

Renewal Inspection Report

Cape Cod Lighthouse
Charter School
Orleans, Massachusetts

SETTING

The Cape Cod Lighthouse Charter School is located in a commercial center in the community of Orleans. Orleans is an attractive New England coastal town with strong ties to its seagoing past. Sports fishing, shelling fishing, and aquaculture are the present forms of its ongoing maritime industry. Conservation efforts and the formation of the National Seashore Park have been the cornerstone of a recent growth in tourism.

The 162-student school shares the commercial center with professional offices and small businesses. Though students come to the school's site for most activities, the school views the greater community as its campus; and many school activities take place in the facilities of local resource partners and in the natural settings in Cape Cod. Cape Cod Lighthouse Charter School was founded by a group of parents and teachers with a mission to create an interdisciplinary middle-school program that would utilize community resources.

Inspection Team

Ledyard McFadden, Lead Inspector

Mr. McFadden is the President of SchoolWorks. He has taught English as a second language in Costa Rica and Chelsea, Massachusetts. He was the founding Director of Operations for City on a Hill, a charter school in downtown Boston.

Mary Beth Klee, Inspector

Dr. Klee founded and served as Head of School of Crossroads Academy (K-8) in Lyme, New Hampshire. She is a consultant to the Core Knowledge Foundation and technical editor of a new Pearson Educational Development history series for elementary school students.

Karen Laba, Inspector

Dr. Laba is a former elementary, middle school, high school, and college science teacher. She is a consultant to a range of science curriculum projects, including the Scientist as Humanist Project and FIRST Lego® League. She also supervises student teachers for the University of New Hampshire.

Mr. George Viglirolo's distinguished career in public education spans thirty years. The majority of his career has been spent teaching and helping others to teach English at the middle and high school levels. For fourteen years, Mr. Viglirolo served as the Department Co-Chair for the Brookline High School English Department where he currently teaches full time.

RENEWAL FINDINGS

IS THE ACADEMIC PROGRAM A SUCCESS?

1. **Standardized tests indicate that students enter the school performing at a high academic level and further indicate that these levels of attainment are sustained while students are at the school.**

Though testing data are not available for all students who have attended the Cape Cod Lighthouse Charter School (CCLCS), available results denote appropriate academic growth from year to year. As reported by the California Achievement Test (CAT), the eighth grade class of 1997/1998 maintained the national percentile ranking of approximately 70% from the previous year when they were tested at the seventh grade level. As measured by grade-level equivalency, this same group of students gained 1.2 years on the full battery of the CAT over the same period of time. The 1998 spring implementation of the eighth grade Massachusetts Comprehensive Assessment System (MCAS) also attests to the academic growth of these students during their three-year career at CCLCS. In every area of the test, CCLCS students compared favorably to students across the state and students attending the local regional middle school.

Narrative References: 6,7,8,9,10

2. **The promising movement in the school to review and evaluate internal assessment tools will provide a consistent and accurate measure of both student success and program effectiveness.**

As noted in its application for renewal, CCLCS is building school-wide coherence among the wealth of assessment strategies used by individual teachers. These assessment tools include pre-testing, rubrics, presentations, summative tests, essays, and several portfolio systems. Through formal and informal meetings, subject area specialists are constructing common assessment practices that span the school's three grade levels. For example, in their study of science, CCLCS students create a graphic representation of essential concepts each year. Each new representation elaborates upon and augments the former year's conceptual web. Additionally, through formal and informal meetings, grade-level teachers are creating common assessment practices in all subject areas, such as rubrics that are used to grade writing across the curriculum.

Narrative References: 11, 16, 18, 28, 29

3. **There are substantial sets of academic standards that shape the daily teaching at the school. They exist in the school's accountability plan, in annual reports, in the rubrics for assessment, and in the minds and common understandings of teachers. When brought to life through dialogue and collaboration among teachers, these standards are the foundation of a vibrant curriculum experience.**

Upon review of a mosaic of documentation and oral tradition, the inspection team found evidence of academic standards that are generally appropriate for the school's interdisciplinary mission. A system of faculty meetings, organized at times by grade level and at times by subject area, promotes a common understanding of these standards among the faculty and ensures a logical articulation of the standards across the three grade levels. The constant verbal exchange of ideas among teachers is the primary vehicle for weaving the school's subject area standards into interdisciplinary units.

Narrative References: 1,2,3,4,5, 18, 19,20,21,22,23,24,25,26,27,28,29,30

IS THE SCHOOL A VIABLE ORGANIZATION?

1. **Both parent satisfaction and the rising number of new applicants indicate the school's success to date and its ongoing viability.**

Parents, as well as other community members, praise the school's adherence to mission. They are particularly impressed by the individual attention that their children receive from faculty. Parents trust the faculty and support the ongoing development of programming by participating in school events and classroom instruction. Strong bonds between the faculty and families of CCLCS abound and ultimately strengthen the school's long-term viability. In addition to satisfying its present student body, the school has attracted a widening group of applicants. Both of these developments indicate that the school will remain fully enrolled.

