Baldwin’s Interdisciplinary Program 2020-21
The Mission of The Baldwin School

The Baldwin School, an independent college preparatory school, develops talented girls into confident young women with vision, global understanding and the competency to make significant and enduring contributions to the world. The school nurtures our students’ passion for intellectual rigor in academics, creativity in the arts and competition in athletics, forming women capable of leading their generation while living balanced lives.
About Baldwin’s Interdisciplinary Program

Baldwin’s authentic interdisciplinary program is based on research that indicates that students engaging in this work have higher academic outcomes, enhanced critical thinking skills, a greater ability to transfer knowledge to new contexts, deeper and more complex conceptions of knowledge and longer-term retention of what they’ve learned. Giving our students the opportunity to develop these skills gives them a head start in college, where they can continue to build on a solid foundation.

Our interdisciplinary focus is also based on our expert understanding of how girls learn best. We know that our students want to see the purpose behind their learning and are most engaged when they can work together on finding solutions and can connect their learning to their interests and passions. Baldwin’s interdisciplinary programming supports this kind of learning, ensuring that our girls-first environment supports our students’ learning now and prepares them for the future.

Finally, we are keenly aware that we are preparing our students for a future where, as of 2030, 85% of the jobs our kids will want most do not exist today. To best prepare our girls for that certainly uncertain future, we must support the development of key skills that will be most critical in the decades to come. This is why we focus on helping our girls develop relational skills such as empathetic leadership and collaboration, the ability to act on solutions arrived at via creative problem solving, and the confidence to think in multidisciplinary ways that engage our ever-changing world.
Coming in 2022 – Baldwin’s Innovation Center

One of the trademarks of The Baldwin School is a commitment to the future that is informed by an appreciation of the past. The latest capital project the School has undertaken is a perfect demonstration of this viewpoint. The former pool house will be transformed into the Innovation Center - an interdisciplinary hub that will give students an edge in the 21st century job market. A building dedicated to the tangible, hands-on work of interdisciplinary learning will allow students across grades and classes to focus on problem-solving, creativity, teamwork and adaptability. Construction of the Innovation Center will begin in the summer of 2021 with a grand opening planned for the winter of 2022.
Lower School Interdisciplinary Incubator
In the first year of our Lower School Interdisciplinary Incubator experience, students in all grades developed a year-long interdisciplinary project focused on health and medicine, exploring the systems of the body and the impact of nutrition, exercise, technology and the environment on those systems. Building on this first year of the Interdisciplinary Institute process this year, Lower School teachers have branched out into new content areas and collaborative partnerships. These projects bring together two or more content areas, allowing students to deepen their knowledge, while developing essential skills including collaboration, communication and problem-solving skills. The Lower School Interdisciplinary Incubator experience helps students to more readily seek out and explore connections between and among disciplines and, in turn, see their learning as an organic, dynamic, and exciting endeavor!

Pre-K: Animal Habitat Investigation
The Pre-K interdisciplinary learning experience, focused on the question: Is Baldwin a good home for animals? They engaged in an investigation that incorporated reading, writing, math, science, DREAM Lab and Library. Students took “field trips” around Baldwin’s campus, to investigate the animal homes right around us. They learned how to make scientific observations and discovered how different animals design their homes based on their specific needs. Students created a mural to demonstrate what they learned and the learning experience culminated in a vote for a class pet and collaborative work to design a plan for its care.
**Kindergarten: Female Artist Innovators**

Through their interdisciplinary study of female artists Mexican surrealist Frida Kahlo, American modernist Georgia O’Keeffe and contemporary Japanese artist Yayoi Kusama, Kindergarteners investigated the essential question: How do artists use their creativity to express big emotions and how can I express my emotions using art, as well? Learning about each artist took place through literature and visual arts. Students were invited to consider which artist they felt compelled to learn more about, and then worked in small groups in a week-long investigation of their chosen artist’s inspirations and styles. Finally, students created their own works of art, in the style of the artists and created an open-ended art project using their own ‘big emotions’ as inspiration.

