EXPLORATIONS ACADEMY

This document is an overview of our Fall 2021 course offerings. The overview is listed by courses; however, the presentation of this curriculum will be experiential with students involved in activities, projects, and field experiences addressing several course areas at once. While these course descriptions are subject to modification as the curriculum is finalized and as we respond to the pandemic, they should help students and parents know what to expect.

High School Curriculum Overview

Our Fall 2021 curriculum features two interdisciplinary course clusters at the high school level: Food and Endings.

Food Cluster

What you are is what you eat? It may sound like an old adage but the story of food is the story of us. Food plays a vital role in envisioning, imaginating, and acting to create the desired future. You will dive into the exploration of food through the disciplines of writing, social studies, and science. You will explore your personal relationships with food, the relationships between our community and food, and the impact of those relationships on the environment locally and globally. As we explore this topic, you are constantly edging to reflect on, "what is the future of food and our individual and collective roles and responsibilities to that future?"

Journalism and Food Writing **.50 English** **Marley Simmons-Abril**

Journalism is often referred to as "The Fourth Estate" to indicate its critical role in the social and political fabric of our society. We will cover the history and evolving ethics of journalism to learn how the form has changed over time, from muckraking "yellow journalism" to raucous gonzo journalism and tech-enabled citizen journalism. As student journalists you will pick local issues that interest you, then use investigative reporting to dive into them and report back to the community. We will finish the term by collectively editing and publishing a magazine featuring your original stories. Why use journalism to explore food? Because mealtime traditions unite families across generations and cooking is a form of cultural heritage. Additionally, food supply chains can reveal the strength (or weakness) of our local economies, and nutrition support is often the first intervention for families experiencing poverty. In this Food Cluster, we will use journalism as a lens to explore our local economy, culture, farms, food supply, and family traditions.

Geography of Food **.50 SS/ Social Science** **Quinn Wilson**

The Geography of Food follows the sometimes surprisingly complicated path of food from the farm to our table. In this course we will learn about the importance of place in the innovation, production, distribution, and business surrounding food. We will learn where our ingredients come from, how food has shaped cultures around the world, and who has (and doesn't have) access to it. The role of culture and environment are critical in understanding why, what, how much, and where we eat. In the United States, we are increasingly removed from the farm and reliant upon processed foods, so understanding and appreciating the place of food has become critical. Geographic concepts like nature-society relationships, spatial interconnections and patterns, and site and situation, will be applied to help us understand why food is produced and consumed, where it is, by whom, and the changing nature of these relationships.

Ecology **.50 Science** **Quinn Wilson**

Ecology is the study of the interactions between organisms and their environment. This course covers topics such as plant and animal adaptations, food chains, competition and symbiosis, species population, biodiversity, and sustainability. Students will acquire an "ecological literacy" about how the natural world works, and develop an understanding of how scientific methods and data are used to construct ecological knowledge and understand complex systems. Outdoor labs and field trips will also serve to increase the student's familiarity with nature. Additionally, the course will explore human impact on ecosystems, and the important research that is being done to address these concerns.

ENDINGS CLUSTER

Change is inevitable in natural and human systems. This cluster examines the many interdependent factors that can determine the sustainability of cultures, civilizations, and the natural world. Through our studies we hope to better understand what went wrong for previous societies, what our depictions of dying societies tell us, and what we can do to ensure that the society that we are living in is able to not just continue existing, but to thrive for generations to come. Endings seeks both to understand the influences of systemic change and to draw conclusions about how to maintain stability.

Post-Apocalyptic Literature **.50 English** **Marley Simmons-Abril**

When all the comforts are gone, when civilization as we know it ends, when the zombies attack, only then do we glimpse the essence of human character. This class will look at the history of apocalyptic and post-apocalyptic literature in order to better understand what makes humanity (cease to) tick. The genre has served as a window into the fears and beliefs of different eras of society, and can tell us a lot about the fears of our current moment. We will cover classic examples of disaster, contemporary novels that explore its modern causes, and a selection of short stories, articles, and short films. Throughout the class we will think about the ways that post-apocalyptic literature helps us articulate our fears, but also promises a new and hopeful future.

