

**CONCORD EDUCATION FUND
GRANT PROPOSAL COVER SHEET
YEAR 2012 GRANTS**

PROPOSAL TITLE:

Field Work for Rivers and Revolutions

PRIMARY CONTACT:

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OTHER PROPOSAL APPLICANT NAME(S):

Diana Rigby, Peter Badalament

\$\$ AMOUNT REQUESTED:

\$23,370

GRADE LEVEL(S) TO BENEFIT FROM THIS PROPOSAL:

Grades 11-12

ESTIMATED # OF STUDENTS WHO WILL BENEFIT FROM THE PROPOSAL:

100+

SHORT DESCRIPTION OF PROPOSAL:

The funds will be used to support the field portion of Rivers and Revolutions, including transportation, admission fees, and speaker stipends.

IS THIS PROGRAM NEW TO THE CONCORD SCHOOLS?

Yes.

Rivers and Revolutions Field Work

A. *Proposal Goal - Include number and grade level of primary beneficiaries.*

The goal of the proposal is to support the field portion of Rivers and Revolutions – an interdisciplinary, experiential school-within-a-school opening at CCHS in the fall of 2011.¹ As the program operates on a 1:1 classroom to field ratio, a significant amount of time will be spent attending plays, performances, panel discussions, visiting museums, libraries, natural areas, National and State Parks, Conservation Lands, and other sites of salience. A sampling of likely sites includes: Walden Pond, Minuteman National Historical Park, Estabrook Woods, Sleepy Hollow Cemetery, Orchard House and the School of Philosophy, Emerson House, Hugh Cargill Community Gardens, Caesar Robbins Interpretive Center, Great Meadows NWR, Concord Museum, Concord Free Public Library, Concord Art Association, Concord Conservation Lands, Carlisle Cranberry Bogs, DeCordova Sculpture Park, Harvard Museum of Natural History, The Huntington Theater, The Black Heritage Trail, Boston Public Library, The State House.

Each semester, the program will include fifty students in their junior or senior year. As such, over the course of the school year, one hundred students will participate directly in the program. The program aims to attract a diverse student body – from students struggling to access the curriculum to students who are

¹ A full description of the program is attached to the end of this document – please note that it is meant to serve as an appendix, and as such this proposal itself does not exceed the seven-page limit.

performing well but might not feel connected to the curriculum. As these students will re-enter the mainstream curriculum, it is likely that the impact will be felt beyond these one hundred students as they take their learning back with them into the classroom.

It should further be noted that aside from the five teachers who will be embedded in the program, CCHS will support a professional development program that will allow other teachers to observe and to participate in the program. As such, it is possible and likely that many more students than those enrolled in the program will also benefit from Rivers and Revolutions as teachers who come to observe/participate bring back new ideas to the classroom.

B. Proposal Description - Including timeline and implementation plan.

Upon receipt of funding, funds would be used to arrange transportation and to pay the necessary fees and stipends. Funds would be used over the course of the year in order to cover these costs.

C. Evaluation Methodology - Include how you will be able to evaluate the proposal during and after completion.

The pilot program as a whole will be assessed several throughout the course of the year to determine whether or not it will run in the following school year, 2013-2014. Particularly, we will assess the efficacy of the field portion of the

program by soliciting feedback from students and teachers, and by looking for and assessing the impact of the field work on student performance.

D. Proposal Budget - Include a detailed accounting of all project expenses such as equipment, supplies, printing, travel, stipends (salaries cannot be funded), etc.. Also indicate whether this project could proceed with partial funding and if other funding sources are being approached.

(15) Half day trips - \$135 each = \$2025

(8) Full day trips - \$270 each = \$2160

(15) Group admissions to historical sites/plays, etc. - \$400 each = \$6,000

(15) Stipends for guest speakers - \$100 each - \$1,500

One semester=\$11,685

Full year=\$23,370

We are not pursuing other funding sources at this point.

E. Qualifications - Describe education, experience or personal interest of proposal leaders and participants.

Michael Goodwin began his career in education as a teacher of English at The Groton School. Following Groton, he settled in Vermont, where he worked intensively with students who had been expelled from the public school system.