Narrative References: 11, 29, 35, 39, 49

2. **The school's collaborative governance structure continues to be effective in identifying problems and developing solutions.**

As set forth in its original charter, the CCLCS management structure reflects a strong belief in personal responsibility, consultation, and consensus. It is the personal responsibility of all CCLCS community members to bring to light issues and concerns and to participate in the daily governance of the school. Decision-making on a particular issue begins with a consultation of appropriate community members and strives to find closure in the consensus of the same. For instance, vital decisions such as budget, hiring, and compensation are made through committees comprised of parents, faculty, and, in some cases, students. Curriculum decisions are made through a similar system of faculty meetings organized both by subject area and grade level. The flexibility inherent in such a governance structure has allowed this small school to address effectively the multitude of start-up challenges faced by any new organization. When new issues or tasks arise, formal or informal committees are created and remain intact as necessary. The size, representation, and skill sets of these committees are easily adjusted because of the willingness to participate that pervades the CCLCS learning community.

Narrative References: 38, 39, 40, 41, 42

3. **The school's long-term viability and its control over its own mission are presently compromised by the inadequate articulation of its educational goals, standards, and practices. Present documentation does not adequately communicate the rich teaching and learning that were clearly in evidence during the inspection.**

The challenge for CCLCS is not achieving academic success but communicating its present success in a way that it is both true to the school's beliefs and easily accessible to a wider audience. While the inspection team came to understand the school's academic goals, standards and practices and the ways in which these components work together, there is no vehicle for others who are not able to spend time in the school to do so. Neither the original charter nor the present accountability plans serve this function. As stated in the school's application for renewal and corroborated by the majority of the faculty, the original charter is "open textured." To better serve the students of CCLCS, significant changes have been made to its original design during the last four years. In the opinion of the majority of faculty interviewed, the present accountability plan, while serving an important accountability function, is not an adequate expression of the school's educational goals, standards, and practices. Without comprehensive, precise program documentation, CCLCS cannot comply with the spirit of accountability and the dissemination of best practices that characterize the Massachusetts Charter School Law.

Narrative References: 1,2,3,45, 18, 21,22,23,24,25,26,27

4. **A bright, imaginative, hardworking and intellectually ambitious faculty encourages the love of learning, curiosity, and creativity in students.**

Board members, parents, and students resoundingly applaud the faculty's dedication to the school and the acumen its members bring to the education of young people. There is unanimous agreement that the faculty is the cornerstone of CCLCS. The faculty has a high degree of content knowledge and a notable command of teaching methodologies. Parents express deep satisfaction with the individual attention given to their children. Parents generally sense that every child is individually monitored and nurtured by the professional staff and that all of the children are flourishing as a result. The involvement of students in numerous seminars and extra-curricular activities stems from the love of learning and the sense of responsibility for guiding one's own education that have been instilled in them by the faculty.

Narrative References: 1, 2, 4, 16, 18, 21, 27, 31, 32, 33, 41

5. **Given the school's reliance on the strengths of individual teachers, the continued viability of the program will depend upon the school's ability to recruit and retain faculty with strong academic backgrounds in the subjects they teach.**

The reliance on excellent staffing is higher at CCLCS than at many schools. CCLCS values the autonomy of individual teachers and encourages all staff members to develop their own approach to teaching. This approach is well suited to a highly skilled staff, allowing them to develop innovative and effective programming without unnecessary constraints. The school's colloquium style of curriculum management also depends upon a faculty that has internalized high academic standards and can therefore manage the academic program through conversation and shared understandings, as well as through documentation. The school's challenging mission to develop an interdisciplinary program that still meets the guidelines of the Massachusetts Curriculum Frameworks further heightens the need for skilled teachers who can weave together important strands of content and skills from various subject areas into coherent interdisciplinary units. Therefore, the school's ongoing success will depend on maintaining the high quality of teaching staff presently engaged by CCLCS.

Narrative References: 1, 18, 19, 21, 26, 27,31, 32, 41, 42

HAS THE SCHOOL BEEN FAITHFUL TO THE TERMS OF ITS CHARTER?

- 1. The school's stated goal of thematic, interdisciplinary learning is evident in many areas of the program.**

While the traditional subject areas are taught through separate classes and subject area specialists are identified at each grade level, many units within these classes are interdisciplinary. For instance, the sixth grade social studies curriculum teaches geography through a study of animal migration patterns that one would expect to find in a science class. The school makes excellent use of its writing and art programs to integrate the academic disciplines. For example, a fine arts research project on nineteenth century artists supports the student's historical study of the same period. The faculty has accomplished this linking of subject areas while bringing the curriculum into alignment with the Massachusetts Curriculum Frameworks.

Narrative References: 5, 19, 20, 21

- 2. The CCLCS charter recognized the establishment of a "community of learning" as a key goal for the school. This goal has been fully realized, not only through the faculty's dedication, but also through family commitment and community involvement.**

Teachers, parents, and students strongly identify with the shared values of personal responsibility, perseverance, and consideration that define the CCLCS community of learning. They believe that each person is responsible for his or her own intellectual growth and that the CCLCS community as a whole is responsible for fostering the growth of each individual. The school's board and administration create opportunities for the faculty to develop their own approach to teaching; and teachers, in turn, model their own pursuit of intellectual growth for students through the school's seminar program and through the regular academic program. Parental involvement in a myriad of extracurricular activities further demonstrates to students the importance of developing an abiding passion for learning. This emphasis on taking responsibility for one's own learning and finding joy in that learning goes hand in hand with the consideration for others shown by all community members. Throughout the day, the school is busy with students passing through the interconnected classrooms, working alone in the library, and pursuing projects in small groups with minimal supervision. In this hive of individual endeavors, there are few examples of lost time or interruption. Each student pursues his or her learning with a high degree of purposefulness and consideration for the work being done around him or her.

