/Revision/Integration/Evaluation and remediation	Yes		2h		
	Wk.5 02-06/10/23	Influence of the environment on plants and animals		2.Environment and habitats	-Definition of terms /Biotic and abiotic factors/Effects of day and night	Yes		2h		
	Wk.6-7 (09-20/10/23)	Practicing agriculture and animal husbandry		3.Improving soil quality	-Soil quality/farming practice -Farming techniques	Yes Yes		3h		
	Wk.7-8 (18-27/10/23)	- Using the soil in the production of consumable resources. - Preventing soil degradation		4.Soil erosion	-Types of soil erosion	Yes		3h		
	Wk.9 30-03/11/23				-Causes effects and prevention	Yes				
	Wk.10 06-10/11/23				Revision/integration/Evaluation and remediation.	Yes		2h		
	Wk.11 13-17/11/23			5.Hunting/fishing/harvesting/gardening	-Purpose/materials/methods/effects and importance.	Yes		2h		
Wk.12 20-24/11/23	Conserving natural resources (food and medicinal plants).		6.Roles of medicinal plants	-Types of medicinal plants - Methods of preparation.	Yes		2h			
				-Cultivation/harvesting and preservations						
2 nd Term	1-2(27-08/12/23)	Preventing/Avoiding early pregnancies.	2 Health Education	7.Reproductive health	Puberty/primary and secondary sexual characteristics			3h	15-02/01/2024---First break.	
	Fertilization and pregnancy									
	3(11-15/12/23)			8.Early pregnancy	Causes, consequences and Prevention.			2h		
	4(02-05/01/24)	Revision/integration/Evaluation and remediation.					2h			
	5(08-12/01/24)	Preventing/Avoiding STIs and AIDS.		9.STIs, HIV/AIDS	Gonorrhoea, syphilis/ chlamydia			2h		
	6(15-19/01/24)				Hepatitis-B, HIV-AIDS/PREVENTION of STIs, HIV-AIDS/hygiene of the reproductive organs					
	7(22-26/01/24)	Preventing/Avoiding food poisoning.		10.Quality nutrition	Classes and sources of food Nutritional diseases			2h		26-02/02/2024 Bilingualism week. 05-11/02/24 Youth Week.
	8-9(29-09/02/24)			11.Food hygiene	Food preparation/preservation/ Practicals.			6h		
					Social health					

	10(12-16/02/24)				Revision/integration/Evaluation and remediation.			2h	
3 rd Term	11(19-23/02/24)	Preventing water pollution	3 Environmental Education and Sustainable Development	12.Water management	Natural water sources/water pollution			4h	
	12(26-01/03/24)				Effects of water pollution/water borne diseases				
	1(04-08/03/24)				Purification of used water-water filters/maintenance.				
	2(11-15/03/24)	Preventing air pollution		13.Air	Composition of air/uses of natural and artificial air			2h	28-15/04/24 Second break
	3(18-22/03/24)				Air pollution and effects.			2h	
	4(25-28/03/24)				Revision/integration/Evaluation and remediation.			2h	
	5(01-05/04/24)	Preventing land pollution		14.Land pollution	Land pollutants and their effects			2h	
	6(15-19/04/24)				Preventing Land Pollution			2h	
	7(22-26/04/24)				Practicals			2h	
	8(29-03/05/24)	Conserving Biodiversity		15.Conservation of biodiversity	Notions and conservation techniques			2h	
	9(06-10/05/24)				Interdependence and Legislation			2h	
	10(13-17/05/24)				Revision/integration/Evaluation.			2h	
TOTAL	33		03	15				66h/Year	

*60 hours of theory

* 06 hours of practicals.

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- 3) The learning period for integration is an indicative proposal; this lesson has to be placed after a group of lessons. That is at the end of each didactic sequence
- 4) The elaborated progression sheet has to be clipped to the cover page or first page of the subject in the log book(RWKBK).
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Specific Objectives for Form 2 :- Exploring the living world to ameliorate human life

School:: Class: F2; Number of chapters:14; Weekly workload: 2H Subject: Biology

Teacher's Name :; Qualification :Longevity.....

