

Exhibit C: Curriculum Overview

Provide evidence that the proposed school's education program (described in the Executive Summary and other responses) would allow students to meet or exceed the performance standards currently established by the Board of Regents.

New Roots Charter School's curriculum is designed to ensure that all students receive a balanced, comprehensive, and college-preparatory curriculum that satisfies New York State graduation requirements, meets or exceeds all 28 commencement-level NYS Learning Standards, and prepares students to take both required Regents exams as well as those that qualify a student for a diploma with distinction. The curriculum reflects an orientation to the interdisciplinary, place-based, applied learning that is the hallmark of education for sustainability. Faculty from Cornell University, Ithaca College, Tompkins Cortland Community College, and Hobart and William Smith Colleges have been involved in its design, in addition to faculty and administrators from regional school districts. (See Exhibit H for more information about the New Roots Charter School Curriculum Development Team.)

All New Roots students will take a four-year sequence of courses in each core curriculum area: Science, Mathematics, Social Studies, and English. Yearly themes and essential questions will provide opportunities for integration across disciplines, as well as a “community read” selection each trimester. Interdisciplinary community-based projects will draw on all core subject areas, and arts instruction will be infused throughout the curriculum. All students will meet daily in Mentoring Community, which will include activities related to advising and portfolio development, physical education, health, participation in government, and family and consumer sciences instruction.

Core courses will be discipline-based with a cross-disciplinary focus. With the support and guidance of the Curriculum Director, teachers will use faculty meeting times on a regular basis to plan specific content connections and ways that students can use material from more than one class for projects and assessment activities. Courses across the disciplines will also be integrated through a common problem-based approach to learning, and through interdisciplinary place-based applications during experiences in the field and service learning projects. As in other schools that use the Core Benchmark Practices of Expeditionary Learning, an “Instructional Guide” (called the Curriculum Director at New Roots Charter School) will coordinate these efforts.

New Roots Charter School
Essential Questions, Required Scope and Sequence

Grade 9:	Essential Questions: <i>Who Am I? Where Am I?</i> Themes: Ecology and Systems Thinking
Science:	Earth Systems Science I: Physical Setting
Social Studies:	Global Studies I
Mathematics:	Mathematical Reasoning I: Algebra
English	English 9
Health/PE:	Personal Wellness I
CDOS/FCS:	Mentoring Community
Grade 10:	Essential Question: <i>Where have we come from?</i> Themes: The Evolution of Earth’s Natural and Social Systems
Science:	Earth Systems Science II: Living Environment
Social Studies:	Global Studies II
Mathematics:	Mathematical Reasoning II: Geometry
English	English 10
Health/PE:	Personal Wellness II
CDOS/FCS:	Mentoring Community
Grade 11:	Essential Questions: <i>Where are we going? How will we get there?</i> Themes: Human Invention/Technology
Science:	Contemporary Science and Technology I
Social Studies:	American History
Mathematics:	Algebra 2 and Trigonometry <i>or</i> Probability, Statistics, and Discrete Mathematics for Sustainability
English	English 11
CDOS/FCS:	Mentoring Community
Grade 12:	Essential Questions: <i>What’s my role? How do I prepare myself?</i> Themes: Wisdom, Insight, Entrepreneurship
Science:	Contemporary Science and Technology II
Social Studies:	Economics and Government
Mathematics:	Mathematical Modeling for Sustainability
English	English 12

CDOS/FCS: Mentoring Community
Seniors will also do an apprenticeship and a team capstone project.

New Roots Charter School Course Descriptions

History

Our “whole Earth community studies” curriculum is designed to create connections and cross-disciplinary instruction between our history and science curriculum strands. Inspired by Dr. Maria Montessori’s “Cosmic Curriculum,”¹ the first two years of our required four-year sequence lay a foundation of understanding the relationship between human and natural systems. In the context of studies of the origins and evolution of the Universe, students will learn about the development of Earth and its living systems, and the origins and development of human experience in this context. A common strand in our studies of human history will be an exploration of how geography, geology, and the bioregion that human communities are situated in have shaped culture, politics, and economics, and in turn, the impact that these human activities have had on the environment. Another focus will be systems thinking—understanding each concept and new piece of information as connected to and in the context of other aspects of the human and natural systems. Grounded in this understanding over the first three years of our required four-year sequence, students will explore how to apply this understanding to current issues in our community as part of a capstone experience in their Economics and Government course.

