



Dubai International Private School - BR.

DIPS, in partnership with parents and community, strives to ensure all students are digitally literate, lifelong learners, productive citizens and nurture their well-being in an inclusive learning environment.

"Empowering Minds, Inspiring Hearts, Shaping the Future"

"تمكين العقول، إلهام القلوب، تشكيل المستقبل"



Science Department

Semester: 1

2026-2027

Grade Level		Grade 12	Subject: AP Biology	
Teacher(s) Name		Halima Issa		
Textbook		Pearson : Biology: A global approach, Digital Update , Global Edition , 12 Edition.		
Week #	Dates		Lesson Title / Pages	CCSS / NGSS Code / MOE
1	Aug 31	Sept 4	- Introduction to AP Biology Framework - AP Science Skills - Overview 1.1- Structure of Water and Hydrogen Bonding 1.2- Elements of life	BIG IDEA 2 -3 and 4 SY1-Living systems are organized in a hierarchy of structural levels that interact
2	Sept 7	Sept 11	- Diagnostic Test 1.3 Introduction of Biological Macromolecules. 1.4- Properties of Biological Macromolecules 1.5-Structure and Function of Biological Macromolecules	BIG IDEA 2 -3 and 4 SY1-Living systems are organized in a hierarchy of structural levels that interact.

				IST-1 Heritable information provides for continuity of life
3	Sept 14	Sept 18	1.6-Nucleic Acids 2.1-Cell Structure: Subcellular Components. 2.2-Cell Structure and Function	Big idea 1-2-3 and 4 SY1-Living systems are organized in a hierarchy of structural levels that interact ENE-1 The highly complex organization of living systems requires constant input of energy and the exchange of macromolecules
4	Sept 21	Sept 25	2.4: Plasma Membranes 2.5: Membrane Permeability 2.6 Membrane Transport	ENE-2 Cells have membranes that allow them to establish and maintain internal environments that are different from their external environments
5	Sept 28	Oct 2	2.7: Facilitated Diffusion. 2.8: Tonicity and Osmoregulation	ENE-2 Cells have membranes that allow them to establish and maintain internal environments that are different from their external environments

6	Oct 5	Oct 9	2.9: Mechanisms of Transport. 2.10: Compartmentalization 2.11: Origins of Cell Compartmentalization	ENE-2 Cells have membranes that allow them to establish and maintain internal environments that are different from their external environments EVO-1 Evolution is characterized by a change in the genetic make up of a population over time and is supported by multiple lines of evidence.
	Oct 12	Oct 16	1st Semester Break	
7	Oct 19	Oct 23	3.1 Enzyme Structure. 3.2 Enzyme Catalysis 3.3 Environmental Impacts on Enzyme Function	ENE-1 the highly complex organization of living systems requires constant input of energy and the exchange of macromolecules
8	Oct 26	Oct 30 Oct 30 End of Quarter 1	4.1: Cell Communication 4.2 Introduction to Signal Transduction 4.3 Signal Transduction	IST-3 Cells communicate by generating, transmitting, receiving and responding to chemical signals.
9	Nov 2	Nov 6	4.4 Changes in Signal Transduction	IST-3 Cells communicate by

			Pathways 4.5 Feedback	generating, transmitting, receiving and responding to chemical signals. ENE-3 Timing and coordination of biological mechanisms involved in growth, reproduction, and homeostasis depend on organisms responding to environmental cues.
10	Nov 9	Nov 13	4.6: Cell Cycle 4.7: Regulation of Cell Cycle	IST-1 Heritable information provides for continuity of life.
11	Nov 16	Nov 20	5.1: Meiosis 5.2-Meiosis and genetic diversity	IST-1 Heritable information provides for continuity of life
12	Nov 23	Nov 27 (1 day for National Day Celebration)	5.3 Mendelian genetics 5.4 Non-Mendelian genetics	EVO-2 Organisms are linked by lines of descent from common ancestry. IST-1 Heritable information provides for continuity of life
13	Nov 30	Dec 4	5.4 Non-Mendelian Genetics	IST-1

		(Dec 2-Dec 4 National Day Holiday)	5.5 Environmental effects on phenotype 5.6 chromosomal inheritance	Heritable information provides for continuity of life SYI-3 Naturally occurring diversity among and between components within biological systems affects interactions with the environment.
14	Dec 7	Dec 11	6.1 DNA and RNA Structure 6.2 Replication	IST-1Heritable information provides for continuity of life
	Dec 14	Jan 1	Winter Break for All Students	
15	Jan 4	Jan 8	6.3 Transcription and RNA Processing	IST-1 Heritable information provides for continuity of life
16	Jan 11	Jan 15	3.4: Cellular Energy 3.5 Photosynthesis 3.6 cellular respiration	ENE-1 the highly complex organization of living systems requires constant input of energy and the exchange of macromolecules SYI-3 Naturally occurring diversity among and between components within biological systems

				affects interactions with the environment.
17	Jan 18	Jan 22	Semester 1 Exams (French, Civics, Social studies) followed by regular Teaching Days for Revision.	
18	Jan 25	Jan 29	Semester 1 Exams	

**** Map Test week will be assigned throughout the semester for every grade level.**