Western Line SCHOOL DISTRICT

Pacing Guide
2026-2027 School Year

Foundations of Biology

QUARTER 1		
Term Dates	**MS College and Career Readiness Standards / Instructional Focus**	**Core Academic Vocabulary / Resources**
Week 1 **August 5-7, 2026**	**BIO.1A.1; Science & Engineering Practices** Scientific thinking and characteristics of life. Differentiate living/nonliving; observations vs. inferences; variables, controls, hypotheses; read simple data tables and graphs.	organism, homeostasis, stimulus, reproduction, metabolism, variable, control, hypothesis, evidence **Resources/Practice:** Living/nonliving evidence sort; graph-reading warm-ups; short controlled-investigation design; CER response.
Week 2 **August 10-14, 2026**	**BIO.1B.1** Chemistry of life and macromolecules. Compare carbohydrates, lipids, proteins, and nucleic acids by broad structure and function; connect monomers/polymers to biological roles.	carbohydrate, lipid, protein, nucleic acid, monomer, polymer, amino acid, nucleotide **Resources/Practice:** Macromolecule model/sort; food-label evidence task; structure-function comparison chart; MAAP-style model item.
Week 3 **August 17-21, 2026**	**BIO.1B.2** Enzymes and chemical reactions. Explain enzyme-substrate interactions and analyze how temperature, pH, and concentration affect reaction rate.	enzyme, substrate, active site, catalyst, reaction rate, pH, denature **Resources/Practice:** Catalase or enzyme investigation; identify IV/DV/control; graph and interpret data; CER conclusion.
Week 4 **August 24-28, 2026**	**BIO.1A.2; BIO.1C.2; BIO.1C.3** Cell theory and cell types. Compare prokaryotic/eukaryotic and plant/animal/fungal cells; contrast viruses with cells and explain dependence on host cells.	cell theory, prokaryote, eukaryote, nucleus, unicellular, multicellular, virus, host **Resources/Practice:** Microscope/model comparison; cell-type sorting task; virus-vs-cell evidence prompt; TE-style matching.
Week 5 **August 31-September 4, 2026**	**BIO.1A.3; BIO.1C.1** Cell organelles and biological organization. Explain how organelles interact; trace cell-to-tissue-to-organ-to-system organization.	organelle, nucleus, ribosome, ER, Golgi apparatus, mitochondrion, chloroplast, vacuole, tissue, organ, organ system **Resources/Practice:** Organelle systems model; protein secretion pathway; cell specialization case; model completion.
Week 6 **September 8-11, 2026**	**BIO.1D.1-2** Cell membrane and transport. Explain selective permeability, diffusion, osmosis, facilitated diffusion, active transport, and concentration imbalances.	cell membrane, selectively permeable, diffusion, osmosis, concentration gradient, active transport, hypertonic, hypotonic, isotonic **Resources/Practice:** Potato/egg/dialysis osmosis lab; predict cell changes; graph mass change; scenario-based transport questions.
Week 7 **September 14-18, 2026**	**BIO.2.1-2.4** Energy transfer. Connect ATP/ADP, photosynthesis, and cellular respiration; identify major reactants/products and trace matter/energy transformations.	ATP, ADP, photosynthesis, cellular respiration, glucose, chloroplast, mitochondrion, aerobic, anaerobic **Resources/Practice:** Photosynthesis-respiration model; reactant/product card sort; fermentation example; data/diagram analysis.

Week 8 **September 21-25, 2026**	**BIO.1E.1-3** Cell cycle and mitosis. Explain growth, repair, cell differentiation, asexual reproduction, and consequences of loss of cell-cycle regulation.	cell cycle, interphase, mitosis, cytokinesis, chromosome, daughter cell, differentiation, asexual reproduction, cancer **Resources/Practice:** Mitosis model; cell-cycle sequencing; cancer case; compare binary fission/budding/vegetative reproduction.
Week 9 **September 28-October 2, 2026**	**BIO.1-2 cumulative** First nine-weeks synthesis, assessment, and reteach. Integrate macromolecules, cells, transport, energy, and cell division using models, investigations, and data.	spiral review of Weeks 1-8 **Resources/Practice:** Cumulative MAAP-style assessment; error analysis; targeted reteach; student concept map linking cell structure, transport, energy, and division.
Cumulative Review and BMA **October 5-9, 2026**	**BIO.1-2 cumulative** First nine-weeks synthesis, assessment, and reteach. Integrate macromolecules, cells, transport, energy, and cell division using models, investigations, and data.	spiral review of Weeks 1-8 **Resources/Practice:** Cumulative MAAP-style assessment; error analysis; targeted reteach; student concept map linking cell structure, transport, energy, and division.