Term	Week	Category of Actions	Module/Topic	Sub Topic/Didactic Sequence	Pedagogic sequence/Lessons	Digitalization		Duration	Observations
						Res. online	Res. used		
1 st Term	1-5(04-06/10/23)	Practicing agriculture and animal husbandry	1 The Living World.	1.Reproduction in plants	Need for Reproduction and types/agents of pollination	Yes		10h	*Practicals on V.P (cuttings)
					Fertilization /seed structure/seed dispersal/ qualities	Yes			
					Seed germination/types of asexual reproduction	Yes			
					Vegetative propagation [Natural and artificial]	Yes			
					Advantages/disadvantages of vegetative propagation/Evaluation	Yes			
	6 (9-13/10/23)				Practicals/Revision/Evaluation and remediation.	Yes		2h	
	7-9 (16-03/11/23)	2.Animal production		Sexual reproduction-fertilization and development/ techniques of rearing animals	Yes		6h		
				Metamorphosis in Insects and Amphibians	Yes				
				Impact of larval forms on plant yields	Yes				
	10-11 (06-17/11/23)	3.Improvement of quality and quantity of production		Animal/Plant parasites and diseases	Yes		4h		
				Biological/chemical control of pests	Yes				
	12 (20-24/11/23)			Integration/ Evaluation/remediation.	Yes		2h		
2 nd Term	1-2(27-08/12/23)	Preserving consumable resources.		4.Transformation of foodstuff	Role of microorganisms	Yes		4h	
				- Methods of food preservation/Practical	Yes				
				-Principle of animal and plant products preservation.					
	3(11-15/12/23)	Preventing-eliminating deficiency and over feeding diseases.	2 Health Education	5.Quality nutrition	Nutritional diseases	Yes		2h	
				6.Body mass index	Body mass index	Yes			
	4(02-05/01/24)			7.Calorific value of food	Determination of calorific values/project design on nutritional diseases	Yes		2h	
	5(08-12/01/24)	Integration/Evaluation/remediation.					2h		
	6(15-19/01/24)	8.Food hygiene		Food hygiene and rules of food preparation			2h		
	7(22-26/01/24)	Maintaining physical and social health.		9.Physical and social health	Alcohol and smoking			2h	26-02/02/2024 Bilingualism week.
	8(29-02/02/24)				Drugs			2h	
	9(05-09/02/24)				Project on social health			2h	05-11/02/24 Youth Week.
	10 (12-12/02/24)				Exercise/rest/sleep- integration and Evaluation/remediation.			2h	
	11(19-23/02/24)	Caring for and maintaining the reproductive			10.Behaviour harmful to reproductive health	Practices harmful to adolescent reproductive health			2h
12(26-01/03/24)	Emergent harmful behaviours							2h	

		organs in good health.							
	1(04-08/03/24)	Preventing/avoiding STIs, HIV and AIDS		11.STIs, HIV/AIDS	Notion and example of STIs			2h	
	2(11-15/03/24)				HIV/AIDS and STIs.			2h	
	3(18-22/03/24)				Revision/Integration / Evaluation/remediation.			2h	
3 rd Term	4(25-28/03/24)	Reducing/mitigating the effects of global warming and the depletion of the ozone layer.	3 Environmental Education and Sustainable Development	12.Global warming and climate change/ the ozone layer	Notion, causes and effects of climate change and the ozone layer depletion			2h	28-15/04/24 Second break
	5(01-05/05/24)	Conserving Biodiversity.		13.Conservation of biodiversity and natural disasters in Cameroon	Effects of man’s activities on biodiversity and methods of conserving biodiversity			2h	
	6(15-19/04/24)	Preventing/mitigating the impact of natural disasters/restoring the environment to its natural state.		14.Natural disasters in Cameroon	Types, causes , effects and prevention			2h	
	7(22-26/04/24)				Practical- field work			2h	
	8(28-03/05/24)				Integration and Evaluation.			2h	
	9(06-10/05/24)								
					END OF YEAR				
TOTAL	33	03		14				66h/Year	

*60 hours of theory.

