Course Descriptions 2023-2024

Middle School Expedition Courses

Eating Dirt Expedition (6/7th Grade, Tri 1)

What is soil and how does this often overlooked resource impact our ecological and anthropogenic communities? In this introduction to soil science, students will examine the role of soil in cycling nutrients, regulating water flow, supporting plant growth, and sequestering carbon. The class will begin with soil properties, including soil texture, structure, and organic matter content, and how these factors influence soil fertility, water holding capacity, and soil health. Students will learn how to analyze soil samples and interpret soil test results. Students will explore the benefits and challenges of different soil management practices, such as no-till farming, crop rotation, and soil conservation practices.

Culture on a Plate Expedition (6/7th Grade, Tri 1)

Food is one of our most basic human needs and has always been part of fueling the human story. But food is about so much more than survival. Food reflects and shapes our histories, social and economic statuses, and values. It affects our environment and influences politics. In this class, you will seek out culture on the plate: *What can we learn about culture and identity through the foods we eat?* Throughout this course, students will conduct fieldwork with organizations including the Boulder Museum, local restaurants, and Harvest of Hope, in order to serve their community and make personal and local connections to the global story of food. Students will conduct food culture case studies, organize a food drive, and share their own food story through the Family Food Project. Assignments will involve working both individually and in teams to provide students with opportunity to build skills in collaboration and self-direction.

The Physics of Bicycles Expedition (8th Grade, Tri 1)

How do the basic laws of physics impact our everyday lives? What physical phenomena and principles are at play when you ride a bicycle? The humble bicycle is one of the best examples humanity has of a relatively simple yet incredibly efficient combination of simple machines. Every time you ride a bicycle, you are harnessing the power of the fundamental laws of physics that define how our universe works. In this course, students will learn about every part of the bicycle, from the frame to the spokes, and how those components relate to the physical sciences. We will be learning about everything from materials sciences and geometry, friction and aerodynamics, to chemistry and engineering. Partnerships with local experts are pending, but fortunately, the Front Range is somewhat of an epicenter for the bicycle industry. Through thorough research and investigative thinking, students will be honing their quantitative thinking skills, as well as learning about complex physical phenomena and the process of iterative design used in STEAM fields.

The Power of Bicycles Expedition (8th Grade, Tri 1)

How can bicycles change the world? The Power of Bicycles will explore this essential question in partnership with the Physics of Bicycles science expedition. Through interdisciplinary projects, students will explore how engineers and physicists describe, communicate, and take advantage of energy and forces. Using strategies of design thinking and inquiry, students will tackle questions, problems, and communicate their understanding of scientific and historical thinking through bike-based projects. Students will also study how bikes can positively impact people's lives in various ways and collaborate with Community Cycles and Boulder County Open Space to apply their learning in our community. Throughout this expedition, students will work on collaborative discussion, reading for content, and written communication skills as they build an understanding of how tools and machines have changed what is possible through human history into the present day.

The Hero's Journey: Storytelling, Archetypes, and Myth Expedition (6/7th, Tri 2)

In this course, students will explore the power of storytelling by examining the fundamental principles that underlie all great stories. Through readings, discussions, and creative activities, students will learn about archetypes, myth, and the seven basic plots that form the foundation of all human narratives. Students will analyze stories from a range of cultures and genres, from ancient myths and legends to modern-day novels and films. They will learn how to identify common narrative structures and motifs, such as the hero's journey, the quest, the tragedy, and the comedy. By the end of the course, students will have gained a deeper appreciation for the art of storytelling and the role it plays in shaping our culture and identity. They will also have honed their own storytelling skills, through exercises in creative writing, oral storytelling, and multimedia production.

Source to Sea Expedition (6/7th Grade, Tri 2-3)

How does water shape who we are and the places we live? How does it physically move, carve, and design the natural landscape? What impact does water have on natural and human communities? Within the natural boundary of a watershed, all things - living and nonliving - are connected by the flow of water. Students will take a deep dive into the study of our local watershed and how water impacts local ecosystems, economies, and communities.

Transformations of Thinking and Self Expedition (8th Grade, Tri 2-3)

Transformations of Thinking and Self is a course in developmental psychology, metacognition, and brain anatomy. Students will gain a deeper understanding of their mental workings while empowering them to learn how to view cognition, emotion, and changes in their bodies and minds as a dynamic process that they can engage in and direct. As a reading and writing intensive course, students will explore adolescent development through various lenses, examining current research in neuroscience related to the brain and the implications of this understanding. Students will explore psychological frameworks used to better understand the developing mind, and make connections to their own experiences to begin answering the essential question, *who am I?*

History of Humans Expedition (8th Grade, Tri 2-3)

In this eighth-grade course, students will ask, *Who are we?* as they approach the question of what makes us human through a study of the origins of humanity and the lens of the past. Students will learn about the discipline of anthropology, or the study of humanity, including branches that focus on our past in order to better understand our present, including

archaeology and paleoanthropology. Engaging in fieldwork, including an expedition to Crow Canyon Archaeological Center, students will also explore how and why we study the past, and will work to make connections to our current shared and diverse cultural experiences. Along the way, they will develop their skills in observation, documentation, inference, and critical inquiry. *What makes us human?* In pursuing this essential question, students will consider not only what has been, but what is to come.