While in Vermont, Michael founded Friends of Dicisco, a nonprofit organization dedicated to strengthening communities by highlighting relationships between people and the natural world. He currently serves as President of the organization. Michael has also served as the academic director of the Great Books Summer Program, an enrichment opportunity for high school students held at Amherst College and Stanford University. In the summer of 2010, he created and directed a tuition-free interdisciplinary, experiential program entitled “Rivers and Revolutions,” the template for the program opening at CCHS. Having graduated from CCHS in 1994, Michael returned to the building in 2007. He has worked in the Special Education and Social Studies Departments, has helped to advise the Environmental Field Studies Group, and currently directs Senior Project. He is pursuing an M. Ed in School Leadership from the Harvard Graduate School of Education, where he also serves as a teaching fellow. He will complete his degree in May of 2012. He is currently applying for the position of program director and English teacher for Rivers and Revolutions.

Superintendent Diana Rigby and CCHS principal Peter Badalament have been ardent supporters of interdisciplinary programming throughout their tenure in the system and have been working closely with Michael to develop the program. They feel that Rivers and Revolutions offers not only a more authentic approach to the world, but also a potent means of serving the needs of all learners. They have both been tireless advocates of students who have trouble accessing the curriculum at CCHS, and see Rivers and Revolutions as a key part of the strategy

in closing the achievement gap. Further, they see Rivers and Revolutions as a profound learning opportunity for teachers, thus potentially impacting countless students in the future.

F. Future Budget - Please indicate whether the proposal will have future operating budget impacts and if so, how your proposal will remain funded or supported in the future when CEF funds are spent

The funds requested in this proposal will cover the field portion of the program for the first year of the program's operation, 2012-2013. As the status of this proposal has not yet been determined, it is unclear whether or not we might continue to apply for CEF grants, or whether we will have to look elsewhere for the financial support necessary to fund this aspect of the program.

Rivers and Revolutions

Program Overview for Concord Education Fund Proposal
October 26, 2011

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Introduction

This document is designed to offer an overview of Rivers and Revolutions, an interdisciplinary and experiential pilot program scheduled to launch at Concord-Carlisle High School in the school year 2012-2013. The document reflects the collaboration of many faculty members, administrators, and students from across the district, including: Michael Goodwin, Diana Rigby, Kathy Codianne, Peter Badalament, Jessica Truslow, Johanna Glazer, Mary McCabe, Shane DiCristina, Margaret Perko, and the CCHS department chairs group.

Rivers and Revolutions first ran as a summer course in August 2010. Led by a team of seven educators – including Concord-Carlisle faculty and staff members Michael Goodwin, Anthony Beckwith, Mary McCabe, and Patrick Savage – a group of twenty students from across the state came to Concord to participate in a successful two-week, tuition-free program (www.riversandrevolutions.org).

As a “school-within-a-school” at CCHS, Rivers and Revolutions will offer a full immersion experience for 50 students - juniors and seniors - per semester. Students will have the opportunity to take one class outside of the program during A block; this will allow students to continue their foreign language program or take another elective.

Please note that while the basic thrust of the following description will remain unchanged, some of the details might change as the Rivers and Revolutions planning committee continues to work towards implementation. All alterations will be finalized by the time students sign up for the program.

For more information please contact: Michael Goodwin (megoodwin@colonial.net).

Program description

Governed by an overarching thematic arc; the semester will be divided into 1-3 week units. The program will operate on a 1:1 classroom to field ratio, though not necessarily on a daily or even weekly basis. Each day of the week will be devoted to a particular discipline, or lens, through which students and teachers will engage the subject matter.

- Monday: English
- Tuesday: Social Studies
- Wednesday: Science
- Thursday: Mathematics
- Friday: Arts

Though the same curriculum will be offered each semester, different field site visits will make the spring semester a different experience from the fall. Types of field activities include, but are not limited to: attending plays, performances, panel discussions, visiting museums, libraries, natural areas, National and State Parks, Conservation Lands, and other sites of salience.²

The program will be of a contiguous nature and as such, students and teachers will have the opportunity to continually reference the collective body of material at any given time. In other words, though direct instruction in mathematics might only take place on Wednesday, students might apply their mathematical understanding on Friday as they figure out how to collectively create a painting on a twenty-foot canvas.

This interdisciplinary, experiential program will offer students a coherent and rigorous academic experience. The curriculum will provide students with the opportunity to consider the relationship among different ways of understanding and engaging the world, create connections between seemingly disparate things, and investigate links between the content and their own lives. The program is designed to work for all types of learners.

² A sampling of likely sites includes: Walden Pond, Minuteman National Historical Park, Estabrook Woods, Sleepy Hollow Cemetery, Orchard House and the School of Philosophy, Emerson House, Hugh Cargill Community Gardens, Caesar Robbins Interpretive Center, Great Meadows NWR, Concord Museum, Concord Free Public Library, Concord Art Association, Concord Conservation Lands, Carlisle Cranberry Bogs, DeCordova Sculpture Park, Harvard Museum of Natural History, The Huntington Theater, The Black Heritage Trail, Boston Public Library, The State House.