Archeological Science **.50 Science** **Quinn Wilson**

At about 300,000 years old, *homo sapiens* (that's us!) has a long and diverse history. Archeological science takes a data-driven approach to understanding past human societies. The focus of the course is how archaeologists are able to go from dirty, broken bits of stone, pottery, bone, crumbled walls, and charcoal to reconstructions of subsistence, men's and women's work patterns, group size, social and political organization. This involves methods of site planning and excavation, geology, soil science, and biology, and a good bit of detective work. This course will teach students specialized laboratory, analytical, and field skills, and use data generated by materials science to answer questions about human behaviour.

Collapse of Civilizations **.50 SS/ World History** **Marley Simmons-Abril**

Societies experience periods of expansion and contraction, and sometimes the contraction is so severe it leads to a complete collapse of that civilization. This class will cover the causes, effects, and lasting traces of civilizational collapse. We'll start by looking at Easter Island as an example of ecological collapse; then we'll turn to the Soviet Union to explore how social and political systems fail. We will look at various causes for these large-scale failures, and take a special interest in the art and objects these societies left behind. Throughout the course we'll look at different models for civilization collapse, and boldly attempt to evaluate our own moment against these dire predictions.

ELECTIVES

***Note:** all High School students will be automatically enrolled in History and Craft of Science Fiction with guest teacher Heather Flannagan. You will have your choice of a second elective. Please choose between Kitchen Prep and Intro to Python.

Kitchen Prep **.50 CTE** **Daniel Rommel**

Food is 95% presentation and 5% taste. If it looks good, it is going to taste good. Students will learn from direct experience on how to safely navigate the kitchen environment. Students will be tested daily concerning proper hygiene and safety protocols which are necessary to facilitate full meal preparation. Students will learn to develop their taste palette and properly balance naturally sweet, salty, and sour ingredients. Students will be expected to maintain the cleanliness of the kitchen commons both in and out of class. The daily class environment will involve critique of utensils and cooking techniques. Students will be assessed on their ability to arrive collectively at the pass in an appropriately fashionable time. Critical thinking about what makes good food and where our food comes from will be an essential part of this course. Finally, students will be expected to develop complete meals and meal prep from scratch.

Intro to Python **.50 CTE** **Gavin Ray**

As any old nerd can tell you, text adventure games played a crucial role in the development of early video games. A lesser known fact is that writing your own text based game is a great way to learn a new programming language. In this class, we will learn the basic Python commands for those who are brand new to programming, as well as a collection of command line interface tools for creating a complex user interface. A student with more advanced coding knowledge could dive deep into Object Oriented Programming, while a student with artistic ambition can focus on game design and storytelling.

History and Craft of Science Fiction **.25 ELA** **Guest Teacher: Heather Flannagan**

This course boldly goes where no class has gone before. This fun, interactive class considers several aspects of science fiction including its origins, how it is defined, and how it shapes technology development IRL. In addition to a Socratic look at the history of science fiction, we will explore story writing and the steps that authors use to plan a first draft of a novel. These skills are transferable to fiction and memoir writing, but we will be creating stories consistent with the science fiction genre.History of Science Fiction is being offered by guest teacher, Heather Flanagan. Heather is the mother of a middle school student as well as a lifelong science fiction geek. Heather has an MBA from Seattle University. She left the executive marketing world to begin writing fiction and spend more time with her family and community.

MATHEMATICS

Algebra I **.50 Mathematics** **Frank Kuhl**

Algebra as we know it today is an amalgamation of the works of many mathematicians from third century Greece, eighth century Persia and sixteenth century France on up to the present day. This course will present students with the requisite concepts for familiarity and facility with this basic dialect that serves as a foundation for the language of mathematics.

Algebra II **.50 Mathematics** **Daniel Rommel**

Algebra II will explore variant types of traditional functions and their characteristic features. Specifically, we will analyze the characteristic equations for linear, quadratic, exponential, logarithmic, and trigonometric curves. We will discuss the real world application of such functions and how to solve for variants. A detailed

examination of the unit circle will bring to light its implications on sinusoidal functions and trigonometric rules. Assessments will be a combination of project oriented learning and relevant demonstrative transfers of knowledge. This class will culminate with a written essay detailing how to use the functions we examined to model nature and contemplate their predictive implications.

