BRYN MAWR ONLINE

MIDDLE SCHOOL COURSE DESCRIPTION BOOK

COMPUTER SCIENCE	**1**
ENGLISH	**2**
VISUAL ARTS	**2**
HISTORY	**3**
MATHEMATICS	**3**
SCIENCE	**4**
WORLD LANGUAGES AND CULTURES	**4**

**Course list is subject to change based on enrollment*

COMPUTER SCIENCE

Computer Science **Full Year** **1 credit**

Computer Science introduces students to the fundamentals of programming through hands-on work in Python. Students explore core concepts including variables, conditional statements, loops, and an introduction to data structures, building a strong conceptual foundation in computational thinking. The course is lab-based, meaning students spend significant time writing and running actual programs. Each new concept is reinforced through programming exercises that build upon previous ones, so students can see how the pieces of a program connect and grow in complexity over time. By the end of the course, students will have written a variety of programs from scratch and developed the problem-solving skills and confidence to continue exploring computer science.

ENGLISH

English – 7th Grade **Full Year** **l credit**

7th Grade English develops students' literary skills through a rich selection of novels, short stories, poetry, and drama. Guided by essential questions about storytelling, truth, justice, and coming of age, students read texts including Ninth Ward, To Kill a Mockingbird, Twelve Angry Men, student-chosen literature circle novels, and A Midsummer Night's Dream. Throughout the year, students build close-reading habits, including annotation, theme interpretation, and character analysis, and develop their writing craft from structured paragraphs to full literary essays. Grammar is woven throughout instruction, with students practicing parts of speech, sentence structure, and mechanics using a variety of resources. Discussion skills are cultivated through Harkness seminars and literature circles, with a consistent emphasis on supporting ideas with textual evidence.

English – 8th Grade **Full Year** **l credit**

8th Grade English challenges students to read deeply and think critically across a diverse range of literary genres and voices. Texts include The Sun is Also a Star, Lord of the Flies, The Odyssey, Romeo & Juliet, Girl in Translation, and poetry by Frost, Dickinson, Hughes, Dunbar, and Cullen. Students practice active and close reading strategies, including annotation, paraphrase, and identification of literary devices, to analyze how authors create meaning and connect literature to the world around them. Writing instruction focuses on crafting strong analytical essays with well-supported arguments, precise thesis statements, and direct textual evidence. Students also participate in formal Harkness discussions, student-led discussions, and creative writing projects that deepen their engagement with each text.

VISUAL ARTS

Visual Arts **One Semester** **½ credit**

Visual Arts introduces students to a range of artistic techniques and media through meaningful, culturally connected projects. Students explore drawing with value, shading, and oil pastels, inspired by the food paintings of artist Wayne Thiebaud; create mixed-media self-portraits using proportion and the grid method in the tradition of Frida Kahlo; complete a collaborative landscape painting and build three-dimensional fiber coil baskets inspired by Apache and Tohono O'odham basketry traditions. Throughout the course, students develop an appreciation for diverse artistic traditions and the cultural meaning behind works of art.

Design: Studio Art Foundations **One Semester** **½ credit**

The semester focuses more on Design themed elements of art and learning how to make an image that communicates a message. Observation, independent thinking, creativity, and problem-solving skills are developed and explored using the design-based creative process. Drawing, painting, mixed media, and 3-D components will develop the student’s expressive abilities and pave the way for emergent artistic vision. Lessons on contemporary art and art history are included to give context and inspiration through discussion and analysis.

Graphic Design **One Semester** **½ credit**
This semester course teaches students the basics of graphic design, including visual cohesiveness, layout, and color usage. Students will use these design concepts to create projects using the software applications Adobe Photoshop, Illustrator and InDesign. Over the course of the semester, students will develop a portfolio of pieces ranging from a book cover to a logo design to a magazine. This course will also cover basic advertising principles and teach students how to analyze print design. No previous art or computer knowledge is required.

MUSIC

Private Lessons
By arrangement with *The Music School*, students may take private lessons online with teachers of voice, piano, violin, viola, cello, flute, clarinet, saxophone, guitar and harp. Teachers for additional instruments may be arranged if demand warrants.

HISTORY

History – 7th Grade **Full Year** **1 credit**
7th Grade History takes students on a journey through world history from medieval civilizations to 20th-century global events. In the first half of the year, students explore African Empires, the Islamic Golden Age, the Song Dynasty, the Mongols, the Black Death, the Enlightenment, and the French Revolution. The second half of the year examines 19th- and 20th-century revolutions, the rise of fascism and propaganda, World War II and the Holocaust, the Cold War, Apartheid in South Africa, and events including 9/11 and the War on Terror. Throughout the course, students develop skills in analyzing primary and secondary sources, constructing evidence-based arguments, and understanding how historical forces shape the present. A highlight of the course is the National History Day project, in which students independently research a self-chosen topic and produce a research-based presentation.

History – 8th Grade **Full Year** **1 credit**
8th Grade History takes a deep dive into the ancient world, tracing the development of human civilization from the Stone Age through the Imperial Age. Students examine early human societies, Bronze Age civilizations and their myths, the great religions and philosophies of the Axial Age, and the rise and fall of major empires including those of Greece, Rome, and ancient China. Throughout these units, students develop skills in evaluating primary and secondary sources, constructing thesis-driven arguments, and analyzing historical cause and effect. The course includes both a National History Day project, in which students independently research a self-chosen topic, and an end-of-year research paper, giving students significant experience with long-form historical inquiry and writing.