Students

Fifty students in total will participate in the program each semester. Students entering their junior or senior year will be eligible to apply. All efforts will be made to recruit a diverse student body. Given the unique nature of the program, Michael Goodwin and other members of the planning committee will begin holding informational meetings for students and their families in the fall of 2011. Once applications have been received, a lottery process will determine which students are placed in the program.

CCHS students participating in the program will earn 2.5 credits for English, Social Studies, Science, Mathematics, and Art.

Faculty

The five teaching positions will first be offered to current members of the CCHS faculty so long as there is interest, and so long as the candidate is suitable for the position.

Learning objectives

1. Students will come to a clearer understanding of the purpose, use, and depth of each academic discipline, and will begin to grasp the holistic relationship of academic disciplines to one another. Further, students will become more adept at using different expressions of each discipline to articulate their conceptual understanding of the material.
2. Students will develop their capacities to make connections between the content and their own lives.
3. Students will understand the different domains of group work and will become more effective at working with groups to accomplish collective goals.
4. Students will, in the net, enjoy the learning process and will further develop their capacities to educate themselves in their quest to become life-long learners. To this end, the collected faculty will allow students a significant amount of choice and control in engaging in the work of the program.
5. Students will come to a clearer understanding of how their actions impact others, and will explore the myriad ways in which they may shape the world in which they live.

Assessment program

Rivers and Revolutions aims to meet the needs of all students by creating a learning community in which the curriculum and assessment tools will be tailored to the individual needs of each student.

Students will be assessed through individualized rubrics created by students and faculty at the start of the program. Each faculty member will be responsible for overseeing the rubric portfolio of ten students in the program and will meet with each student periodically to assess movement through these rubrics and to revise rubrics where necessary. The final assessment will take the form of a narrative that gauges the

individual student's movement through these rubrics; in this sense, RR offers a developmental form of assessment unique to each student.

Factors that will be taken into account to assess each student's development include: class participation, nightly homework assignments, unit projects, participation in group projects, and a final presentation. The final presentation will give students the opportunity, in groups of five, to take ownership of a full day of the program, using the five primary disciplines to present a topic of their choosing.

Sample curriculum

The following sample curriculum will serve as the foundation for the work of faculty members engaged in the Rivers and Revolutions Professional Development Program, and the student subcommittee engaged in curriculum development. The work generated collectively by these two committees will be handed over to the Rivers and Revolutions faculty. At this point, the Rivers and Revolutions faculty members will use this wealth of material to finalize the day-by-day curriculum and will begin the intensive process of collaboratively building the final curriculum.

Key

E: English

SS: Social Studies

M: Mathematics

S: Science

A: Arts

G: All disciplines

Quarter one

Opening ceremonies (day 1)

Rivers (days 2-13)

- E: The River and the Human Condition
- SS: 1635: Floodplains, Egg Rock and the Natives of Massachusetts
- S: One and the Many: Molecules and Riparian Ecology
- M: What does X have to do with 7? Symbols and Inflection Points
- A: Andy Goldsworthy and the River Systems of Massachusetts
- G: Rubric Development
- E: Rivers and Human Conditions, Robert Frost's "Directive"
- SS: The Wheel
- S: Water Tables, Dams, Evaporation
- M: The Circle: A Geometric and Trigonometric Perspective
- A: River gallery walk
- G: Group synthesis

Commence work on Ten Presentations (day 14)

Revolutions (day 15-21)

- SS: Education and Obligation
- S: The big bang, seasons, and glaciers
- M: Pablo Picasso and Jackson Pollack
- E: Tone - From the Transcendentalists to Edward Abbey
- A: At the forefront: From Hieronymus Bosch to Virginia O'Keefe
- G: Group Synthesis

Air (day 22-33)

- S: Gravity, Frogs and the Stratosphere
- M: Pollution: Linear Equations and Inequalities
- A: Skyscapes
- E: The Stratosphere, Frogs, and Gravity
- SS: Changes in the Climate
- S: Transpiration and The respiratory system
- M: Parabolas: up into the air and down again
- A: Reflections
- E: Birds
- SS: From Lindbergh to the Enola Gay to the decline of NASA
- G: Group Synthesis

Fire (day 33-40)