**Grade 1 - Animal Adaptations**

First graders explored animal adaptations through learning that integrated reading, research and science. The learning began with a visit from the experts at Elmwood Park Zoo, who shared information about animal environments and adaptations. Students then did their own independent research, using books to become experts on the adaptations of the animals they had selected for study. Students then used this learning to design their own animal habitats. In DREAM Lab, they used Lego Wedo 2.0 to explore animal habitats and the adaptations that allow animals to survive. And finally, they considered where further adaptations could lead, by imagining new animals we might see in the future.

**Grade 2 - The Endangered Animals of Kenya**

Second graders interdisciplinary learning took them to the country of Kenya, to explore the questions, What events contribute to or impact animals becoming endangered? And what can we do to prevent African animals from becoming extinct? Through learning that integrated geography, research, social studies, music and art, the students got to know the country of Kenya, including its geography, wildlife, habitats and people, with a focus on the culture of the Maasai tribe. After this foundational learning, the students each conducted independent research on an endangered animal native to Kenya and shared her findings with her peers. To extend their learning, the students created art projects inspired by their endangered animals and made drums similar to those that the Maasai make and use.
Grade 3 - The Ecosystems of Our National Parks
Third graders traveled (virtually) across the country to consider the questions why do National Parks matter? And what ecosystems exist in our National Parks? Pulling together essential skills related to research, writing, science and DREAM Lab, each student studied the features, animals and plants of a specific park. They then learned to use a graphic organizer to structure their research, drafting, editing and publishing. They synthesized their learning through informational writing about the park and then took this one step further in the DREAM Lab. There, students learned about using visual elements to tell a story with data. Working in pairs, students designed an informational poster that used graphic design elements to represent the data about their park. These posters became the foundation for shared learning and group discussion.

Grade 4 - Rad Women Museum Showcase
Fourth graders used skills in areas including research, writing, social studies, art and music to answer the questions: What makes a Woman Radical? And how have “Rad Women” represented and shaped the state of Pennsylvania? As the focus of her study, each student selected a Radical Woman from Pennsylvania who has made a lasting contribution in some way. The learning began with in-depth reading and research, to create a detailed picture of each woman’s life and contributions. Students then used this learning to design artifact boxes filled with items carefully selected to represent each Rad Woman. A Museum Showcase will culminate this learning experience, with each student demonstrating and presenting a creative demonstration of a skill connected to the life of a Rad Woman.

Grade 5 - Ancient Egypt: Immersive Storytelling with Digital Tools
The 5th grade interdisciplinary experience brought together research, writing, social studies and DREAM Lab to address the question: What made it possible for the ancient Egyptians to create a civilization? Students began with a deep-dive study of one aspect of Ancient Egyptian civilization. This full research and writing experience included finding and analyzing sources, reading for information, note taking, analysis, and finally, synthesizing information in a written and edited research paper, complete with source citations. Students then brought their learning into the DREAM Lab, where they used their coding skills in “Shared Spaces” and created a dynamic and engaging assembly that brought the entire Lower School into the world of Ancient Egypt.
Middle and Upper School Interdisciplinary Institute

In the Middle and Upper Schools, regular classes are set aside for a week in the spring to dive into our Interdisciplinary Institute. This multi-day learning experience is designed around exploration of topics at the intersection of disciplines and leverages student choice, creativity and real-world problem solving.

For example, our physics, math and music teachers will jointly lead students through a study of waves. They will consider how sound waves are formed, how those waves are mathematically represented and how they come together to create music. Students interested in the intersection of literature and science will study Shakespeare’s plays alongside chemistry, to understand the science behind the stories’ potions and poisons.

