Prairie Junior High School
8th Grade
Science Curriculum Outline

Unit 1: Scientific Method (August/September)

State Standard	Summary
11.7.01, 11.7.02	Steps of method
11.7.03	Definition of theory
11.7.04, 11.7.05	Variables and control
11.7.06	Collecting and analyzing data
11.7.07, 11.7.08, 11.7.09, 11.7.10	Designing experiments
13.7.03	Results and repeatability
13.7.14	Multiple data sets required for generalizations

Unit 2: Laboratory Equipment, Procedures, Safety (September)

State Standard	Summary
13.4.02	Safety rules
13.7.01	Identifying safety hazards
13.7.02	Lab report writing

Unit 3: Metric Measurement (September/October)

State Standard	Summary
13.7.05	Science uses standard measurement
13.7.13	Choosing correct instruments
11.7.07, 11.7.08, 11.7.09, 11.7.10	Designing, building, testing prototype
12.7.34	Defining and measuring mass, weight, volume, density, etc.

Unit 4: Cells (October)

State Standard	Summary
12.7.02	Definition of cell; Cell/tissue/organ organization
12.7.03	Plant vs. animal, cells and organelles
12.7.04	Uni- vs. Multicellular organisms
12.7.05	Function of nucleus
	Cell size
	History of microscopy and cytology
	Use of microscopes; preparing slides
	Cell Theory

Unit 5: Modern Genetics (November)

State Standard	Summary
12.7.06	Mitosis
12.7.07	Meiosis
12.7.08	Sexual vs. asexual reproduction
12.7.11	DNA and its function
12.7.13	Fertilization
	Genes and chromosomes
	Genetic disorders
	Genetic technologies

Unit 6: Mendelian Inheritance (December)

State Standard	Summary
12.7.10	Inherited traits are determined by genes
12.7.12	Punnett squares
	Gregor Mendel

Unit 7: Evolution (January)

State Standard	Summary
12.7.22	Natural selection
12.7.23	Fossil record
12.7.24	Species change over time
12.7.30	Behaviors influenced by environments
12.7.31	Body parts adapt to suit environments
	Evidence for evolution
	Radioactive decay

Unit 8: Taxonomy (February)

State Standard	Summary
	Six kingdoms and their characteristics
	Binomial nomenclature
	Dichotomous keys
	Linnaeus classification

Unit 9: Low Kingdoms (March)

State Standard	Summary
	Properties of Archaebacteria
	Properties of Eubacteria; helpful/useful vs. harmful/pathogenic
	Germs, disinfectant effectiveness, antibiotic resistance

	Properties of protists; identification and observations
	Properties of fungi; dissection/anatomy

Unit 10: Plants (April)

State Standard	Summary
12.7.14, 12.7.19, 12.7.21	Plant reproduction
12.7.16	Photosynthesis
12.7.17	Characteristics of leaves
12.7.18	Root classification
12.7.20	Pollination and adaptations
12.7.29	Modes of pollination
	Monocot vs. dicot

Unit 11: Animals (May)

State Standard	Summary
12.7.09	Limb regeneration
	Properties of invertebrate phyla
	Anatomy and dissection
	Predator/prey relationships
	Properties of vertebrate classes
	Anatomy and physiology
	Frog anatomy and dissection