Narrative References: 13,14,15,16,17

3. **In the spirit of its charter, the school has consistently fostered strong relationships with community organizations and members. These not only strengthen the academic program but also help students become good citizens of Cape Cod.**

The number and quality of partnerships formed by the school in its short history are remarkable. The extent to which these partnerships are integrated into the academic program is equally impressive. These partnerships alleviate some of the limitations of the school's facility, provide field study opportunities that enrich classroom studies, and bring a wealth of experts into the CCLCS community.

Narrative References: 37, 48, 49, 50, 51, 52

IF THE SCHOOL'S CHARTER IS RENEWED, WHAT ARE ITS PLANS FOR THE NEXT FIVE YEARS OF THE CHARTER?

Note: Given the prospective nature of this renewal question, no references are included to the school inspection and resultant narrative.

1. Plans cited in the application for renewal to disseminate the school's ideas, curriculum, and goals are commendable. Fruitful dissemination of the school's program will depend not simply on the communication of specific programs, but also on a clear expression of what the school values in teaching and learning.

CCLCS has appropriately identified the dissemination of ideas, methods, and materials as one of the school's key goals for the next five years. Furthermore, the school already has an outstanding track record for the dissemination of particular practices. Through its web site, newsletters, seminars, professional development opportunities open to district schools, stargazing parties for the public, monitoring of public environmental issues, and many other outreach programs, many aspects of the CCLCS academic program are already available to the public. However, this impressive range of dissemination activities does not distill for others the common values and beliefs that define this community of learning. The school presently lacks a consolidated statement of mission, philosophy and practice that accurately describes its rich attributes.

2. A structured system of teacher evaluation, as mentioned in the renewal application, is necessary. It will ensure the ongoing success of a school that relies upon a highly competent staff.

Just as the charter school law provides schools with a high degree of independence in exchange for a high degree of accountability, CCLCS is correct to develop a professional evaluation process that will hold the faculty accountable for the high degree of autonomy they now exercise over academic programming. Such a system will be another example of how the school's values of personal responsibility and consideration for others can be instituted in the school's day-to-day practices.

I. Student

Beyond mastering skills and attaining content knowledge, students practice integrating what they know and are able to do in the school's many interdisciplinary activities. These activities are crafted to make students aware of their social and natural environment and to promote in students a sense of stewardship for the same.

ACADEMIC STANDARDS AND GOALS

ACADEMIC GOALS STATED IN THE ORIGINAL CAPE COD LIGHTHOUSE CHARTER

- TO DEVELOP THE BASIC SKILLS OF LITERACY AND NUMERACY
- TO DEVELOP THE BASIC SKILLS AND PATTERNS OF THOUGHT NECESSARY TO UNDERSTAND THE SCIENTIFIC METHOD AND TO APPLY THE CONCEPTS OF SCIENCE TO REAL WORLD SITUATIONS
- TO ASSIST OUR STUDENTS TO UNDERSTAND THE ENVIRONMENT AND THEIR COMMUNITY, AND OUR POSITION AND RESPONSIBILITY WITHIN IT
- TO PROMOTE CRITICAL THINKING PATTERNS AND COMMUNICATION SKILLS WHICH ENABLE OUR STUDENTS TO MAKE CONNECTIONS AMONG TRADITIONAL DISCIPLINE AREAS SUCH AS SCIENCE, MATHEMATICS, HISTORY, LANGUAGE ARTS AND THE APPLIED AND PERFORMING ARTS
- TO PROVIDE STUDENTS WITH CHALLENGING LEARNING EXPERIENCES WHICH WILL STIMULATE THEIR INTELLECTUAL CURIOSITY AND ENABLE THEM TO EXPERIENCE THE THRILL OF SUCCESS
- TO PROVIDE A FOUNDATION FOR THE SUCCESSFUL MASTERY OF A FOREIGN LANGUAGE
- TO DEVELOP IN OUR STUDENTS SKILLS FOR LEARNING AND FUTURE LIVING SUCH AS BASIC COMPUTER LITERACY SKILLS AND AN UNDERSTANDING OF THE POSSIBLE INTEGRATION OF TECHNOLOGY IN ALL SUBJECT AREAS

- 1** The charter's original academic goals, listed above, represent the educational philosophy of the school today. Academic success at CCLCS is characterized by developing a passion for pursuing one's intellectual interests and by developing the ability to use knowledge and skills across disciplines. Although still prevalent in the school's documentation, these core academic goals have found a more vibrant life in the school's oral tradition. Teachers, parents, and students talk about academic success in terms of gaining higher order thinking skills that allow students to see connections between the traditional subject areas and that prepare students to tackle interdisciplinary problems in later life. These core academic standards are perpetuated through a frequent exchange of ideas among faculty. There are numerous meetings between staff every week, ranging from grade-level planning sessions, to department meetings, to full faculty meetings. As one faculty member expressed it, "We are constantly discussing what we are doing, even at the copier."
- 2** Other academic standards have found their expression in the school's written tradition. By reviewing the different versions of the school's accountability plan developed over the last

four years and the annual reports that chronicle changes in the accountability plan, one can see an increasingly detailed list of content and skills standards emerging from year to year. Through curriculum study groups, the faculty and other community members have designed these content and skills standards and articulated them across the grade levels. There is a high degree of alignment between these written standards and the Massachusetts Curriculum Frameworks.