*06 hours of practicals.

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Specific Objectives for Form 3: - Exploring the living world to ameliorate human life and environment.

School:; Class: F3; Number of chapter:14, Weekly workload: 2H Subject: Biology

Teacher's Name:; Qualification:Longivity.....

Term	Week	Category of Actions	Module/Topic	Sub Topic/Didactic Sequence.	Pedagogic Sequence/Lesson.	Digitalization		Duration	Observations
						Res. online	Res. used		
1 st Term	1(04-08/09/23)	Understanding cellular exchanges to better conserve life.	1 THE LIVING WORLD	1-CELLS AND WATER RELATIONS	-Notion of cells and water	Yes		4h	08/09/23. Literacy Day.
	2 (11-15/09/23)				-Diffusion, Osmosis and active transport	Yes			
	3 (18-22/09/23)			2-CELLULAR EXCHANGE IN DIFFERENT CONDITIONS	-Experiments to demonstrate cellular exchanges(practical on osmosis)	Yes		4h	
	4 (25-29/09/23)				-Osmosis and plant tissues -Transpiration(briefly treated).	Yes			
	5 (02-06/10/23)				-Revision, asking and answering questions. Use of osmosis in grocery to keep vegetables fresh. Integration/Evaluation/remediation.			2h	
	6 (09-12/10/23)	Understanding the nature and variety of life forms to better live with them.		3-CLASSIFICATION (Nature and Variety of life forms)	-Understanding Classification - Viruses -Prokaryotae (Bacteria)			2h	
	7 (16-20/10/23)				-Kingdom Protocista -Kingdom Fungi			4h	
	8 (23-27/10/23)				-Kingdom Plantae				
	9(30-03/11/23)				-Kingdom Animalia			6h	
	10 (06-10/11/23)			- Revision/Integration/evaluative/remediation.					
	11(13-17/11/23)	Improving the quantity and quality of plant and animal food resources.		4-CULTIVATION AND REARING OF ORGANISMS	Cultivation of Monocots and Dicots.			2h	
	12 (20-24/11/23)				END OF TERM				
2 nd .	1 (27-01/12/23)			-Rearing of snails, fish and birds - Rearing of Mammals e.g. Guinea pigs and wistar rat.			2h		
	2 (04-08/12/23)		5-PLANT NUTRIENTS	-Major and minor plant nutrients			2h		
	3(11-15/12/23)			-Importance of N,P,K in plants -Sources of plant nutrients -Types of fertilizers - Fertilizer application			2h	15-02/01/2024--- First break.	
	4 (02-05/01/24)		6-DIETING IN FARM ANIMALS	-Dietary needs of farm animals -Balanced dieting in farm animals			2h		