Global Studies I

Global Studies I is the first part of a two-year course sequence that provides a meaningful overview of human history in direct relationship to the current challenges of political, economic, and environmental sustainability. This course sequence prepares students to demonstrate their understanding of world history and geography in multiple ways, including by passing the Global Studies Regents examination. New York State content standards are explored thematically to help students deeply understand the structures and processes that shape our current world system. In the first trimester, students explore the relationship of local history and culture to natural systems and to world political, economic, and energy systems. In the second trimester, students analyze the historical origins of our modern world through the lenses of four social sciences: history, geography, economics, and political science. In the third trimester, students explore the origins, ideas, and development of the world's religions, and the role of religion and values in current global conflicts.

Global Studies II

Global Studies II is the second part of a two-year course sequence that provides a

¹ Montessori, Mario M.(1976). Cosmic Education. Amsterdam: AMI.

meaningful overview of human history in direct relationship to the current challenges of political, economic, and environmental sustainability. This course sequence prepares students to demonstrate their understanding of world history and geography in multiple ways, including by passing the Global Studies Regents examination. New York State content standards are explored thematically to help students deeply understand the structures and processes that shape our current world system. In the first trimester, students investigate the history of empires by studying the rise and fall of a wide range of ancient and modern empires, deducing the essential aspects of empire, and considering the imperial aspects of American world power. In the second trimester, students explore the modern era and its network of political, social, cultural, industrial, and scientific revolutions, and consider the role of individuals in making social change. In the third trimester, students participate in a model United Nations, learn to see our current world of sovereign nation-states from a multitude of national, political, and cultural perspectives, and develop a systems-level analysis of the current world, including recommended courses of action for sustainability.

United States History and Government

In the United States History and Government course, students explore the history of the United States from the colonial era to the present day and the structure and function of democratic government. This course prepares students to demonstrate their understanding of American history and government in multiple ways, including by passing the United States History and Government Regents examination. New York State content standards are explored chronologically with thematic emphasis. Consistent attention is paid to the ways that beliefs and practices concerning land and natural resources have shaped the broad patterns of United States history. For example, students will study how land use has transformed through time from Native American settlement, to colonial mercantilism, southern plantationism, family farming, early and late industrialization, and imperialism. Furthermore, students will explore how local, state, and federal governments have structured the relation of people to land and resources. Finally, students will explore the possibilities of individual and collective action as citizens to construct a healthy and sustainable relationship of humans to the natural world. Throughout the course, emphasis will be placed on the development of students' ability to: "read the world" using a variety of information sources such as text, visual media, and interpersonal communication; identify problems; envision alternative ways of being; and carry out real-world, community-based projects that address their relationship to the natural world.

Economics and Government

This year-long course unites the traditional senior-year semester-long studies of economics and participation in government. This course introduces students to the main ideas and practices of economics and civics, as they relate to current political, economic, and ecological challenges. In the first trimester, students study the basic concepts and skills of microeconomics, macroeconomics, international economics, comparative economics, and green economics and entrepreneurship, using the Cloud Institute for Sustainability Education's curriculum "Business and Entrepreneurship Education for Sustainability." Students analyze local, national, and global economies, actions being

taken to reorient these economies toward ecological sustainability, and develop entrepreneurial planning skills. In the second trimester, students study the basic concepts of political theory, American politics, comparative politics, international relations, and developments toward sustainability in local, national, and transnational governance, using the Cloud Institute for Sustainability Education's curriculum "Inventing the Future: Leadership and Participation for the 21st Century." In the third trimester, students work in groups to plan and enact a capstone project which demonstrates their understanding of economics and/or government as it relates to current challenges faced by their community.