3 Neither the school's oral tradition nor written tradition alone can adequately represent the school's academic standards. In fact, when asked about the written accountability plan, the majority of faculty stated that it did not fully represent the academic standards in practice in the classroom. Though faculty members agreed that the plan served an important accountability function, they choose to share the school's emphasis on interdisciplinary studies through anecdotal information, unit plans, and examples of student work. Because faculty members are versed in the school's oral tradition and equipped with the school's written content and skills standards, they can effectively plan and implement a rich curriculum that adheres to the school's mission. However, the school is limited in its ability to disseminate its practices as long as its oral and written academic standards remain somewhat disjointed. At this time, there is no way to express clearly the schools goals to others as called for by the spirit of the Massachusetts charter school law.

4 Though difficult to understand for someone not immersed in the school, the CCLCS academic standards are operationally strong; and, by means of the faculty's collaborative planning efforts, they serve as the basis for a rich curriculum experience. A combination of evidence from the school's written and oral traditions reveals a substantial set of academic standards in place in the core academic disciplines:

- The language arts program presents a series of skills, standards, goals, and expectations that are discussed, shared, and disseminated by and among teachers of English and Social Studies, principally in general conversation and meetings. Additionally, many of them are included, if not fully enunciated, in the accountability plan of January, 1999. The four major learning strands of the English Language Arts Curriculum Framework are interwoven throughout. Thus, within the language strand, students at CCLCS are expected to practice informal and formal discussions in small and whole-class groups, make oral presentations, acquire vocabulary, identify parts of speech, and apply knowledge of standard English conventions for punctuation and sentence structure. The literature strand is represented in the analysis of basic story elements--such as point of view, theme, mood, tone, setting, and characterization. The composition strand is addressed in an emphasis upon evidence, organization, detail, research methods, vocabulary, and style. The media strand is evident in the use of computers and the technology of digital cameras, as well as in the use of other multi-media including film.
- The CCLCS mathematics standards mirror the key areas of mathematics in the standards promoted by the National Council of Teachers of Mathematics. Productive efforts were made two years ago by CCLCS faculty to adjust subject matter with the expectations of the Massachusetts Curriculum Frameworks. Both the outline of mathematics standards provided in the renewal application and the curriculum description provided by the mathematics coordinator show strong alignment with the Frameworks. Sixth-grade objectives address systematic problem solving, exploring operations with rational numbers including exponents, factors, multiples, and primes. Sixth-grade standards also

deal with statistics at the level of collecting, organizing, displaying, and interpreting data. Seventh grade standards, while continuing to address ways to use real numbers, introduce the properties of geometric patterns and the properties of polygons, as well as pre-algebraic skills. Eighth grade standards cover basic algebraic skills and content.

- Standards in social studies are also substantive and relatively well aligned with state standards. As in the other subject areas, the faculty has spent significant time over the last few years modifying the school's social studies standards in order to better reflect the Massachusetts Frameworks in History and Social Science. They have also clearly articulated the content standards across the three grade levels. Less in evidence was the strand of "historical understanding". The school's expectations for student understanding of the perspectives and justifications of historical protagonists are not yet as well developed as its other expectations in the area of history and social science.
- Faculty describe the science standards as being organized around "three legs of a stool": science content, concepts, and skills. Here, too, a great deal of thought and hard work have been dedicated to developing a comprehensive and well articulated set of academic standards that meet the school's mission while recognizing the requirements of the Massachusetts Curriculum Frameworks. As displayed below in Figure 4, the Massachusetts Curriculum Frameworks for Science and technology are already woven into numerous curriculum units.

- 5** The school's standards in critical thinking, interdisciplinary work, and core values are in clear evidence through conversation with parents and teachers, in examples of student work, and in the school's efforts to create multiple opportunities for students to pursue intellectual interests. In concord with the Massachusetts Common Core of Learning, CCLCS expects students to become self-directed learners who will pursue knowledge throughout life, not only for their own benefit, but also for the benefit of society. CCLCS expects students to be cognizant of worldwide issues and to muster a range of knowledge and skills to address these issues. These expectations for learning are preserved, in large part, in the common understandings and oral tradition of faculty, parents, and board members.

ATTAINMENT AND IMPROVEMENT

- 6** Student academic achievement has been consistently strong in the school's standardized assessment program, including the California Achievement Test (CAT/5) and the newly-administered examinations in English, Mathematics, and Science of the Massachusetts Comprehensive Assessment System (MCAS). Some longitudinal data for specific grades and cohorts of students have been established using the CAT/5, including its national norms and grade-level equivalencies.

- 7** The CAT/5 has been administered every year in the school's four year history. However, as the school has developed its assessment system, changes have been made in which batteries were administered, which grade levels were tested and in the frequency of testing. The history of these changes is represented in Figure 1. The school presently plans to administer the reading, language, and mathematics batteries once per year at all grade levels.