	5(08-12/01/24)				Making of compost manure Integration/evaluation/remediation. -Concept of balanced diet. -Classes of food. Practicals			4h	
	6(15-19/01/24)			7-CLASSES OF FOOD					
	7(22-26/01/24)	Preventing deficiency in nutritional and calorific requirements of humans.	2 HEALTH EDUCATION		-Nutritional and calorific requirements -Reference Intake(RI) and Guidelines Daily Amounts (GDA) -Calorific value of RI or GDA of a commonly eaten meal			4h	26-02/02/2024 Bilingualism week.
	8(29-02/02/24)	-		8-SOME COMMON DISEASES AFFECTING CROP PLANTS AND HUMANS	-Plant diseases				
	9(05-09/02/24)	Preventing/eliminating the transmission of diseases of food crops, farm animals and humans including HIV/AIDS and STIs and Ebola		9-Personal Hygiene	-Human diseases			2h	05-11/02/24 Youth Week.
	10(12-16/02/24)			10-AUTO-MEDICATION	-Rules of personal hygiene			2h	
	11(19-23/02/24)			11- Risky Behaviour	-Fake traditional medicines -Risky behaviours -Protective behaviours			2h	
	12(26-01/03/24)	-Rejecting risky behaviors that facilitate the transmission and propagation of these killers.		12- Covid 19 Virus Disease	-Covid 19 Evaluation/remediation.			2h	
3rd	1(04-08/03/24)	Preventing/eliminating intestinal worms.		13- Intestinal worms	-Tapeworm (<i>T. Solium</i> , <i>T. Saginata</i>). -Ascaris.			4h	
	2(11-15/03/24)	Enhancing food production while conserving the Environment.	3- ENVIRONMENTAL EDUCATION AND SUSTAINABLE DEVELOPMENT	14- Interdependence between living organisms	-Interdependence of organisms				
	3(18-22/03/24)				-Social organization: Bee colony			2h	
	4(25-28/03/24)				-Termite colony -Evaluation			2h	
	5(01-05/04/24)				-Biological importance of social organizations			2h	28-15/04/24 Second break
	6 (15-19/04/24)				-Differences between organic and non- organic fertilizers			2h	
	7 (22-26/04/24)				-Effects of fertilizers in the soil and environment - Visit to a near- by farm. Practicals.			2h	
	8 (29-03/05/24)				Integration/EVALUATION			2h	
	9 (06-10/05/24)				END OF YEAR				
TOTAL	33	03		14				66h/Year.	

*60 hours of theory

*06 hours of practicals.

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Specific Objectives for Form 4:

1) Understanding the functioning of the systems of the human body to better care for them.

2) Maintaining a clean Environment.

School:; Class: F4; Number of chapters:19; Weekly workload: 3H Subject: Biology

Teacher's Name : ; Qualification :Longivity.....

Term	Week	Category of Actions	Module/Topic	Sub Topic/Didactic Sequence	Pedagogic Sequence/Lesson	Digitalization		Duration	Observations
						Res. online	Res. used		
1 st Term	1-3 (04-22/09/23)	Improving food production by constructing and appropriating knowledge of the mechanisms of functioning of living things.	1 THE LIVING WORLD	1-. Nutrition In Plants	- Nutritional requirements of Plants. - Mechanisms of nutrient uptake and transpiration. -Photosynthesis and -. Experiments on photosynthesis. - Fate of translocated food.	Yes		9h	08/09/23. Literacy day.
	4-5 (25-06/09/23)			2. Classes of food	- Carbohydrates, Proteins, Lipids, Water, Mineral elements, Vitamins, etc. their sources, importance and deficiencies. -Notion of a Balanced Diet.	Yes		6h	
	6 (09-13/10/23)				-Practicals, Integration/ Evaluation	Yes		3h	
	7 (16-20/10/23)			3.Enzymes	-Characteristics, Types and Importance of Enzymes. - Experiments to show enzyme activity(practicals)			3h	
	8-10 (23-10/11/23)			4.Digestion	- Structure and Functions of the Alimentary canal in Mammals. -Physical and Chemical digestion. -Fate of the products of digestion.			9h	
	11 (13-17/11/23)				-Digestion in herbivores. - Adaptation of herbivores, carnivores, omnivores to their diet.			3h	
	12 (20-24/11/23)				Integration/Evaluation			3h	
2 nd Term	1-2(27-08/12/23)	Protection against emerging diseases.	2 HEALTH EDUCATION	5. Emerging Diseases	- HIV/AIDS, Ebola virus disease and Corona virus disease. - Prevention of infections.			6h	15-02/01/2024---First break.
		Preventing infections by Pathogens.		6. The Immune Responses	- Specific and non-specific.			3h	
	3-4 (11-15/01/24)	Prevention of cardiovascular accidents and diseases.		7. The Circulatory System	- The heart and blood vessels, blood cells, Pulmonary and systemic circulation, cardiac cycle, blood pressure and maintenance of blood flow.			6h	
	5(08-12/01/24)				Integration/Evaluation			3h	
	6-7(15-26/01/24)			8.Hygiene of the Circulatory System	-Accidents of the Circulatory System. -Diseases of the Cardio-Vascular System			6h	

