

MONTH	CONTENT	NYS STANDARD/KEY IDEA/PERFORMANCE INDICATOR	LAB THEMES	SKILLS	ASSESSMENTS
September	Review year I		Graphing skills Scientific tools Measurement Safety	Review basic process skills <ul style="list-style-type: none"> • Observing • Inferring • Predicting • Classifying • Using models 	Written assessment which encompasses problem solving, comprehension, synthesis and evaluation of performance. Evaluation of lab write ups.

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September/October	Genetics Heredity Genes DNA/RNA Mutations Protein Synthesis	Standard 4 KI-2 PI – 2.1 a-k	DNA Replication Probability Punnett Squares Cat Lab Mitosis/Meiosis lab reviews	Apply rules of Mendelian genetics relating to inheritance Explain how probability relates to genetics Use Punnett squares to solve inheritance questions Summarize relationship between DNA and Genes Explain the relationship between genes and proteins Identify parts of a nucleotide Compare/Contrast DNA and RNA Transcribe/translate DNA into protein Define/differentiate types of mutations Explain how genes are controlled	Written assessment which encompasses problem solving, comprehension, synthesis and evaluation of performance. Evaluation of lab write ups. Research genetic disorders

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October/November	Genetic engineering Human Genome	Standard 4 KI 2 PI 2.2a – e 5.2i	Gel Electrophoresis Genetic engineering Human Genetics * Biodiversity	Identify human involvement/impact on development of genetics and technology Define and describe different techniques used in selective breeding Explain different ways DNA can be manipulated Summarize gene transformation and describe it usefulness Summarize the main steps in cloning Identify the main parts of a karyotype Explain how pedigrees are used to study human traits Identify characteristics of human chromosomes Describe some sex-linked characteristics	Written assessment which encompasses problem solving, comprehension, synthesis and evaluation of performance. Evaluation of lab write ups

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December	Evolution Natural selection Populations	Standard 4 KI 3 PI 3.1 a-1	*Beaks of finches Evolution Bottle neck theory	Characteristics of competition Explain Darwin principals Explain how natural selection leads to change over time Define genetic equilibrium Discuss the importance of the fossil record	Written assessment which encompasses problem solving, comprehension, synthesis and evaluation of performance. Evaluation of lab write ups Report on extinct species

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January	Classification	Standard 4 KI 3.1j-1	Dichotomous key Classification	Classify specimens using a cladogram Use dichotomous key to classify things Explain the importance of evolutionary characteristics in classification Name/describe six kingdoms and three domain system as they are now identified	Written assessment which encompasses problem solving, comprehension, synthesis and evaluation of performance. Evaluation of lab write ups

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February/March	Ecology	Standard 4 KI 6 PI 6.1a-g 6.2 a-b 6.3 a-c	Biosphere Ecosystems Cycles of matter Climate/weather Food web/ food chain	Identify niches Identify biotic/abiotic factors Use models to interpret Describe cycles of matter Understand relationships between organisms Identify the characteristics of major biomes/ Ecosystems	Written assessment which encompasses problem solving, comprehension, synthesis and evaluation of performance. Evaluation of lab write ups

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March/April	Standard 4 KI 6 PI 6.1a-g 6.2 a-b 6.3 a-c	Populations Human impact on the biosphere	Food web Population growth Limiting factors Predator/prey Water/soil/air quality Affect of chemicals on plant growth	Identify niches Identify biotic/abiotic factors Use models to interpret List characteristics of populations and factors that affect population growth Explain how resources are classified Define biodiversity and explain its value Describe the goal/importance of conservation of biodiversity Understand relationships between organisms	Written assessment which encompasses problem solving, comprehension, synthesis and evaluation of performance. Evaluation of lab write ups

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May	Plants/flowers	Standard 4 KI 4.3	Plant dissections Review state mandated labs for regents exam	Identify parts of a plant Identify flower as the sexual reproductive organ of a plant Identify different types of plants	Written assessment which encompasses problem solving, comprehension, synthesis and evaluation of performance. Evaluation of lab write ups

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June	REVIEW				