Figure 1.

History of CAT/5 administration at CCLCS, 2/1996 - 5/1998			
Year of Operation	Testing Date	Grades Tested	Batteries*
1 st	2/28/96	7 th **	R, M, L, SS, S
2 nd	4/29/97	7 th	R, M, L
3 rd	11/3/97	6 th , 7 th , 8 th	R, M, L
	5/29/98	6 th , 7 th , 8 th	R, M, L
* R = Reading, L = Language, M = Mathematics, SS = Social Studies, S = Science			
** Scoring information for the 2/28/96 administration of the CAT/5 was only available as reported by the school in the 1995-1996 annual report.			

- 8** CCLCS students do well on the CAT/5. All administrations of the CAT/5 since 2/28/96 show students scoring at grade level equivalents two to four years above their actual grade levels. When the test was administered to all grade levels twice in the 1997-1998 school year, students showed appropriate growth in their grade-level equivalents over the seven-month period between test administrations. A year-to-year comparison of scores is possible for the cohort of students tested as seventh graders in the spring of 1997. When tested again as eighth graders in the spring of 1998, this same group of students showed growth in their grade-level equivalency scores in all areas of the test, except in the language battery where this group attained the highest possible score in both years. See Figure 2 below.

Figure 2.

CAT/5 Results in Grade Level Equivalencies for Single Cohort		
Battery	7 th Grade Spring, 1997	8 th Grade Spring, 1998
Reading	11.7	12.6
Language	12.9*	12.9*
Mathematics	10.9	12.7
* 12.9 is the maximum grade level equivalency score possible		

- 9** CCLCS students also scored well on the first administration of the eighth grade MCAS in the spring of 1998. The school's combined score in English, mathematics, and science and technology gave it a ranking of seventh for all Massachusetts charter schools and districts. Scores also compared favorably with those of the local sending district in all three areas of the test.

Figure 3.

8 th Grade MCAS (Spring 1998)				
Percentage of Students at Each Performance Level				
	Advanced	Proficient	Needs Improvement	Failing
Subject Area				
English Language Arts				
State	3%	52%	31%	14%
CCLCS	4%	81%	15%	0%
Mathematics				
State	3%	23%	26%	42%
CCLCS	26%	44%	22%	7%
Science & Technology				
State	2%	26%	31%	41%
CCLCS	7%	56%	31%	6%

- 10** Another external measure of student achievement at CCLCS is the success of its graduates at the high school level. CCLCS's 1998 graduates, as a group, scored well above the average on the Nauset Regional High School Algebra Readiness Examination. The school's application for renewal reports that approximately 40% of CCLCS graduates at Nauset Regional High School are enrolled in honors courses. Over half of the school's alumni are enrolled in honors science courses. CCLCS staff also reported receiving highly favorable feedback from high school teachers vis-à-vis the general performance and preparation of CCLCS graduates.
- 11** Internal, non-standardized assessments do not provide as clear a picture of student attainment and improvement. The review of student presentations and student work such as essays, projects and tests reveal a wide range of achievement. As noted in the school's application for renewal, developing a comprehensive internal assessment system will be a primary focus of the school if its charter is renewed. Until such a system is in place, internal assessment data can provide only anecdotal information on student achievement. Even in the absence of a clear assessment system, however, it should be noted that parents overwhelmingly feel that their children are carefully monitored through their close relationships with the faculty and that students receive appropriate support and challenge based on faculty recommendations.
- 12** Classroom attitudes at CCLCS reflect the school's strong belief in individual responsibility for learning. Students work well individually, in small groups, and in whole-class activities, often taking the lead in their own learning. During a teacher-directed lesson on graphing parabolas, one student, politely and with the teacher's support, chooses not to follow the directions to graph random points in order to locate the vertex. When asked, the student

explains that he is trying to "figure it out" without plugging points. The teacher fosters his initiative and curiosity with questions and feedback. Eventually, the student comes back to plugging points, clearly having thought deeply about the mathematics before him. Another student works alone in the art room reviewing work by nineteenth century artists as part of an interdisciplinary history and fine arts project. Examples such as these abound.

INDIVIDUAL NEEDS AND DEVELOPMENT

- 13** Students pass through the interconnected classrooms with consideration and smiles for others. Their half-constructed gumball and toothpick structures, hieroglyphic scrolls, poetry folders and home made telescopes survive the impossibly cramped passage because of the thoughtfulness of all community members. The students' open cubbies, each replete with learning artifacts and each open to and undisturbed by the rest of the community, are symbolic of this community's nurturing of healthy individuals who not only develop themselves but also respect the community around them.
- 14** The academic program extends learning about citizenship far beyond the confines of the classroom. In the Patchwork Project, students design and sew quilts that are then given to children across the country with severe illnesses. One parent notes how much her child has learned about recognizing the need of others and balancing that need against her own by giving a distant child a beautiful quilt that she has come to love during hours of hard work. Science and social studies activities teach students about the preservation of their own community's natural habitats. The CCLCS-sponsored study of water quality in local Pleasant Bay has provided important environmental data to the Town of Orleans while teaching students how to collect data scientifically. On clear nights, students equipped with sophisticated homemade telescopes host stargazing parties open to the community. All of these activities create good citizens by providing students an opportunity to learn new skills, to create products they should be proud of, and to share these accomplishments with others in a selfless manner.
- 15** The health of students and the development of life-long fitness habits is a second pillar of the school's commitment to creating happy, well-rounded graduates. In the spring of 1999 alone, students have experienced a wealth of required and extra-curricular health activities including CPR training, learning about healthful habits from a ninety-one year old marathoner, self-defense classes, bowling, swing dancing, weight training, basketball, and, yes, dog sledding in Maine. Through the ingenuity and resourcefulness of staff, all of this is accomplished without on-site athletic facilities.
- 16** CCLCS provides opportunities to learn for all students with notable attention to creating support systems and challenges that match individual needs. Students who benefit from special education services are identified through intake information, parent input, and faculty input. The on-site team of specialists is very capable and has established a good network of outside specialists to assist in testing and in the designing of inclusion and/or pull out activities. The team meets weekly and collaborates extensively with a receptive faculty.