Students will also have the opportunity to see and hear how concepts and skills are applied beyond Baldwin’s gates, by connecting with outside experts who will bring the students into the worlds of their real-world work. Driven by students’ passions, each of these seminars will culminate in different ways, from papers to art exhibits to plays to published writing.
ONLINE AND HYBRID COURSES

The Art of Geometry
Ms. Lee, Mr. Lilholt
Grades 6 – 8, Online and In-Person Students

Did you ever wonder about the secret to creating breathtaking works of art? It is a course you have been taking your entire life -- Mathematics! This course investigates the role that math plays in various genres of art — origami, straightedge and compass designs, linear perspective, tessellations, the golden spiral. Students will create their own designs using Desmos, an interactive software tool that uses math equations to produce any image or sketch imaginable. The finale of this course will be a student-curated art exhibit, highlighting the intersections of math and art.

Feminae Mythologicae
Magistra. Keshishian, Ms. Zemaitis
Grades 6 – 8, Online and In-Person Students

What do Disney heroines like Princess Aurora in Sleeping Beauty and Harry Potter characters like Minerva McGonagall have in common? These fictional modern women have roots in Greek and Roman mythology. Students will be excited to learn about strong mythological goddesses and enjoy a journey into the ancient world, as they uncover the positive and negative representations of women in these classical tales. We will read stories and watch videos to make connections between the modern portrayal of female characters and the Greek heroines who influenced their creation. Students will showcase what they learned by collaboratively discussing, writing creative stories, and designing artwork and projects.

Science of Well-Being
Sra. Alvarez-Spychalski, Ms. Koster, Ms. Moser
Grades 6 – 8, Online Students Only

Breathe in, breathe out. We’ve made it through the school year! While we’re living through a pandemic, there’s no better time to explore the science behind improving our physical and mental well-being while helping to relieve stress in our daily lives. We will put scientific findings into practice through the use of mindful art, nature, music, food, and body movement. Activities will include yoga practices, guided meditation, and a virtual tour of a special place in a Spanish-speaking country. Students will leave with a toolbox of skills and resources to use and build habits that will help us live a happier, more fulfilling life.
Voices for Change  
*Dr. Carter, Ms. Guenther, Mr. Harmantzis*  
*Grades 6 – 8, Online and In-Person Students*

Do you think you are too young to make a difference? The answer is NO! Through historical and current events, younger generations have influenced the world around us. Hearing from guest speakers in music, art, and various writing genres, students will take a broad look at how to employ their voices for change while remaining as their authentic selves. In this session, students will use a variety of media (i.e. music, art, dance, poetry, skits, podcasting) to publicly inform global and local issues that matter to them. We will celebrate the power of the “pen” in the hands of the young.

**IN-PERSON COURSES**  
**The Art of Geometry**  
*Mr. Campbell, Ms. Konopka*  
*Grades 6 – 8, In-Person Students Only*

Did you ever wonder about the secret to creating breathtaking works of art? It is a course you have been taking your entire life -- Mathematics! This course investigates the role that math plays in various genres of art -- origami, straightedge and compass designs, linear perspective, tessellations, the golden spiral. Students will create their own designs using Desmos, an interactive software tool that uses math equations to produce any image or sketch imaginable. The finale of this course will be a student-curated art exhibit, highlighting the intersections of math and art.

**Blast off with Rockets**  
*Ms. Lukens, Coach Pitocchelli, Ms. Triebenbacher*  
*Grades 6 – 8, In-Person Students Only*

Have you ever wondered what it takes to launch a rocket into space? Are you interested in joining the amazing women that have impacted space exploration? This session will take you back into the history of the barriers women faced to join the Space Race and into the theory behind human and object motion. Together, we will travel through the history of rockets and space exploration with math, science and technology as we design, build, and launch our own rockets.
Damsels Who Disrupt
Ms. Friedman-Way, Ms. Phillips, Mme. Sugarman
Grades 6 – 8, In-Person Students Only

Fairy tales are full of damsels in distress (Rapunzel, Sleeping Beauty, Cinderella, Snow White, the list goes on). How do these fairy tales inform the way we look at gender roles and shape the ways society enforces and upholds gender norms? What does it mean to be a disruptor? Students will participate in group discussions, historical research and peer collaboration; they will also have the opportunity to engage with a contemporary fairy tale author and do a deeper dive into the idea of “disrupting” the traditional fairy tale mold. By creating their own fairy tale adaptations, students will critically think about what it means to bring a fairy tale into a diverse, modern world.