One World: Global Connections Expedition (6/7th Grade, Tri 3)

The international relations expedition will integrate social studies, economics, politics, and literature to investigate the phenomenon of globalization. Over the course of the last 30 years, the world has become more interconnected than ever. Our decisions regarding what we buy, eat, drink, how we travel, and where we shop have ramifications that span the globe. We will look deeply into supply chains, international trade deals, natural resources, and working conditions. Students will step away from this course with a more developed understanding of how their decisions affect others in the world, and how they can use their voice to effect change.

Middle School/ 6-8th Grade Skills Courses

Digital Design 1 & 2

Digital Design is a course that introduces students to the most common software programs utilized by industry creatives within Adobe Creative Suite. Work during this class will add to students' repertoire of skills for use at Watershed and beyond. It is a skills-based class that requires time, patience, and imagination. Simple practice exercises will serve as the basic steps to more complex design challenges that will serve as project assessments. In this course, students will take the time to understand the tools of the trade as a basis for extended learning or application to other Watershed School projects. Digital Design 1 focuses on graphic presentation and design. Digital Design 2 focuses on UI and UX projects. Prerequisite for Digital Design 2 is Digital Design 1. Students in both classes must have a computer capable of running Adobe Creative Suite programs. Please verify specifications with the instructor prior to beginning the course.

Middle School Spanish

The goal of this course is very straightforward: to improve Spanish proficiency. The process of acquiring a second language (SLA) can be long and tedious, and is unique for every student. It is a lifelong endeavor with an immense reward. SLA requires a connection between the student and the language they are learning. For that reason, our focus in MS Spanish will be on *Identity* with the intention of establishing a strong foundation through a creative and flexible approach. Every student should strive to make this class feel personal. I challenge students to find what excites you, what makes you, you, and how we can explore your interests further- in Spanish. Students will reflect on lessons in a daily journal and cover three units under the umbrella of *Identity***.** These will include, *Personal Introductions, The Family, and Likes and Dislikes.* We will also investigate aspects of identity that are different from our own and reflect on the culture and traditions of numerous Spanish speaking countries. The assignments within these units will consist of reading, writing, individual research projects, and presentations.

Studio Ceramics

This course is designed to introduce students to clay and the many forms that can be created through handbuilding. Students will fashion a variety of pots by using forms, making attachments, sculpture, and working with slabs. We will also explore a variety of decorative techniques including texturing, sticker and paper resist, decaling, and painting. Through a variety of projects, students will be challenged to make a collection of functional and artistic creations. Along the way, students will sketch out ideas, document new techniques and information, participate in constructive critique, reflect on their process and finished work, and maintain a digital portfolio page for the course. The course culminates with a student-designed project in which they incorporate aspects of their newfound skills in a summative clay creation.

Cinema Studies: Documentary Filmmaking

Students will embark on a journey of both studying and making documentary films. As a means of better understanding visual storytelling, students will have a chance to view scenes and clips from a variety of styles of documentary films. Students will learn the art of filming effective interviews, shooting b-roll footage, recording quality sound, writing narration, and managing editing techniques. Students will get behind the camera and make a collection of films independently and collaboratively. The class will band together as a team to partner with a group in the Boulder community as we endeavor to make a short film communicating that group's story and the work they do. Field work will include opportunities to meet documentary filmmakers and visit a production studio. In addition, we will use our long blocks to film on location with our community partners.

Athletics, Leadership and Mindfulness

This course will focus on a range of leadership skills, including decision making, teamwork, expedition behavior, confidence and initiative. Additionally, the course will expose students to a variety of activities focused on skill development, fitness, and coordination. Students can expect, when weather permits, to spend time outside during their longer blocks, where they will have opportunities to explore local hikes and trails, as well as to utilize public parks. Finally, the course will include opportunities to engage in mindfulness practice, where students will be supported in exploring the connections between leadership, athletics, and mindfulness.

The Maker Movement

The potential of the future lies within our hands! The future is full of surprises, but history has shown us that we must always be prepared for the unexpected. With the advanced tools available to us today, we have the ability to tap into our creative problem-solving skills. This engineering and design course will teach us how to use modern fabrication tools safely and creatively. The course will be structured around a series of design challenges, such as building a toy that can launch a foam ball using a laser cutter, or using a 3-D printer to solve a problem on Mars. We will not only become proficient in using these tools, but also experts in the design thinking process. This will empower us to not only design for the world, but to design with the world. As members of the maker movement, we will become solution seekers who can enter new environments, empathize with others, and help solve even the smallest or most urgent problems of the day.