17 All students enjoy an opportunity to expand their learning in the seminar program, which meets twice weekly in ninety minute blocks. The interests of students and teachers determine seminar topics. They range from participating in a statewide mock trial competition to creating an Internet plankton guide based on students' collection and identification of plankton species. Within a given seminar topic, individual students explore their interests and gain a joy of learning that carries into the remainder of their studies. The work is approached in much the same way an adult would pick up a new intellectual pursuit. With inquisitiveness and a willingness to take risks, students manipulate digital images for the yearbook, build telescopes from scratch, and design murals to decorate the school. These activities build students' love of learning and teach them how to pursue knowledge independently.

II. Classroom

The overall alignment of the curriculum with internal and external standards is underway. An unusually well educated and resourceful faculty has created a stimulating and challenging curriculum that weaves together school goals and the Commonwealth's Curriculum Frameworks. Like the school's standards, the curriculum exists in both written and oral forms. Further work is needed to express clearly to a wider audience how the curriculum functions as a whole and what common themes unite the myriad of teaching and learning activities that operationally serve children well. The school has correctly identified the development of common assessment practices as an area for future focus.

CURRICULUM AND ASSESSMENT

- 18** Working in subject-area study groups throughout the academic year and summer vacation, the CCLCS faculty continues to develop curricula to meet both the school's interdisciplinary mission and the recommendations of the Massachusetts Curriculum Frameworks. The faculty's four-year effort in this area has produced laudable progress towards both goals. However, creating a school wide curriculum that provides interdisciplinary learning opportunities while ensuring a rigorous scope and sequence of studies is a complex task that requires bold experimentation, numerous revisions, and time for reflection. As part of its natural and healthy evolution, CCLCS is now on the verge of meaningful integration of its interdisciplinary approach and its scope and sequence of skills and content knowledge. At the time of the renewal inspection, both components were in clear evidence in the school's accountability plan, in the common understandings of teachers, and in numerous course descriptions and assessment practices. Further coalescing and balancing of the school's commitments to interdisciplinary learning and a rigorous scope and sequence are necessary to ensure accurate dissemination of practices to the greater Commonwealth and, most importantly, the establishment of a concise statement of curriculum that will serve as a reference in the school's ongoing efforts to improve.
- 19** The school's commitment to and success in establishing interdisciplinary studies is in evidence at every grade level. At this time, there is no course catalog or other easily accessible compilation of the school's interdisciplinary courses. However, the inspection team was able to obtain many descriptions of the units in both oral and written form. Based on these descriptions and the team's direct observations, there appear to be many well-developed interdisciplinary units at each grade level. For instance, the 1996-1997, 7th grade interdisciplinary unit on immigration weaves together instruction in historical research, immigration patterns in U.S. history, mapping skills, interviewing, heredity, and the use of graphs to communicate information. The unit requires students to perform an in-depth study of their own and sample family histories. Students perform and record interviews with family members to determine how their families have been affected by U.S. immigration patterns. They create maps showing the past movements of their families and produce pie and bar charts to explain significant trends in U.S. immigration. They also study the genetic

concepts of dominant and recessive traits by examining traits passed down through their ancestry.

- 20** Interdisciplinary work in the core academic areas is supported by the school's fine arts program, school-wide writing program, and a host of seminars and extra-curricular activities. In their study of nineteenth century history, students select an artist and create a reproduction of his or her work with the help of the art instructors. The sixth graders study of ancient Egypt is enriched through the creation of hieroglyphic paintings and the study of Egyptian art. Writing instruction is a constant across the curriculum. Supported by the school's writer-in-residence, many interdisciplinary units are held together by central writing assignments that require students to integrate knowledge of various subject areas into a single, cogent report or presentation. Seminars offer yet another opportunity to study multiple subjects in the pursuit of a single project, such as creating claymation videos based on students' written screenplays.
- 21** The school's interdisciplinary curriculum is well aligned with its oral tradition of standards for interdisciplinary work. Teachers consistently describe the goals of developing students' critical thinking skills, communication skills, and their ability to manipulate and integrate knowledge from various subject areas. These goals were originally emphasized in the school's 1996 written accountability plan. The more recent emphasis on developing scope and sequence goals in the accountability plan has overshadowed these goals somewhat in the written document. Their central importance to faculty and students' families is now best understood through conversation with CCLCS community members.
- 22** The school's core subject area curricula are in substantive alignment with the school's content and skills standards and the Massachusetts Curriculum Frameworks. This alignment has been achieved through the hard work of curriculum study groups during the last three years. The faculty uses both the school's standards as articulated in the accountability plan and the Massachusetts Curriculum Frameworks in order to plan subject-specific units and interdisciplinary studies. The latter are planned and managed through the school's meeting schedule that allows time for both grade-level teams and the entire faculty to meet on a regular basis.
- 23** In science, the majority of units bridge one or more subject areas. Pond water studies include history and geography lessons along with lessons concerning the chemistry and biology of water habitats. The origin of life in scientific terms parallels the study of pre-history in social studies. The sixth grade salmon project involves lessons in writing skills that are the foundation of further writing instruction in the seventh and eighth grades. These interdisciplinary studies are accomplished while maintaining a high degree of coverage of important scientific content and skills recommended by the Massachusetts Curriculum Frameworks as noted in Figure 4.