- M: Probabilities and Thresholds
- A: Mood
- E: Playing with the Flames: Prometheus/Socrates/Annie Dillard/Martin Luther King Jr.
- SS: From Prehistoric Caves to the Congo to the Firebombing of Tokyo
- S: The sun
- G: Group synthesis

Quarter two

Love (day 41-51)

- A: Portraits
- E: Form? The Sonnet, Emily Dickinson, and ee cummings
- SS: The progressive era
- S: Molecules and Mating behaviors
- M: Limits and multiple variables
- A: To All Which We Declare
- E: Richard Goodwin's *The Hinge of the World*
- SS: Marriage
- S: Forces of attraction

- M: The Beckwith mystery: the square root of 17
- G: Group synthesis

Seasons (day 51-66)

- E: So Much Has Changed, So Much Remains the Same: assorted passages from Henry David Thoreau, Jhumpa Lahiri and Franz Kafka
- SS: Human Development - a psychological retrospective, introspective
- S: From solstice to equinox and back again
- M: Avian Architecture
- A: Cave Art and Public Murals
- E: Summer
- SS: Fall
- S: Winter
- M: Spring
- A: Summer
- E: Fall
- SS: Winter
- S: Summer
- M: Spring
- A: The Globe
- G: Group synthesis

Migration (day 67-72)

- SS: The Great Migration: A sociological investigation
- S: Birds and whales
- M: Calculus
- A: Vernal Pools
- E: Across the ocean
- G: Group synthesis

Equilibria (day 73-79)

- S: Rivers
- M: From Two to One to Zero
- A: Breathing
- E: The River and the Human Condition
- SS: Native

Ten presentations (day 78-88)

- Group 1 - TBD
- Group 2 - TBD
- Group 3 - TBD
- Group 4 - TBD
- Group 5 - TBD
- Group 6 - TBD

- Group 7 - TBD
- Group 8 - TBD
- Group 9 - TBD
- Group 10 - TBD

Closing ceremonies (day 89-90)

- 1/2- Final Meetings with academic advisor/networks
- 2/3- Final group synthesis/closure

Salient excerpts

These excerpts speak to many of the pedagogical underpinnings of the program.

John Muir (1911) “When we try to pick out anything on its own, we find it hitched to everything else in the universe.”

Annie Dillard (1974) “What is the difference between a cathedral and a physics lab? Are not they both saying: hello?”

Andy Goldsworthy (2000) “The older I become, the more connections I can make between time, experiences, and places. I have always felt uncomfortable with the easy categorizations that people sometimes apply to my art.”

David Orr (1994) “We have fragmented the world into bits and pieces called disciplines and subdisciplines, hermetically sealed off from other such disciplines...(this) explains why our national accounting systems do not subtract the costs of biotic impoverishment, soil erosion, poisons in our water and air, and resource depletion from our gross national product”

Thich Nhat Hanh (1993) “When we believe something to be absolute truth and cling to it, we cannot be open to new ideas.”

Will and Ariel Durant (1968) “We must operate with partial knowledge, and be provisionally content with probabilities; in history, as in science and politics, relativity rules, and all formulas should be suspect.”

Aldo Leopold (1949) “One day, I buried myself prone in the muck of a muskrat hole.”

S. Paris and J. Turner (1994) “...it is the perception of students in these situations that is paramount and if they perceive that they have choice and control, and if they can take responsibility for reaching their goals, then indeed they can display appropriate and continued motivation.”

Alan Bandura (1997) “In competitive systems, the successes of skilled members spell failure for the less able. Victors enhance their self-appraisal. Losers suffer self-devaluation. The negative impact may be lessened if different people find different things at which they can excel.”

Alan Bandura (1997) “Educational practices should be gauged not only by the skills and knowledge they impart for present use but also by what they do to children’s beliefs about their capabilities, which affects how they approach the future. Students who develop strong belief in their efficacy are well-equipped to educate themselves when they have to rely on their own initiative.”

Carol Dweck (2000) “(Self-esteem) is something we equip them to get for themselves – by teaching them to value learning over the appearance of smartness, to relish challenge and effort, to use errors as routes to mastery.”

John Bransford et al (2000) “Effective teachers help people of all ages make connections between different aspects of their knowledge.”

Roger Goddard et al (ND) “When educators having unique knowledge of a child operate in isolation, the child’s educational experience becomes fragmented and the child’s needs may go unmet.”

Roger Goddard et al (ND) “...when teachers work together they are not only less isolated, but also more focused on academic and behavioral outcomes for students than when they work alone.”