Precalculus **.50 Mathematics** **Daniel Rommel**

Precalculus will explore advanced algebraic themes through the scope of abstract set theory and number quantity. Connections between vector fields, matrices, and complex systems will develop through the language of set notation. Assessments will be a combination of project oriented learning and relevant demonstrative transfers of knowledge. Introduction to geometric series and limits will culminate into the understanding of the derivative as the foundation of calculus.

WORLD LANGUAGE & CULTURE COURSES

Spanish I/II (B) **.25 World Language** **Luis Portugal Tarifa**

In an increasingly globalized society, the ability to communicate effectively with diverse linguistic groups is paramount. As such, Spanish I/II emphasizes acquainting students with everyday vocabulary, its correct pronunciation, and appropriate usage. Grammatically, we will focus on present tense conjugations. We will use speaking and listening activities to simulate actual everyday situations, and related written assignments will utilize students' meta-linguistic capabilities. Further, students will experience aspects of Hispanic culture through films, music, and periodicals, learning skills that prove invaluable to taking the language beyond the classroom.

Spanish III/IV (B) **.25 World Language** **Luis Portugal Tarifa**

Spanish III/IV builds upon those skills acquired in Spanish I/II. Students will increase vocabulary and awareness of verb tenses and grammatical structures, with an emphasis on differentiating the preterit and imperfect tenses and subjunctive and indicative modes. Increased emphasis is placed on greater conversational ability as well as increased listening and comprehending skills. Students will be exposed to Spanish literature and films and will be expected to begin interactions with native speakers of Spanish as part of their coursework.

PE

Yoga and Backpacking **.50 PE** **Guest Teacher: Pat Cavit**

Yoga can improve flexibility, strength, and stress relief with adaptations that make it accessible to anybody. The classes will move through breath exercises, stretches, poses and flow sequences with a focus on alignment and personal development. No experience is necessary; all levels are welcome. This year backpacking trips will also be included in our physical education curriculum. Hiking is healthy!

*Note: Students who are enrolled in sports or other athletic programs may choose to count their program hours towards PE in place of yoga. Students must complete the Independent Study contract and pay an administrative fee.

Capstone I **.25 CTE** **Marley Simmons-Abril**

All seniors will be enrolled in this Capstone and graduation planning course in the fall. Each Capstone will start from a broad question or inquiry, such as "What is the relationship between art and science?" or "What makes people believe in wild conspiracy theories?" Students will seek answers to this question from a few different subject areas, such as (perhaps) biology, literature, and philosophy. This class will provide dedicated time for seniors to actively plan, develop, and even get a head start on their spring term projects. The Capstone is intended to be a bridge between high school and whatever follows graduation. Accordingly, this class will also cover college admissions and career pathways, program admissions, scholarships, resume-building, and other post-secondary topics.

*__Note__: All seniors are automatically enrolled in this course, which takes place during the scheduled PE period. Seniors who need or want to earn PE credits this term will design an independent PE course totalling 2 hours per week. There will be no administrative cost for this Independent Study.

FOOD CLUSTER

Stories of Food **.50 English** **Dashiell Potter**

Food is a sensory experience in its color, texture, temperature, and aroma, in its variety of tastes, in the chopping and sizzling sounds of cooking. Food is history: consider the tamal, jambalaya, or shepherd's pie. Food is culture: we develop customs, art, and institutions all around food. Food is universal: we all find it, cook it, eat it, and share it - every day. In this course we will be creating a community cookbook compiling interviews, recipes, and research papers surrounding a member of our community. Through reading select pieces and exploring our personal and cultural relationship to food through formal and creative writing, we will discover what food means to us and the community, why it is more than simple nourishment, and how it can enrich our lives.

The Importance of Salmon **.50 Social Studies** **Joy Pesaturo**

Why are salmon important? How did salmon influence the establishment of Washington as a state? If humans can farm salmon, will wild salmon be important moving forward? In what ways can we increase the sustainability of our salmon run? As an indicator species, the state of health of the wild and farmed salmon populations provide us critical feedback on the impact of human interactions with the environment. You will research the Boldt decision, investigate the treaties, and recognize our individual and collective responsibilities to honor them in perpetuity. You will investigate, communicate, and think critically about the current state of our salmon populations, analyze the root causes of salmon decline, discover the technology used to simulate salmon habitat, and judge the efficacy and safety of salmon farming for the future of food.