Science

Our four-year science sequence is designed to give our students a foundation in understanding Earth's systems through an integrated study of traditional science disciplines, to foster understanding of how scientific thought, inquiry and knowledge have been a catalyst for the development of human civilizations, and to apply contemporary scientific understanding to the understanding and development of new technologies that address our current economic and ecological problems.

Earth systems science is an integrated and interdisciplinary approach to learning about the world around us. The Earth system approach focuses on the Earth as a set of components connected through the movement of matter and energy. Students learn this through study of Earth's subsystems and how they are inextricably linked through biogeochemical cycles. An Earth system approach fosters spatial and systems thinking in students, as well as other higher-order thinking skills.

Given the concerns that humans are impacting the Earth's climate and life support system, a broader concept of Earth as a system is emerging, including societal dimensions and the recognition that humanity is playing an ever-increasing role in global change. The Earth system is represented by a set of interacting spheres of influences and processes including the atmosphere, hydrosphere, biosphere, lithosphere, cryosphere, anthroposphere, and exosphere. Thus, Earth system science embraces chemistry, physics, biology, mathematics and technology to transcend disciplinary boundaries to treat the Earth as an integrated system to understand the past, current and future states of the Earth. Earth system science provides the physical basis for understanding the world in which we live and upon which humankind seeks to achieve sustainability.

The learning approach generates student interest and excitement by using student prior knowledge and experience as a starting point for instruction. We start with forcing factors or changes in conditions in a specific sphere of the Earth system and trace the effects of that change to other components of the system. Another unique dimension of our science curriculum will be its integration with agricultural studies and our Farm-to-School Meals Program.

Earth Systems Science I

This is the introductory course in our 4-year science sequence. In this course science is introduced as an integrated and interdisciplinary process of learning about the world around us. Throughout the year, students learn both the process skills necessary for understanding how science is actually done (analysis, inquiry, and design), and the content necessary for understanding how Earth's life support system works. In this first year, students begin their study by focusing primarily on what they can see and experience first hand. The course begins with a place-based study of local natural systems and how these have impacted and been impacted by humans. This will then naturally lead us into developing a model of the Earth system that includes the atmosphere, hydrosphere, biosphere, lithosphere, cryosphere, anthroposphere, and exosphere. With a firm understanding of the sub-systems interconnections, we will be able to use a problem-based approach to exploring and learning about the system dynamics. This class will fully integrate indoor and outdoor activities, observations, field trips, and experiments to fulfill the NYS Regents laboratory requirements. At the end of the year, students will take the NYS Regents exam in Earth Science.

Earth Systems Science II

This is the second course in our 4-year science sequence, and a continuation of Earth Systems Science I. We will continue using the systems model we developed in year 1 to deepen our understanding of the past, current, and potential future states of life on Earth. This course will explore the process and content covered in the NYS core curriculum for the Living Environment from an Earth systems approach. As in year 1, this class will fully integrate indoor and outdoor activities, observations, field trips, experiments, etc. to fulfill the NYS Regents laboratory requirements. By the end of the year, students will be ready to take the Living Environment Regents Exam.

Contemporary Science and Technology I

This 11th grade course will explore technology systems and manufacturing processes, and will address the social and political consequences of technological change. At the end of the course, students will engage in a capstone technology project through which they will demonstrate mastery of content and skills covered in the course. Topics in physics and engineering will be covered including measurement, straight-line motion, forces, dynamics, momentum, projectile, circular & rotary motion, engines and waves. The course will also include a unit on electrical theory and the basic principles and theories of digital circuits.