	8-9 (29-09/02/24)	Preventing respiratory infections and diseases.		9. Respiratory System	-The lungs and the respiratory tract. -Mechanisms of breathing and respiratory volumes. - Internal Respiration.			6h	ualism week.
	10-11(12-23/02/24)			10. Hygiene of the Respiratory System	- Accidents of the upper respiratory tract infections - Lower respiratory tract disorders.			6h	05-11/02/24 Youth Week.
	24 (26/02/24)			Integration/Evaluation				3h	
3rd TERM	1-3(04-22/03/24)	Preventing infections and disorders of the excretory system.		11. The Excretory system	-Organs of the Excretory System, Urine formation and Osmoregulation. -Urinary tract infections and treatments. -The Human Skin and the Liver.			6h	
	4-5(25-05/04/24)	Preventing skeletal system deformities, diseases and accidents.		17. The skeletal and Muscular Systems.	-Functions of the Skeleton, Joints and the different types of movements. -Fractures, sprains and Dislocations. -Importance of exercise, Muscles.			6h	28-15/04/24 Second break
	6 (15-19/04/24)			Integration/Evaluation				4h	
	7 (22-26/04/24)	Maintaining a clean environment and the natural equilibrium through recycling.	3 ENVIRONMENTAL EDUCATION AND SUSTAINABLE DEVELOPMENT	18. Saprotrophic nutrition	-Role of Saprotrophs in the ecosystem, Saprotrophic food chain and Nitrogen Fixation. Practicals (Role of Saprotrophs in nature). -Decomposition of Sewage and Refuse			3h	
	8 (29-03/05/24)	-Eradicating plant and animal parasites. -Maintaining natural relationships and ecosystem interaction.		19. Parasitism	-Parasitism and parasitic Food Chain, Predation, Food Web. -Ecological Equilibrium and Biological control of pests. -Predation			3h	
	9 (06-10/05/24)			Integration/Evaluation				3h	
TOTAL	33		3	19				99h/Year.	

*87 hours of theory.

*06 hours of practicals.

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Specific Objective for Form 5: - Implementation of resources to ameliorate human life while maintaining a healthy Environment.

School:; Class: F5; Number of chapters:18; Weekly workload: 3H Subject: Biology

Teacher's Name : ; Qualification :Longivity.....

