

CBS Curriculum Alignment

Grade 9

Class Summary

Grade 9 marks the beginning of high school and the start of cumulative GPA calculation. Students engage with rigorous academic content that prepares them for advanced coursework. The curriculum emphasizes literary analysis of complex texts including Shakespearean drama, sophisticated mathematical reasoning including quadratic functions and systems, comprehensive biological investigation, and integrated geographic and historical perspectives.

Core Objectives

- Analyze sophisticated literary works including novel extracts, magazine articles, editorials, drama (Shakespeare's *The Tempest*), essays, science articles, fables, poems, and novels (*Holes*) with attention to complex themes, symbolism, and author's purpose
- Master Algebra I content including literal equations, compound inequalities, linear and quadratic functions, exponential functions, polynomial operations, systems of equations, and statistical analysis
- Investigate cell biology including cell theory, organelles, transport mechanisms, cell cycle regulation, ecosystem dynamics, energy flow, population ecology, biomes, human environmental impact, and diversity of viruses, prokaryotes, protists, fungi, and plants
- Explore geographic cause and effect, industrial systems, global connections through archaeology and trade, and weather and climate patterns with emphasis on sustainability
- Demonstrate proficiency in digital tools and applications across multiple platforms

Standards Alignment

Language Arts: Aligned to CCSS RL.9-10.1-10, RI.9-10.1-10, W.9-10.1-10, SL.9-10.1-6, and L.9-10.1-6. Students make inferences, analyze complex characters and plot development, determine themes, compare texts and universal themes, interpret Shakespearean language and symbolism, analyze tone and figurative expressions, write literary analyses, creative narratives, and reflective pieces, and perform dramatic readings.

Mathematics: Aligned to CCSS HSN (High School Number and Quantity), HSA (High School Algebra), HSF (High School Functions), HSG (High School Geometry), and HSS (High School Statistics and Probability). Students solve literal equations and compound inequalities, transform linear functions, work with arithmetic sequences, graph systems of equations and inequalities, evaluate absolute value and piecewise functions, work with exponential and quadratic functions, apply inverse functions, and interpret two-way frequency tables.

Biology: Aligned to NGSS HS-LS (High School Life Science) performance expectations. Students explain cell theory and organelle function, describe diffusion/osmosis and active transport, analyze the cell cycle and mitosis, compare asexual and sexual reproduction, trace energy flow through ecosystems, model biogeochemical cycles, analyze population dynamics and succession, explain climate and biome distribution, evaluate human environmental impacts, and classify diversity of microorganisms, protists, fungi, and plants.

Geography: Aligned to National Geography Standards and C3 Framework. Students analyze spatial patterns and human-environment interactions, identify types of industrial systems and employment structures, evaluate positive and negative impacts of tourism, explore archaeological connections between past and present, understand labor history, evaluate objectives of international organizations, and distinguish between weather and climate while examining ecosystem distribution.

Technology: Aligned to ISTE Standards for digital literacy and creative use of technology. Students demonstrate proficiency in word processing, presentation software, and other digital tools (Techno Book and Techno Painter projects).

Grade 10 Summary

Class Overview:

Grade 10 consolidates foundational knowledge while introducing students to complex analytical and problem-solving tasks across disciplines. The focus is on developing deeper comprehension, critical thinking, and structured communication through literature, mathematics, and science. Students refine their academic independence and research skills in preparation for upper high school.

Core Objectives:

- **Language Arts:** Analyze literary elements, develop narrative and analytical writing, engage in discussions, and strengthen vocabulary.
- **Mathematics:** Apply geometric concepts, explore probability and trigonometry, and prove theorems using logic and construction.

- **Science (Chemistry):** Understand atomic structure, bonding, periodic trends, stoichiometry, and chemical reactions.

CCSS Alignment:

- **ELA:** CCSS.ELA-Literacy.RL.9-10.1–10.10 (analyzing text evidence, themes, and structure) and CCSS.ELA-Literacy.W.9-10.1–10.9 (argumentative and analytical writing).
- **Mathematics:** CCSS.Math.Content.HSG.CO (Congruence), HSG.SRT (Similarity, Right Triangles, and Trigonometry), HSS.CP (Conditional Probability), HSG.GPE (Geometric Proofs).
- **Science:** Aligned with NGSS HS-PS1 (Matter and Its Interactions) emphasizing inquiry, analysis, and evidence-based reasoning.

Grade 11 Summary

Class Overview:

Grade 11 builds on prior learning and challenges students to interpret, analyze, and apply knowledge across varied contexts. With a focus on literary interpretation, mathematical reasoning, and scientific inquiry, students prepare for college-level expectations while developing autonomy and precision in academic work.

Core Objectives:

- **Language Arts:** Deepen literary analysis (Hamlet, Tuesdays with Morrie), evaluate rhetoric and structure, and write extended essays supported by evidence.
- **Mathematics (Science/Business):** Analyze quadratic, polynomial, exponential, and trigonometric functions; apply compound interest and annuity formulas.
- **Science (Chemistry):** Investigate acids and bases, thermodynamics, kinetics, equilibrium, and electrochemistry through quantitative and experimental learning.

CCSS Alignment:

- **ELA:** CCSS.ELA-Literacy.RL.11-12.1–12.6 (theme, word choice, author's purpose), CCSS.ELA-Literacy.W.11-12.2–12.9 (argumentative, informative, and research writing).
- **Mathematics:** CCSS.Math.Content.HSF.IF (Interpreting Functions), HSA.CED (Creating Equations), HSF.BF (Building Functions), HSF.TF (Trigonometric Functions).
- **Science:** NGSS HS-PS3 (Energy), HS-PS2 (Motion and Stability), HS-PS1 (Chemical Reactions), emphasizing laboratory precision and problem-solving.

Grade 12 Summary

Class Overview:

Grade 12 represents the culmination of high school education, focusing on mastery, synthesis, and application of advanced skills. Students engage in analytical reading, persuasive writing, complex problem-solving, and research, preparing for post-secondary academics and careers.

Core Objectives:

- **Language Arts:** Master essay writing, evaluate themes in classic and modern texts (*Othello*, *Brown Girl Dreaming*), and communicate ideas with academic integrity.
- **Mathematics (Science/Business):** Apply calculus principles (derivatives, rates of change), data analysis, probability, and statistics to real-world contexts.
- **Science (Biology/Physics):** Explore genetics, homeostasis, electromagnetism, and energy transformations through experimentation and modeling.

CCSS Alignment:

- **ELA:** CCSS.ELA-Literacy.RI.11-12.7–12.10 and W.11-12.1–12.9 (synthesis of multiple sources, analytical and research writing).
- **Mathematics:** CCSS.Math.Content.HSF.IF.7 (graph analysis), HSF.BF.4 (inverse and composite functions), HSS.ID (Interpreting Data), HSS.CP (Conditional Probability).
- **Science:** NGSS HS-LS1 (Molecular and Cellular Processes), HS-LS3 (Genetics), HS-PS2 (Electricity and Magnetism), promoting analytical experimentation and critical reasoning.