Freaks and Geeks
Mr. Warfel, Magistra Weidler
Grades 6 – 8, In-Person Students Only

“I’ll tell you a secret. Something they don’t teach you in your temple. The gods envy us.” -Achilles

How can we use performance and modern modes of media to connect a modern audience to the mythology of Ancient Greece? After exploring Greek mythology and drama, students will develop a script that places the characters and stories in the current world. Students will then select a medium to tell the story: film, broadcast news, television, podcast. Their production will incorporate the main themes, characters, and spirit of the original myth, while keeping in mind today’s cultural climate. The original works will be edited for presentation to the wider community.

Gaming to Learn
Coach Glascott-Birch, Dr. England, Mr. Potten
Grades 6 – 8, In-Person Students Only

Do you like to play games? Board games, video games, card games, sports, role-playing, etc… Have you ever wondered why you play this game and what makes it exciting? Or have you ever thought, “Ohh, this game would be so much better if…?” Well that’s game design! This course will give you the opportunity to create and build a game using whatever medium you choose and share it with your peers. The only prerequisite is a desire to be creative and have fun!
Maps, Math and Democracy  
*Ms. Cass, Ms. Doherty*  
*Grades 6 – 8, In-Person Students Only*  

Does your vote count? It depends on where you live. You may have been “packed,” “cracked” or “split” without even knowing it. Because of these gerrymandering techniques, the Pennsylvania Supreme Court recently ruled the state's 2011 congressional district maps unconstitutional. This year, Pennsylvania will once again redraw its political maps. Students will have an opportunity to participate directly in this process as engaged citizens and determine what they value most in the democratic process. Students will explore topics related to gerrymandering, including congressional apportionment, redistricting and partisan politics. Using mapping software, students will apply mathematical models and analyze demographics to create their own 2021 Pennsylvania Congressional maps that will be entered in a state-wide contest for students.

When Worlds Collide  
*Ms. Harlamova, Mr. Phillips*  
*Grades 6 – 8, In-Person Students Only*  

Have you ever wondered why and how music tends to bring up certain emotions for us when we hear it? Have you ever thought about why you remember things better when you hear them in song? Join us as we investigate how animators use music to help tell a story, and how theatre and television directors use these musical stories to educate. Students will select a piece of music or compose their own, choose a style of animation, and create a musical short film to entertain and educate their peers about a scientific concept. Students will use different methods of animation, from claymation/stop-motion to flip-book to using CGI software, such as Scratch.
ONLINE AND HYBRID COURSES

Daring Readers and Eaters
Ms. Ameisen, Dr. Sullivan
Grades 9 – 11, Online Students Only

Do you remember the first time Harry Potter encountered pumpkin juice and chocolate frogs? Would you have gobbled up Bertie Bott’s Every Flavor Beans or feared to try them? Students will explore how food serves as a metaphorical and literal means of telling stories, sharing cultural histories and connecting cultural identities. Through the lenses of English and anthropology, students will explore how particular foods help us explore cultural identity, cross-cultural connections and aesthetic expression. Students will eat, cook and think about the relationship between food and culture. The culminating experience will include a communal meal designed by the group and shared over zoom.

Note: Students should have access to basic kitchen equipment. This course will be most enjoyable for students willing to try a wide variety of foods.