Contemporary Science and Technology II

This course will include the application of biology, chemistry, physics, and environmental, life and Earth sciences in such areas as energy, heat, sustainable technology, material properties and scientific inquiry. The course will have a laboratory as well as a classroom component. The course is divided into several units. At the end of each unit, students will be required to submit an exhibition portfolio that demonstrates mastery of relevant standards. Unit 1 will focus on biotechnology, including a review of molecular biology, and the study of its applications in biotechnology and impact on

society, industry, modern medicine and environment. Unit 2, the Cycles of Nature, will include elements of biology, chemistry and Earth science, and will be taught through an integrated, project-based approach that will focus on biogeochemical cycling of elements throughout the environment and the role of biological and chemical reactions in nature. Unit 3, Energy, will introduce topics from physics and chemistry including light, heat, electricity, magnetism, chemical energy and energy transformations. These topics will be integrated with the theme of sustainable energy systems. Course assessment will include a project relevant to students' senior team capstone projects.

Mathematics

The overall goals of the mathematics curriculum are to provide a strong mathematical foundation and appreciation of mathematics to serve its graduates as citizens, in the workplace, and in future studies, and to insure that students are prepared for the required Regents exams. These goals will be driven by contexts, problems, and issues drawn from the disciplines of environmental studies, social justice, and sustainability.

All students will be required to complete four years of mathematics coursework. Students who have not completed algebra successfully prior to enrolling at NRHS will begin with Mathematical Reasoning I. Students who have successfully completed an algebra course prior to enrolling at NRHS will enroll in Mathematical Reasoning II.

Recognizing that mathematical development proceeds at different rates for different students, the New Roots Charter School mathematics curriculum allows students up to two years to prepare for the Regents Algebra exam. Such pacing will also permit students to develop the mathematical knowledge and skills needed for this assessment in the context of meaningful realistic problems related to the environment. Such a focus on applied problem solving is consistent with the five process standards articulated by NYS, and will insure the development of conceptual understanding, procedural fluency, and problem solving skills as expected by the NYS Standards.

Mathematical Reasoning I and II will provide a foundation in algebra and geometry, that in addition to raising students' level of quantitative literacy and improving their problem-solving ability, will also provide a foundation for the upper two mathematical courses in New Roots Charter School's curriculum.

In spreading the development of the mathematical fundamentals out over two years, we will create three important opportunities: i) a chance for *all* students to mature and succeed at their own pace, ii) time in which to pursue some topics in more depth in response to student interest, and iii) time to enhance students' appreciation of mathematics and its role in culture and society by balancing the emphasis on the skills and concepts required for the NYS Regents exam with attention to the historical and cultural aspects of mathematics as a human activity and to contemporary developments in the mathematical sciences.

The next two courses in the sequence will emphasize the role of mathematical modeling as both a means of representing “real-world” problems and a means of solving these problems through use of the mathematical reasoning skills developed in the two previous courses. The first upper-level course, *Probability, Statistics, and Discrete Mathematics for Sustainability*, will develop further the ideas about probability and statistics first encountered in Mathematical Reasoning I and II. In addition, students will study topics drawn from financial mathematics, operations research, and discrete mathematics. The fourth course in the mathematics curriculum will be a capstone course for students to further develop their mathematical reasoning and problem-solving skills. *Mathematical*

Modeling for Sustainability

This course will be driven by real problems drawn from the local community. In developing models and solutions for these problems, advanced mathematical ideas ranging from advanced algebra and trigonometry through pre-calculus and advanced statistics will be introduced as required by the particular problems being addressed in each particular year. In this course, the representation, problem-solving, and communication process standards will receive heavy emphasis. Students interested in pursuing the Regents Diploma with Distinction will have the option of substituting Algebra II/Trigonometry in their junior year, or may take that course as an elective.