MATHEMATICS

Pre-Algebra **Full Year** **1 credit**
Pre-Algebra prepares 7th graders for algebraic thinking through a structured progression of mathematical concepts. Students begin with real numbers and multi-step operations, then move into algebraic expressions, solving and graphing multi-step equations and inequalities, and linear equations, including identifying slope and working in both slope-intercept and standard form. Additional units cover systems of equations (solved by graphing, substitution, and elimination), exponents and prime factorization, and proportional reasoning including ratios, rates, and percents. Students develop problem-solving skills through daily practice, collaborative activities, and projects, building both procedural fluency and real-world application.

Algebra 1 **Full Year** **1 credit**
Algebra 1 provides 8th graders with a comprehensive foundation in algebraic reasoning, equations, and functions.

Students move through units on expressions and order of operations, multi-step equations, linear equations and graphing, systems of equations and inequalities, exponents and scientific notation, polynomials and factoring, quadratic functions and equations, rational expressions, and radicals. Throughout the course, students apply critical and analytical thinking to real-world problem scenarios and develop both procedural fluency and conceptual understanding. The class includes a midterm exam and a final exam, and students engage with content through collaborative activities, digital tools, and a variety of practice formats.

Geometry **Full Year** **1 credit**

Geometry offers 8th graders a rigorous exploration of the properties and relationships of shapes, figures, and space. Beginning with a review of linear equations, the course advances through foundational geometry concepts, including points, lines, planes, and angles, then moves into reasoning and formal proofs, parallel and perpendicular lines, triangle congruence, quadrilaterals, similarity, right triangle trigonometry, and area of polygons. Students write formal two-column proofs, use compass-and-straightedge constructions, apply the Pythagorean Theorem and sine/cosine/tangent ratios, and explore proportional reasoning through similarity. The course concludes with a unit on rational expressions and functions, providing a bridge to higher-level mathematics.

SCIENCE

Science – 7th Grade **Full Year** **1 credit**

7th Grade Science focuses on the study of form and function in the natural world, from microscopic organisms to large-scale ecosystems. Students explore the diversity of life, adaptation and evolution, biomes, food webs, and the carbon, nitrogen, and water cycles, as well as the inner workings of cells, viruses, bacteria, genetics, and human body systems. Hands-on laboratory experiments are a central feature of the course, with students also engaging in design challenges, data analysis, and research projects throughout the year. Students complete an independent Wonder Project on a scientific topic of their own choosing. Throughout the course, students practice scientific reasoning using the Claim, Evidence, Reasoning framework.

Science – 8th Grade **Full Year** **1 credit**

8th Grade Science takes a STEM-focused approach to foundational topics in chemistry and physics, emphasizing the role of evidence in experimentation and real-world problem-solving. In the first semester, students explore properties of matter, physical and chemical changes, the atomic model, and molecular bonding, developing familiarity with the periodic table and chemical structures. The second semester transitions to physics, covering forces and motion, Newton's Laws, energy and work, and magnetism and electricity, including circuits and Ohm's Law. Students complete full lab reports, data collection exercises, and a Women in STEM research project, and the year wraps up with a comprehensive final exam covering all physics concepts..

WORLD LANGUAGES AND CULTURES

French 1 **Full Year** **1 credit**

French 1 builds students' communicative confidence across everyday real-life contexts. Topics covered include navigating a city, giving directions, using modes of transportation, ordering food at a restaurant, describing one's home and daily routine, discussing the past using the passé composé, and looking ahead using the near future tense. Students also explore a health unit covering body vocabulary, illness, and visits to the doctor. Throughout the course, students engage with Francophone culture and current events, and are assessed through quizzes, written compositions, and oral dialogues and skits.

French 2 **Full Year** **1 credit**

French 2 builds on students' previous French experience, developing greater fluency and grammatical sophistication across all four language skills. The course covers self-expression and Francophone celebrations, travel and vacation using both the passé composé and imparfait, home life and the art of the Francophone world, health and daily routine with reflexive verbs, Francophone food culture, and future plans using the future tense.

Students prepare for the National French Exam and engage in projects such as a research presentation on a famous French artist. Skills in speaking, listening, reading, and writing are developed through quizzes, dialogues, compositions, and group presentations.

Spanish 1 **Full Year** **1 credit**

Spanish 1 develops a students' practical communication skills across a range of everyday topics. Students learn to navigate places, including giving directions, using transportation, and ordering in a restaurant, describe daily routines and home life using reflexive verbs and past tense structures, and discuss past events using both regular and irregular preterite forms. Grammar instruction includes affirmative and negative commands, adjective agreement, adverbs, and sentence structure. Students are assessed through quizzes, written compositions, dialogues, and projects, with a consistent emphasis on building authentic communication skills in Spanish.

Spanish 2 **Full Year** **1 credit**

Spanish 2 is aligned with ACTFL proficiency standards and aims to bring students to a Novice Mid or Novice High level of communicative ability in speaking, listening, reading, and writing. The course covers a review of key vocabulary and grammar, Hispanic Heritage Month, family and childhood memories using the imperfect tense, health and wellness vocabulary, and environmental sustainability, including a Shark Tank-style project in which students design a product to address an environmental challenge in a Spanish-speaking country. Students practice all four language skills through interpersonal conversations, presentations, video analysis, and reflective writing. The course concludes with a cumulative final exam and prepares students for more advanced Spanish study.