¡Inside Out!
Sra. Faszczyk, Ms. Hagon-Kerr, Sr. Williamson
Grades 9 – 11, Online and In-Person Students

Are we who we are from the outside in, or the inside out? Using Spanish and music as your primary superpowers, your task is to answer this question of identity and what shapes us. You will find ways to repair and reinforce the quality of human connection, while celebrating diverse identities as part of your exploration. Your collaborative project will be filled with choices: is there a singular shared identity in our group that can be presented and expressed using the tools and skills developed over our time together? Is there a singular one across the Spanish speaking countries that we will encounter that can be encapsulated by our collaboration together? Through your choice of food, art, music and language you will share what you have discovered from contemplating these questions. How do music and language contribute to our shape shifting, and what shape will your final project take?
La Grande Aventure Féminine: Francophone
Women of the 20th and 21st Centuries
Mr. Kountz, Mme. Mariette
Grades 9 – 11, Online and In-Person Students

“Her wings are cut and then she is blamed for not knowing how to fly.”
~ Simone de Beauvoir, Le deuxième sexe

From innovators in fashion, the fine arts and science, to fighters, survivors and heroes, Francophone women have left a substantial impact on the modern age. We will explore the lives of these extraordinary figures and their admirable contributions to the 20th and 21st century world. Along the way, we’ll learn about both France and the wider French-speaking world in the context of the rapidly changing 2020s. A culminating project will feature artwork, videos and presentations highlighting the interdependence between academic disciplines, and the incredible lives of path-breaking women. Participants are not required to have taken French courses, but those who have will be welcomed to share their research in their second language!

Maps, Math, Democracy
Dr. Bunn, Ms. Loke, Mr. Goulding
Grades 9 – 11, Online Students Only

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Voices for Change  
*Ms. Lopez-Carickhoff, Dr. Benjamin*  
*Grades 9 – 11, Online or In-Person Students*

What matters to you? How can you effect change in a way that is compelling and reflective of who you are? This I2 combines activism, graphic arts, journalism and data science. You will hear from professionals who advocate through their work. Then, you will use real-world data to advocate about what matters most to you. We will explore journalism, music and mural art as modes of advocacy, and will work with an expert in data collection and representation. By the end of the week, students will produce an advocacy campaign/piece in the form of a t-shirt, button, music, poem, TikTok video, Instagram story, article, podcast, speech, graphic, cartoon or other form of public expression.

**IN-PERSON COURSES**

**Animals Tell It Like It Is**  
*Dr. Forste-Grupp, Ms. Smith*  
*Grades 9 – 11, In-Person Students Only*

Animals are often important characters in stories and movies. And sometimes they talk! Storytellers have used animal characters and their voices for centuries, to offer us another view of ourselves and our behavior. These animal stories challenge us to ask ourselves questions about morality, ethics and personal choices. We will read animal stories from around the world and watch a short film or two. We will examine how animals were depicted in the illustrations. At the end of each day, you will have a chance to write, illustrate and share your own animal stories.

**The Art of Failure**  
*Ms. Awal-Beirne, Mr. Delio, Ms. Greco*  
*Grades 9 – 11, In-Person Students Only*

This is a course about the other F-word. Failure. Students will participate in activities, readings, discussions, creative games and exercises to generate ideas, and will also explore multimodal art-making. Students will generate a real-world product that tells their own personal stories of “failure through the senses” using both visual and literary tools. However, the emphasis will not be on the technical crafting of a “perfect” finished product but on process, creation and meaning-making.

Note: Please bring a large t-shirt or smock, and clothes/shoes you don’t mind getting dirty!
The Chemistry of Art
Ms. Davis, Ms. Fentress
Grades 10 – 12*, In-Person Students Only

What is art? Is it only paintings, drawings and sculptures? Can science be art? Have you ever wondered about the chemistry involved in making art? Did you know that chemical processes like polarity, energy, absorption, solubility and bonding help artists create their pieces? Students will be expanding their understanding about what constitutes art, by designing and creating projects while discussing the relevant chemistry topics. Students will also consider how science can influence their choices in the design process through trial and error. Failure will be explored as an integral and welcomed part of both the artistic and scientific process.

*Prerequisite: Currently enrolled or have previously taken chemistry.

