

**DISTRICT U-46  
BIOLOGY 1-2 PACING GUIDE**

(Includes reference to the Illinois Science Assessment Framework)

1st Quarter	Ref#	2nd Quarter	Ref#	3rd Quarter	Ref#	4th Quarter	Ref#
<b><u>Ch. 1 <i>Biology and You</i></u></b>		<b><u>Ch. 5 <i>Photosynthesis and Cellular Respiration</i></u></b>		<b><u>Ch. 8 <i>Mendel and Heredity</i></u></b>		<b><u>Ch. 19 <i>Introduction to the Kingdoms of Life</i></u></b>	
Scientific Method - steps	11.11.02			Change over Time	12.11	5 of 6 Kingdom System	12.11.01
Identify sources of error	11.11.03	ATP	12.11.09	Mendel's Laws	.12/15/16	Common characteristics	12.11.02
Parts of experiments	11.11.04	Photosynthesis	12.11.07	Probability	12.11.15		
Understand design and procedures; interpret data; form predictions; and evaluate models	11.11.01	Cell Respiration	12.11.08	Punnett Squares	12.11.16		
Safety	13.01.05			Sex chromosomes/Autosomes	12.11.14	<b><u>Ch. 20 <i>Viruses and Bacteria</i></u></b>	12.11.11
Measurement & Graphing	13.11.09	<b><u>Ch. 6 <i>Chromosomes and Cell Reproduction</i></u></b>		Gene Expression & Specialization	12.11.23/24	<b><u>Ch. 21 &amp; 22 <i>Protists &amp; Fungi</i></u></b>	12.11.02
				Predict zygotes based on genetic make-up of dominant and/or recessive parent	12.11.17/19	<b><u>Ch. 23 <i>Introduction to Plants</i></u></b>	12.11.02
<b><u>Ch. 2 <i>Chemistry of Life</i></u></b>		Chromosomes	.13/17/18	Genotypes and phenotypes of offspring	12.11.20	<b><u>*Ch. 24 <i>Plant Reproduction</i></u></b>	12.11.02
Enzymes	12.11.38	Cell Cycle	12.11.13	Lethal alleles & the gene pool	12.11.26	<b><u>*Ch. 25 <i>Plant Structure and Function</i></u></b>	12.11.02
Atoms	12.11	Mitosis	12.11.13			<b><u>*Ch. 26 <i>Plant Growth and Development</i></u></b>	12.11.03
Organic Compounds & Water	12.11.10			<b><u>Ch. 12 <i>History of Life on Earth</i></u></b>		<b><u>Ch. 27 <i>Introduction to Animals</i></u></b>	12.11.03
pH	12.11.62	<b><u>Ch. 7 <i>Meiosis and Sexual Reproduction</i></u></b>		<b><u>Ch. 13 <i>The Theory of Evolution</i></u></b>		<b><u>Ch. 28 <i>Simple Invertebrates</i></u></b>	12.11.03
Macromolecules				Natural Selection	12.11.25/27	<b><u>Ch. 29 <i>Mollusks and Annelids</i></u></b>	12.11.03
		Meiosis	.12/13/15	<b><u>Ch. 15 <i>Populations</i></u></b>		<b><u>Ch. 30 <i>Arthropods</i></u></b>	12.11.03
		Sexual Reproduction	.13/17/18	<b><u>Ch. 32 <i>Introduction to Vertebrates</i></u></b>		<b><u>Ch. 31 <i>Echinoderms and Invertebrate Chordates</i></u></b>	12.11.03
<b><u>Ch. 3 <i>Cell Structure</i></u></b>				Emphasis on these chapter topics: Reproductive & geographic isolation & speciation	12.11.28	<b><u>Ch. 32 <i>Introduction to Vertebrates</i></u></b>	12.11.03
Plants vs. Animal cells	12.11.04	<b><u>Ch. 9 <i>DNA: The Genetic Material</i></u></b>		Descent from common ancestry	12.11.29	<b><u>*Ch. 33 <i>Fishes and Amphibians</i></u></b>	12.11.03
Prokaryotic vs. Eukaryotic cells	12.11.11			Biological classification	12.11.29	<b><u>*Ch. 34 <i>Reptiles and Birds</i></u></b>	12.11.03
Function of Cellular Organelles	12.11.06	ID-ing Genetic Material	11.11.02/04	Fossil evidence; mass extinction; episodic speciation; and biological diversity	12.11.30	<b><u>*Ch. 35 <i>Mammals</i></u></b>	12.11.03
Characteristics of Life	12.11	Structure of DNA	12.11.21			<b><u>*Ch. 36 <i>Animal Behavior</i></u></b>	12.11.03
		Replication of DNA	12.11.21	<b><u>Ch. 14 <i>Classification of Organisms</i></u></b>			
<b><u>Ch. 4 <i>Cells and Their Environment</i></u></b>				Major categories	12.11.01	<b><u>Ch. 15 <i>Populations</i></u></b>	
Cellular Transport	12.11.05	<b><u>Ch. 10 <i>How Proteins are Made</i></u></b>		5 & 6 Kingdom systems (Ch. 19)		Population Growth	12.11.32
						Interdependence of the species	12.11.36
		From Genes to Proteins	.22/23			<b><u>Ch. 16 <i>Ecosystems</i></u></b>	12.11.31
		Gene Regulation and Structure	12.11.24			Water pollution	12.11.34
		<b><u>Ch. 11 <i>Gene Technology</i></u></b>				Food webs & energy pyramids	12.11.35
						Biogeochemical cycles	12.11.35
		Biotechnology	13.11.06			<b><u>Ch. 17 <i>Biological Communities</i></u></b>	
		Cloning	13.11.07			Biomes	12.11.36
		Human Genome Project	13.11.08			<b><u>Ch. 18 <i>The Environment</i></u></b>	
		Genetic Fingerprinting				Biomagnifications	12.11.33