Mathematical Reasoning I

This course is primarily the study of algebra as the grammar of mathematics. All of the strands of New York’s math Skills Standards are introduced. The concepts and skills associated with variables and variable expressions, algebraic transformation and simplification, functions, generalizations, and proofs are introduced, developed, and assessed. Students’ prior understanding of integers and rational numbers is extended to the Real number system. Graphing on the Cartesian coordinate system lays the foundation for coordinate geometry that in turn leads to an introduction to geometry emphasizing properties of shapes, symmetry, transformations, and proofs related to two-dimensional geometry. As needed by some real-world problems, some elementary trigonometry, probability, and statistical ideas are also developed. The overall emphases are on developing mathematical fluency with variable expressions, equations, and formulas, and on honing students’ problem-solving skills in the context of meaningful realistic contexts. Students will prepare for and take the Algebra Regents exam at the end of their 9th grade year.

Mathematical Reasoning II

This course is a continuation of Mathematical Reasoning I and extends the students’ knowledge and skills to additional topics in geometry including some topics in three-dimensional geometry and transformations. Additional work in coordinate geometry will focus on inequalities and solving systems of equalities and inequalities that will also extend the students’ algebraic understanding of quadratic functions. All topics will be developed to the level of Assessment (NYS benchmark level) by the end of the course. Students will hone their problem-solving skills using meaningful and realistic contexts. All students will have the option to take the Geometry Regents exam at the end of the

course.

Algebra II and Trigonometry

Algebra 2 and Trigonometry is an option for the third year course in our four-year mathematics sequence. Students will hone their problem-solving skills using meaningful and realistic contexts whenever possible; however, the primary emphasis will be on the Regents curriculum. Students will have the option to take the Algebra 2 Regents exam at the end of the course. One of the standard algebra 2 and trigonometry texts will be selected in conjunction with those chosen for the 9th and 10th grade courses.

Probability, Statistics, and Discrete Mathematics for Sustainability

This 11th grade course introduces advanced concepts and skills required for understanding the roles played by chance, data, and discrete relationships in understanding and solving realistic problems in the fields of environmental studies, politics, business, industry, and science. All five Mathematical Process Standards will guide all work done in this course. Some of the Performance Indicators from previous courses will be deepened by advanced work in these areas as needed in the context of issues of sustainability. This course will be structured around a text such as *Discrete Mathematics Through Applications 3rd Edition*, by Crisler and Froelich and published by W.H. Freeman.

Mathematics for Sustainability

This senior capstone course emphasizes mathematical modeling of environmental, economic, and social problems drawn from the broader community. Small teams of students will complete case studies drawn from community partners and involve the students directly with these partners. In addition to developing further mathematical knowledge and skills, students will develop facility with appropriate technology for mathematical computation and exposition. Software such as *Excel*, *The Geometer's Sketchpad*, *PowerPoint*, *Fathom*, and *Mathematica* will be used as needed. This course also introduces advanced concepts and skills required for understanding the roles played by chance, data, and discrete relationships in understanding realistic problems in the fields of environmental studies, business, industry, and science. Along with other modeling approaches, graph theory is used as both a powerful mathematical modeling tool and as a context for advancing students' understanding of formal mathematical reasoning and proof. The five New York State Process Standards will guide all work done in this course and all five content standards will be emphasized. This course will be driven by curriculum modules published by the Consortium for Mathematics and Its Applications (COMAP). COMAP publishes a large number of stand-alone modules covering a wide range of contexts, ranging from the political and business realms to environmental studies and operational research. It is expected that each year, teachers and students will select modules that are of relevance for the particular community agencies and problems they are focusing on each year. As a reference for teachers, several texts will be used, such as *For All Practical Purposes* by COMAP, and *Discrete Mathematics in the Schools* by Joseph G. Rosenstein, Deborah S. Franzblau, Fred S. Roberts.

English

As in other schools that use the Core Benchmark Practices of Expeditionary Learning, literacy across the curriculum will be a hallmark of New Roots Charter School. English teachers will plan professional development workshops for their colleagues across the disciplines, and the Curriculum Director will coordinate this learning across the disciplines. English courses will focus on literary seminars, writing workshops, research skill development, the use of contemporary communication technology, media literacy, and finished products that culminate cross-disciplinary learning projects. Students will explore each year's essential questions through literature, relating historical, political, and economic events across time and place to individual experience and identity.