Term	Week	Category of Actions	Module/Topic	Sub Topic/Didactic Sequence	Lesson Pedagogic Sequence/Lesson	Digitalization		Duration	Observations
						Res. online	Res. Used		
1 st Term.	1-4 (04-29/09/23)	Improving food production by constructing and appropriating knowledge of the mechanisms of functioning of living things	1 THE LIVING WORLD	1. Reproduction In Plants.	- Notion and types of reproduction, Flower structure and pollination, Mechanism of fertilization. -Formation and dispersal of fruits and seeds - Germination and growth in plants. Practicals (e.g. on hypogeal and epigeal) germination).	Yes		10h	08/09/23. Literacy day.
	5 (02-06/10/23)			2. Food Production through Rearing of Animals.	-Poultry farming, Piggery and Cattle Rearing.	Yes		3h	
	6(09-13/09/23)				Integration/Evaluation	Yes		3h	
	7 (16-20/10/23)			3. Classical Biotechnology and Transformation of Food.	- Transformation of Agricultural Produce - Transformation of Animal Products. Practicals on food transformation.	Yes		6h	
	8-10 (23-10/11/23)			4. Coordination In Plants.	- Plant Responses, -Experiments on Phototropism, Geotropism and the Effects of Auxins. Practicals (on tropisms). - Horticulture and its Importance.	Yes		9h	
	11 (13-17/11/23)	Integration/Evaluation			Yes		3h		
	12(20-24/11/23)	Eradicating prejudices surrounding genetic and chromosome anomalies.		5. Notion of Genetics.	- Understanding Genetics.	Yes		3h	
2 nd Term	1(27-01/12/23)		2 HEALTH EDUCATION	6. Chromosomes and Genes.	- DNA and Human Karyotype.	Yes			6h
	2-3(04-15/12/23)	7. Transmission of Genetic Information.		- Cell Division. - Cancer as a disorder of Cell Division. -Sex Determination in Humans, Mendelian genetics and monohybrid inheritance, Variation within the Human race, Test cross/Back cross.	Yes				
	4(02-05/01/24)	8. Genetic Anomalies.		- Genetic Anomalies.	Yes		3h		
	5(08-12/01/24)	9. Gene and Diversity In Humans		- Notion of Alleles (dominance and co-dominance) Notion of Diversity in Characteristics.	Yes		3h	26-02/02/2024 Bilingualism week.	
				10. Modern Biotechnology.	- Paternity Determination by DNA Fingerprint. - Forensic Science and Crime detection.	Yes			3h
				Integration/Evaluation			3h		
	7-8(22-02/02/24)	Preventing infections through the reproductive organs.		11. Reproduction In Humans.	- Male and Female Reproductive Organs. - Gametogenesis, Copulation and Fertilization -Pregnancy and Birth, Growth and Development of a child -Puberty.			6h	05-11/02/24 Youth Week.

	9-10 (05-16/02/24)	Eradicating STIs and HIV/AIDS		12. Family Planning.	-Birth Control Methods, Early Pregnancies.			3h	
				13. STIs	- Causes and Consequences of Some STIs. - Prevention and Treatment of some STIs.			3h	
				14. HIV/AIDS.	- Notion, Causes, Signs and Symptoms. - Mode of Transmission and Prevention.			3h	
				Integration/Evaluation				3h	
	11(19-23/02/24)								
	12(26-01/03/24)	Preventing hormonal disorders		15.The Endocrine System.	- Endocrine glands, their secretions and roles, Hormonal Imbalance disorders and Consequences. - Hormonal Control of the Menstrual Cycle.			5h	
	1(04-08/03/24)	Preventing Nervous system and Sense organs disorders and accidents.		16.The Nervous System.	-General Organization of the Nervous System, Types of reflexes and nervous transmission, Nervous fatigue and Rest of the Nervous System, Effects of alcohol, drugs and cigarettes on the Nervous System. -The Eye as a sense organ, the ear as a sense organ.			6h	
	2(11-15/03/24)	Preventing terminal diseases.		17.Applicatio n of Modern Biotechnolog y.	-DNA and Gene technology, techniques used in modern Biotechnology, Applications of modern Biotechnology in health.			3h	
	3(18-22/03/24)				Integration /Evaluation.			3h	
3rd TER M	4-5 (25-05/04/24)	Conserving the natural environment and the recycling of matter in nature.	3- ENVIRON MENTAL EDUCATIO N AND SUSTAINAB LE DEVELOP MENT	18. Ecology.	-Ecological Concepts, Ecological factors and effects, Components of the Ecosystem and their interdependence, -Energy flow and the cycling of matter in the Ecosystem,			3h	
	6(15-19/04/24)				- Human impact on the Ecosystem. - Conservation. Practicals.			3h	
	7(22-26/04/24)				Revision/Integration /Evaluation.			3h	
	8-12(29-31/05/24)			END OF COURSE EXAMS					
Total	33		03	18				99h/ Year	

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