Figure 4.

MCF Strands for Science and Technology	Grade Levels	Units and Topics Capturing the Strand
INQUIRY	6 th	Pacific Salmon Project
	7 th	Energy Resources Unit
	8 th	Water Quality Unit
PHYSICAL SC.	6 th	Light and Color Unit
	7 th	Motion, Forces & Energy, and Electromagnetism
	8 th	Chemistry, Nuclear Physics, and Energy
EARTH SC.	6 th	Astronomy
	7 th	Weather
	8 th	Geology
LIFE SC.	6 th	Biology and Ecology
	7 th	Natural Resources
	8 th	Water Studies and Biology
TECHNOLOGY	6 th , 7 th , 8 th	Integrated use of measurement tools to acquire data
SCIENCE, TECHNOLOGY AND HUMAN AFFAIRS	6 th , 7 th , 8 th	Responsible citizenship and knowledge of local ecosystems and resources

24 Mathematics teachers at CCLCS have created a detailed curriculum outline that is substantively in alignment with the school’s standards and the Massachusetts Curriculum Frameworks. To achieve the school’s goal to present mathematical concepts in connection with other topics and subjects, students engage in a variety of projects that highlight the role of mathematics in describing the world around them. The use of fractions is purposely integrated in art projects. Scale models of the solar system created in science reinforce the concepts of ratio and proportion. Real-world connections to social science are found in profit/loss calculations and capital gains problems. Students study the history of the concept of π , as well as its application in mathematics.

25 Among the unifying motifs of the English language arts program is its emphasis upon the thesis essay. In the sixth grade, it is a culminating project in the science-oriented unit on Pacific Salmon; in the seventh grade, it becomes a part of the experience in social science; and, in the eighth grade, it finds its expression in many critical analyses of literature in general and the short story in particular. Similarly, skill development in mechanics, punctuation, parts of speech and other grammatical elements are covered systematically over the sixth, seventh and eighth grades. A speaking and listening component spans the grades beginning with a sixth-grade storytelling and oral tradition unit, followed by a seventh grade exposure to discussion and debate techniques and an eighth-grade pursuit of the principles of research

and inquiry that requires oral presentation and defense of ideas. As discussed above, writing instruction, supported by a writer-in-residence, also spans the school's curriculum.

26 The history and social science curriculum generally follows the sequence of content recommended by the Massachusetts Curriculum Frameworks. In sixth grade, students study geography, taught in large part through interdisciplinary units involving science. In the interdisciplinary "Road Warriors" unit, animal migration patterns lead students across a study of political and natural regions. After following the Monarch Butterfly to Mexico, students must plan a return route to New England through five nation parks that they explore through texts and the Internet. As well as discovering the geography of their route home, students plan an itinerary and live by a trip budget. Sixth graders also receive an introduction to early civilization, including Mesopotamia and ancient Egypt. Here, too, interdisciplinary activities are common: they including learning how to make scientific observations and measurements while mummifying apples. The seventh-grade program covers a very ambitious agenda that includes the history and central tenets of world belief systems, the history of ancient Greece and Rome, and the rise of European civilization. History and social science are combined with English language arts in the eighth-grade program. While studying American history through Reconstruction, students read literature from and about that time period, including *The Red Badge of Courage*, *The Adventures of Huckleberry Finn*, and selections from Cooper and Poe.

27 History and social science and English language arts naturally lend themselves to interdisciplinary work. They are, at the same time, distinct disciplines requiring unique approaches to knowledge. Given CCLCS's dual commitment to both interdisciplinary studies and a rigorous scope and sequence of subject area knowledge and skills, it is natural that the school's history and social science and English language arts curricula would be pulled by both of these goals. Since the school's inception, the faculty has spent significant time exploring this tension and balancing the programming. Crucial to the accomplishment of both goals is continued curricular analysis and adaptation to ensure that these subject areas both:

- provide rich opportunities for interdisciplinary work and
- provide adequate instruction in discipline-specific skills, such as historical causality, historical understanding, and literary analysis.

Early results on standardized tests indicate that the school's approach to these subject areas is working. The introduction of the eighth grade MCAS in History and social science, a more routinized administration of the CAT/5, and the school's development of a comprehensive internal assessment system will provide a clearer picture of the school's success to date and a guide for further curriculum development.