English 9

English 9 helps students develop their skills in reading, writing, speaking, and listening. Students will examine questions related to the present historical moment, as it is experienced in students' lives and the world at large. Themes will include: adolescence and initiation, community, nature, local issues, and the current world situation. Students will read and write stories, poems, essays, and responses for purposes of information, expression, analysis, and interaction, aligned to the New York State Learning Standards. Students will also develop basic research skills of reading and writing for information, and locating and evaluating both primary and secondary sources in research. To employ these skills and encourage cooperative teaching across the curriculum, students will be expected to complete a historical research project on their local area. Core texts for the course may include: Homer's *Odyssey*, initiation myths, Daniel Quinn's *Ishmael*, Jon Krakauer's *Into the Wild*, Barbara Kingsolver's *Prodigal Summer*, and Sherman Alexie's *The Absolutely True Diary of a Part-Time Indian*, in addition to poetry, essays, short stories, and other texts.

English 10

English 10 continues to focus on building students' skills in reading, writing, listening, and speaking, focusing on issues related to human history and development. Students will read a set of texts representing a variety of genres and authors, focusing on texts related to human evolution, history, great ideas, human development, and current global issues. Students will read and write stories, poems, essays, and responses for purposes of information, expression, analysis, and interaction, aligned to the New York State Learning Standards. Students will develop complex writing assignments and oral presentations that offer students the opportunity to articulate and explore their own identities. Texts may include: Sophocles' *Antigone*, Plato's *Apology*, Shakespeare's *Hamlet*, *Bell Jar* by Sylvia Plath, *A Raisin in the Sun* by Lorraine Hansberry, and *American Born Chinese* by Gene Yang.

English 11

English 11 focuses on issues related to the emerging global future. Themes will include: war and peace, utopias and dystopias, multiculturalism, and current global issues.

Students will read and write stories, poems, essays, and responses for purposes of information, expression, analysis, and interaction, aligned to the New York State Learning Standards. By reading across genres and media, students will develop critical literacy skills for all forms of media, including online blogs and forums. Assigned reading for the course may include: Homer's *Iliad*, More's *Utopia*, Shakespeare's *Twelfth Night*, Marjane Satrapi's *Persepolis*, and Esmeralda Santiago's *When I Was Puerto Rican*, among others.

English 12

English 12 addresses questions related to sustainability, citizenship, and vocation. Students will survey contemporary world literature to elicit questions regarding how to situate oneself in the world and what citizenship means. Students will be expected to read and evaluate texts such as *In the Time of the Butterflies* by Julia Alvarez, *The Alchemist* by Paulo Coelho, and *The Kite Runner* by Khaled Hosseini. The course helps students to understand audiences, refine critical thinking strategies, and prepare for college writing. Students will be evaluated by writing across genres and demonstrating the capacity to research, evaluate, and produce informational, analytical, and expressive writing for individual and group projects.

Spanish

New Roots Charter School will offer Spanish language instruction, with the option of three years of coursework culminating in the Regents examination. We have chosen to focus on Spanish because of its importance as a means of communication and as a cultural force for many communities in the United States, and its status as a primary language in countries on both the North and South American continents. As such, Spanish language and culture will be infused across the curriculum as is relevant. Students who are interested in studying languages other than Spanish will be offered opportunities to do so through Tompkins Cortland Community College.

Spanish 1

In Spanish I, students will gain a beginning level of proficiency in Spanish in the four skill areas (Listening, Speaking, Reading and Writing). Cultural learning is embedded in all the skill areas and in all the topics and structures that the students will be studying. By the end of Spanish I students will be able to speak in simple sentences with a limited range of vocabulary, understand simple and some complex sentence structures, understand the main idea of stories and many details that they hear and read, and write a simple 100-word story with basic structure and limited vocabulary.