The Science of Food **.50 Science** **Dashiell Potter**

How do you taste? What actually makes up the food we consume? Where does our food come from? How is it sourced? These questions and more will be investigated in this deep dive into the science behind food. We will be spending time in the kitchen, farms, and in the natural world to come to our own conclusions about the nutrition that we put into our bodies. Using the scientific method as the backbone of this course we will discover what it really means to be a citizen in the world of science.

PE

Physical Education **.50 Health/PE** **Dashiell Potter**

This class we will explore physical education in a variety of ways. We will be primarily traveling to the YMCA two times a week to use their facilities to explore physical health. This year backpacking trips will also be included in our physical education curriculum. Hiking is healthy!

MATHEMATICS

Beginning Math **.50 Mathematics** **TBD**

Students will learn to identify the parts of and how to evaluate algebraic expressions. They will combine like terms and use the distributive property with variables, then apply their knowledge of the concept of area to polygons and to the volume of various geometric solids. Students will answer and form statistical questions using frequency tables and histograms and they will draw conclusions from data distributions and displays. Assessments will be a combination of project oriented learning and relevant demonstrative transfers of knowledge.

Intermediate Math **.50 Mathematics** **TBD**

Students will use their mastery of fractions, proportional relationships, and order of operations to tackle more complicated expressions, equations, and inequalities. They will combine like terms, use the distributive property and interpret linear expressions. Students will solve real-life and mathematical problems using numerical and algebraic expressions.

Pre-Algebra **.50 Mathematics** **Frank Kuhl**

Students will delve into the more abstract aspects of numbers and operations by learning about irrational numbers, properties of exponents, and the varied uses of scientific notation. They will define, evaluate, and compare functions. They will solve equations with variables on both sides, and they will construct linear models using algebraic equations.

ELECTIVES

Warp and Weft **.25 Art** **Joy Pesaturo**

Weaving has been an integral part of life for over 12,000 years. It is both functional and artistic by nature. In "Warp & Weft" we will learn basic weaving skills, while also examining the impact of "fast fashion" and textile waste on our environment. We will examine ways to extend the life of textiles in order to increase sustainability. Students will create a loom from an upcycled wooden frame, cardboard, and nature. We will create both usable and artistic weavings.

Insects and Us **.25 Science** **Colbi Jensen**

Even though life as we know it could not exist without insects, when we see a spider scuttle across the floor often our first reaction is ICK! There are about 10 quintillion living insects on earth at this moment, but what are the vital roles that these small creatures play in our lives? In this class we will investigate the relationships we share with insects, and explore what we can learn from them. We will start by practicing, observing, and sketching insects in our backyard. Then, we will discover the key role that insects play in our food systems, and how we can best protect declining populations. Along the way we will also be building and maintaining mealworm farms to create delicious dishes to share with each other, learning the role insects play in other culture's diets around the world. Yes, we will get the chance to eat bugs.

WORLD LANGUAGE & CULTURE COURSES

Beginning Spanish B **.25 World Language** **Luis Portugal Tarifa**

In an increasingly globalized society, the ability to communicate effectively with diverse linguistic groups is paramount. As such, this class focuses on acquainting students with everyday vocabulary, its correct pronunciation, and appropriate usage. Grammatically, we will focus on present tense conjugations. We will use speaking and listening activities to simulate actual everyday situations, and related written assignments will utilize students' meta-linguistic capabilities. Further, students will experience aspects of Hispanic culture through films, music, and periodicals, learning skills that prove invaluable to taking the language beyond the classroom.

Intermediate Spanish B **.25 World Language** **Luis Portugal Tarifa**

In this course students will increase vocabulary and awareness of verb tenses and grammatical structures, with an emphasis on differentiating the preterit and imperfect tenses. We will also spend more time focused on conversational ability. Students will be exposed to Spanish literature and films and will be expected to begin interactions with native speakers of Spanish as part of their coursework.