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QUARTER 2		
Term Dates	**MS College and Career Readiness Standards / Instructional Focus**	**Core Academic Vocabulary / Resources**
Week 10 **October 13-16, 2026**	**BIO.3A.1-3** Meiosis and sexual reproduction. Model diploid/haploid chromosome number, gamete formation, fertilization, variation, and compare meiosis with mitosis.	homologous chromosome, diploid, haploid, gamete, meiosis, fertilization, crossing over, nondisjunction, karyotype **Resources/Practice:** Chromosome/meiosis model; mitosis-vs-meiosis comparison; karyotype interpretation; chromosome-number problems.
Week 11 **October 20-23, 2026**	**BIO.3B.1-2** Mendelian genetics. Apply dominance, segregation, probability, monohybrid Punnett squares, and introduce independent assortment/dihybrid interpretation.	gene, allele, genotype, phenotype, dominant, recessive, homozygous, heterozygous, probability, Punnett square **Resources/Practice:** Probability simulation; monohybrid crosses; interpret ratios; selected dihybrid reasoning; multi-select practice.
Week 12 **October 26-30, 2026**	**BIO.3B.3-4** Complex inheritance. Analyze incomplete dominance, codominance, multiple alleles, sex-linked traits, pedigrees, and family/population data.	incomplete dominance, codominance, multiple alleles, sex-linked, carrier, pedigree **Resources/Practice:** ABO blood-type problems; pedigree analysis; inheritance data task; evidence-based disease-risk interpretation.
Week 13 **November 2-6, 2026**	**BIO.3C.1** DNA, genes, and chromosomes. Explain DNA as inherited information and connect DNA, genes, alleles, chromosomes, proteins, and traits.	DNA, nucleotide, base pair, gene, chromosome, allele, genetic information **Resources/Practice:** DNA model; gene-chromosome relationship diagram; inherited-information concept map; model-based questions.
Week 14 **November 9-13, 2026**	**BIO.3C.2-3** Protein synthesis and mutation. Trace DNA to RNA to protein to trait; explain transcription/translation and predict effects of point and frameshift mutations.	RNA, mRNA, transcription, translation, codon, protein synthesis, mutation, point mutation, frameshift **Resources/Practice:** Protein-synthesis model; codon practice at foundation level; mutation comparison; predict protein/trait effects.
Week 15 **November 16-20, 2026**	**BIO.4.1-3** Evolution and evidence. Analyze common ancestry using fossils, homologous structures, embryology, molecular evidence, biogeography, and cladograms.	evolution, common ancestor, fossil, homologous structure, molecular evidence, biogeography, cladogram, phylogeny **Resources/Practice:** Evidence stations; cladogram reading; compare DNA/protein evidence; DOK 2 evidence questions.
Week 16 **November 30-December 4, 2026**	**BIO.4.4-6** Natural selection, adaptation, and speciation. Connect genetic variation, environmental pressure, competition, reproductive success, and population change.	variation, adaptation, natural selection, selective pressure, fitness, reproductive success, speciation, isolation **Resources/Practice:** Natural-selection simulation; antibiotic/pesticide resistance case; population change graph; CER explanation.

Week 17 **December 7-11, 2026**	**BIO.5.1-7** Ecology and interdependence. Analyze ecological organization, matter cycles, energy flow, relationships, population growth, limiting factors, carrying capacity, and succession.	population, community, ecosystem, biome, biosphere, food web, trophic level, biomass, symbiosis, limiting factor, carrying capacity, succession **Resources/Practice:** Food-web/energy pyramid models; population growth graphs; carbon cycle; limiting-factor data; succession scenario.
Week 18 **December 14-18, 2026**	**BIO.1-5 cumulative** Semester integration, cumulative assessment, and transition to Biology I. Connect cell biology, genetics, evolution, and ecology through unfamiliar scenarios and evidence.	cumulative academic vocabulary **Resources/Practice:** Cumulative MAAP-style assessment; technology-enhanced item simulations; error analysis; integrated cases such as antibiotic resistance or algal blooms.

Pacing note: Weeks are intentionally listed rather than fixed calendar dates so schools can map them to local calendars. Science and Engineering Practices, graph/data interpretation, CER writing, and MAAP-style item formats should be spiraled throughout both terms.