Making Waves: Math, Science and Music
Ms. Erb, Dr. Goldader, Dr. O’Connor
Grades 9 – 11, In-Person Students Only

How are sound waves created and perceived as music? This course explores the mathematics and physics of waves, as we work to understand the sound waves we call music. What are waves, how are they described and what properties are shared by all waves? What is the mathematical explanation of timbre, the character that distinguishes unique instrumental sounds? Students will learn about Western musical scales and instruments, and also explore world music, identifying the differences and commonalities among different musical cultures. Students will learn to play a tune on an instrument they create or explore how instruments they already play actually produce sound. They will share what they have learned by composing and playing a short musical motive that expresses a specific emotion.
Maps, Math, Democracy  
*Dr. Biss, Ms. Young*  
*Grades 9 – 11, In-Person Students Only*

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Monkey Business  
*Ms. Reed, Dr. Boger, Ms. Wilson*  
*Grade 11 Only, In-Person Students Only*

“To suppose that the eye… could have been formed by natural selection, seems, I freely confess, absurd in the highest possible degree” ~Charles Darwin, 1859

We will explore Darwin’s theory of evolution and what made its publication a watershed moment in science, religion and human society. After an introduction to the theory and why it was so provocative, students will explore examples of continuing human evolution and cultural reasons for resistance to scientific findings. Ultimately, students will develop a final project on one of the essential questions: “Are humans still evolving?” or “How can one speak meaningfully across divides between those who embrace science and those who resist it?”

Mind, Body Connection  
*Ms. Calnan, Coach Furey*  
*Grades 9 – 11, In-Person Students Only*

Breathe in, breathe out. We’ve made it through the school year! While we’re still living through a pandemic, there’s no better time to explore the science behind improving our physical and mental well-being while helping to relieve stress in our daily lives. We will put scientific findings into practice through the use of mindful art, nature, music, exercise and body movement. Activities will include yoga practices, guided meditation and a virtual tour of El Yunque rainforest. Students will leave with a toolbox of skills and resources to use and build habits that will help us live a happier, more fulfilling life.
Potions and Poisons  
Ms. Epstein, Ms. Wiley  
Grades 9 – 11, In-Person Students Only

Modern science or ancient alchemy? William Shakespeare incorporates love potions, sleeping potions and poisons as significant plot points in several of his plays. Students will use basic chemistry to either prove the potency of these poisons or alter the play using their knowledge of modern medicines and toxicology. We will work with a modern apothecary to create a tincture, and perform labs to test the toxicity of modern pollutants; we will train with an actor and then rewrite, design and perform a modern adaptation of a Shakespearean play to dramatize the scientific effects that poisons/potions have on the human body.

The Story of Immigration  
Ms. Malloy, Sra. Sacerio  
Grades 9 – 11, In-Person Students Only

What are the stories of today’s immigrants? Within the Baldwin community, there are a number of told and untold immigrant stories. What compels a person to leave their native land and embark on an often-perilous journey? Immigrants face a number of obstacles, including discrimination, unemployment and underemployment, lack of education, housing, food and language ability. This class will bring a greater understanding to the topic of immigration, with a strong focus on immigrants coming from Mexico, Central and South America. Students will read immigrant stories in Spanish or English, and take part in various virtual museum tours, including the Tenement Museum in New York City. Students will also interview family or community members who have immigrated to the United States and create reflections on what they learn.

Words for Looking  
Mme. Seliversoff, Ms. Wilke  
Grades 9 – 11, In-Person Students Only

How is it possible that a single art exhibition affects “how we see” today? Yet an exhibition in Paris in 1863, the “Salon des Refusés,” did just that. Among those exhibiting were the painters Manet, Monet, Pissarro, Whistler and Cezanne. Working from vantage points of that time, students will engage with the two iconic art movements of Impressionism and Post-Impressionism. We will explore connections between painterly concepts and the French language and consider the relationship between a Philadelphia art collector and the avant-garde world of Parisian culture through a virtual tour of the Barnes Foundation. For their own project, students may choose to work in any mode -- painting, writing (reviews, journals, letters), curating an exhibition or building an individual collection. The final creative product will be a constructed artifact from a particular slice of Parisian culture in the latter half of the nineteenth century.