Content Outline and Pacing Guide
Course: Life Science

Quarter	SOL #	Topic	Suggested Timeframe
1	LS.2a-d; LS 3 a-b	I. The Cell Processes/Specialization/Organization • Cell structure and function • Plant vs. Animal Cells • Cell Theory • Mitosis/Meiosis • Cellular Organization • Life functions and processes	5 weeks
	LS.1 a-j	II. Scientific Investigation • Plan and conduct investigations • Experimental design • Metric measurement • Equipment and lab safety as applicable to units	3 weeks integrated
		Total	**9 wks.**
2	LS.13a-g; 14a-c	III. Genetics and /Evolution • Role of DNA • Genes and chromosomes • Genotypes and phenotypes • Genetic eng. and discoveries related to genetics • Evolution of species • Diversity of organisms	4 weeks
	LS.5a-c	IV. Basis of Classification • History of classification • Classification systems • Characteristics of a species • Survey of the 6 kingdoms/ distinguishing characteristics • **Bacteria and Viruses**	4 weeks
	LS.1a-j	Scientific Investigation • Variables and constants are identified • Using graphs and data tables • Models are constructed • Equipment and lab safety as applicable to units	Integrated
		Total	**9 wks.**

3	LS.5a-c LS 4 c	V. Survey of the Kingdoms • **Protista** • **Fungi**	1.5 weeks
	LS.5a-c; 4a; LS 6 a-c; LS.11 a	VI. Survey of the Plant Kingdom • Characteristics • Plant needs and Life processes • Organ systems • Photosynthesis • Phototropism	3 weeks
	4b, c; 5a-c	V. Survey of the Animal Kingdom • Animal needs • Distinguishing characteristics of major phyla- **Invertebrates**	3.5 weeks
	LS.1a-j	Scientific Investigation • Variables and constants are identified • Plan and conduct investigations • Using graphs and data tables	Integrated
		Total	**9 wks.**
4	LS.4b, c; 5a-c	VI. Animal Kingdom continued • Distinguishing characteristics of major phyla- **Vertebrates**	3 weeks
	LS.8a-b; 9a-e; LS.7a-d; LS.10a-c; 7c	VII. Ecosystems, Communities and Populations • Competition, Cooperation, Social hierarchy • Predator/prey relationships • Symbiotic relationships/ Niches • Carbon/water/nitrogen cycles • Ecosystem vs. biome • Land/freshwater/marine biomes • Adaptations of organisms within specific ecosystems • Energy flow- webs and pyramids	3 weeks
	6.7a-g; LS.12e; 11c	VI. Conservation/Watersheds *(can be integrated with previous unit)* • Eutrophication/Climate changes • Environmental Issues • Abiotic factors of watersheds • Virginia's regional watershed systems: divides/tributaries/river systems/streams/wetlands/estuaries • Water monitoring and analysis/Conservation	2 weeks
	LS.1a-j	Scientific Investigation • Variables and constants are identified • Plan and conduct investigations • Using graphs and data tables	Integrated
		Total	**9 wks.**