Spanish 2

In Spanish II, students will gain an intermediate level of proficiency in Spanish in the 4 skill areas (Listening, Speaking, Reading and Writing). Cultural learning is embedded in all the skills areas and in all the topics and structures that the students will continue studying. By the end of Spanish II, students will be able to speak and write using more complex sentence structures with a wider range of vocabulary, understand complex

sentence structure with a wide range of vocabulary, understand the main idea of short stories, essays, articles, poems, etc. and many details that they hear and read, write short stories, journal entries, and letters with varied tenses and a wide range of vocabulary. This course prepares students to demonstrate an understanding of the relationship between the practices and the perspectives of Hispanic cultures; and to use Spanish both within and beyond the school setting.

Spanish 3

In Spanish III, students will gain an advanced level of proficiency in Spanish in the 4 skill areas (Listening, Speaking, Reading and Writing). Cultural learning is embedded in all the skills areas and in all the topics and structures that the students will continue studying. By the end of Spanish III, students will be able to speak and write using more complex sentence structures with a wider range of vocabulary, understand complex sentence structure with a wide range of vocabulary, understand the main idea of short stories, essays, articles, poems, etc. and many details that they hear and read, write short stories, journal entries, and letters with varied tenses and a wide range of vocabulary. At the termination of this course, students will be prepared to take the NYS Regents Exam in Spanish.

Other Required Courses

Personal Wellness (9th and 10th Grade)

In this physical education and health course, students will develop an integrated understanding of the physical, psychological, and social dimensions of human wellness, and create a personal plan with measurable outcomes that will demonstrate they have met commencement-level Learning Standards for both for their 10th grade Passage and 12th grade Graduation by Exhibition portfolios. A wide range of topics in human health, including physiology, nutrition, disease and disease prevention, drugs and alcohol, sexuality, relationships, stress and stress management, and wellness planning are addressed. Physical education activities focus on somatic training, sports, and exercises that develop physical strength, endurance, and flexibility.

Mentoring Communities (each year)

Mentoring Communities are groups of students and faculty who develop strong mentoring relationships as they meet New York State Learning Standards in Family and Consumer Sciences and Career Development and Occupational Studies. Students work with one another through daily engagement in school decision-making processes, portfolio development, community service and service learning, career exploration, school lunch preparation, physical recreation, wilderness mentoring, meditation and reflection, the arts, and other activities that are essential to building a sustainable learning community. Mentoring Community activities focus on supporting each individual's growth and development through the development of strong community relationships that honor the contributions of each member. Mentors serve as counselors who guide the student in their development of Passage and Graduation portfolios and completion of service and apprenticeship programs.

Art or Music Studio

Students at New Roots Charter School will have opportunities to meet commencement-level Arts Learning Standards through experience with the arts that is integrated with core coursework. In addition, students will take at least one year of a music or art studio course that allow them to develop necessary skills in their chosen area. Additional studio and instructional time will also be available for students who wish to pursue independent studies in one or both of these areas.

Electives

New Roots Charter School students will enjoy an array of elective courses. In the first two years of study, the focus will be on required courses, and electives will be primarily offered as week-long intensive courses between trimesters. In their junior and senior years, students will access elective courses through Tompkins Cortland Community College in addition to those offered at New Roots Charter School. These electives will help inform students' community team capstone projects. Examples include:

Advanced Technology

This technology course will offer students the opportunity to learn more complex web design, digital graphics and publishing. This course will build on students' knowledge of the use of technology as it relates to real-world occupations.

Sustainable Agriculture and Local Food Systems

This course will relate Environmental Science studies to applications in sustainable agriculture.

Permaculture

Students will explore permaculture concepts and principles, and engage in hands-on application and design processes.

Green Building and Architectural Design

This course will provide students with hands-on applications of science, social studies, and mathematics concepts to the question of sustainable human habitats.

Wilderness Mentoring

This course will combine scientific understanding with traditional ways of coming to know and understand nature through direct experience.

Power of Hope

This arts-based course will inspire students to discover their creativity and sense of purpose, while cultivating leadership skills that will enable students to be agents of change in their communities.