28 The school's application for renewal identifies the development of a comprehensive assessment system as a top priority. Consistent with its drive to provide innovative programming, CCLCS already has in use many assessment tools that will be the building blocks of a school-wide assessment approach. The task at hand is one of organizing, aligning, and perhaps even simplifying the abundance of practices developed over the last four years. During the 1996-1997 school year, an Assessment Committee comprised of teachers proposed that tests, portfolios, projects, and performances be developed in all subject areas. The faculty is in the process of adopting these common formats in ways that

make sense for each discipline. At the time of the inspection, interdisciplinary skills were being assessed within each project through a host of assessment tools. No school-wide approach, such as a common rubric for higher order thinking skills, was in use.

29 At the individual course level, teachers apply a range of assessment practices. Unique rubrics are often designed for specific projects, such as the “Image Box” rubric used in seventh grade language arts to evaluate a student's artistic representation, oral presentation, and written reflections about a hero selected for study. Other rubrics, such as the eighth grade “Essay Rubric” are applicable to multiple assignments. Students are given the opportunity to evaluate their own writing through the “Student Writers’ Scoring Card.” Students present projects and other forms of work in almost every subject area. The Astronomy Seminar culminates in student presentations of specific astronomy topics to the whole seminar group. Unannounced tests and unit tests are used to evaluate content knowledge and skills. Parents indicate that teacher’s individual monitoring of students is a strength of the school. In the eighth grade Central Subject (History/English language arts), families receive an in-depth narrative of their children’s progress. There is room on the narrative form for both students and parents to add their observations to those of the teacher. Both the dissemination of the school’s assessment practices and the further improvement of these assessment practices depend upon the kind of comprehensive clarification the school has outlined in its plans for the future.

30 Monitoring and analysis of school-wide programming is addressed in eleven different points in the school’s accountability plans. The school has made progress towards these goals and has reported that progress in its annual reports. These wide ranging goals are indicative of a school burgeoning with productive activity. They are also indicative of a school that is still developing its essential focus through an organic process. All twenty of student and school performance objectives in the accountability plan bespeak CCLCS's dedication to improving student learning, but they do not yet clearly articulate the guiding principles that have led to these specific goals.

TEACHING

31 The division of teaching responsibilities at CCLCS encourages professional collaboration and allows an experienced staff to shape programming according to individual strengths and interests. In general, there is a point person for each subject area at each grade level; however, adaptations are made based on what makes sense instructionally. One course is team-taught to provide a new teacher with support from a teacher already familiar with the school’s curriculum. Many faculty members teach several subject areas; and in the case of eighth-grade history and social science and English language arts, the two subjects are combined in one course. The school’s commitment to interdisciplinary learning also shapes the assignment of teaching responsibilities. Teachers team up in different configurations throughout the year for interdisciplinary units.

- 32** Teachers vary their instructional approaches to provide a number of learning opportunities. Many classes begin with teacher-directed instruction and then move to independent individual or small-group work. In a science lesson addressing isotopes, students receive clear direction on calculating the half-life of radioactive isotopes and proceed to work in groups of three or four while the teachers move about providing assistance. A math teacher initiates an animated discussion of parabolic curves by tossing a football across the room. Students then work individually on sample equations and finally share their work at the end of class.
- 33** Most student responses in class are voluntary, and some students do not participate actively. However, everyone is monitored through subtle coaching from peers and teachers. Class size is small enough and the communication between teachers is strong enough to ensure that everyone receives the individual attention necessary to move forward.

RESOURCES

- 34** Every classroom nook is filled with examples of student work and instructional materials. The shelves of the art studio are packed with materials and the walls adorned with finished products. Student reproductions of great works, such as Van Gogh's self-portrait, hang next to copies of the originals; and from a high shelf, a little figure reminiscent of *The Scream* peers down on the classroom bustle. In describing what they do at CCLCS, teachers and students turn naturally to the examples all around. The fact that so many examples of student work remain undamaged in such a small space bespeaks the pride the community takes in its accomplishments.
- 35** A great deal has been done by the CCLCS technology team to make the school-wide computer network a productive instructional and administrative tool. Whether on carts or permanently installed, computers are present throughout the facility. Students use them for Internet access, word processing, and desktop publication among other activities. Their work is preserved in individual folders that can be accessed from any networked computer. Teachers use computers for all sorts of activities as well, including the use of the Tel Net service for reserving library books. The school's technology team, comprised of two part-time staff members, supports the use of technology by helping directly in the classroom and seeking instructional materials for teachers. A number of databases developed by the team serve administrative needs, such as attendance and state reporting.
- 36** The school is located in a commercial center among professional offices and a Chinese restaurant that supplies lunch for students several times a week. To optimize the space available in the long and narrow structure, there are no hallways. Students pass in an orderly manner from room to room or use the covered sidewalk along the front of the building. Some of the classrooms do not have windows or have only a skylight. There is a small playground tucked along one side of the building. Without the dedication of founders, parents, and the faculty, this space could never have become the warm learning environment

that it is today. Students supply much more than the decorations on the wall. Their community spirit and self-discipline make the facility work. The entire student body passes through the lunch line in the dining area of the Chinese restaurant while other patrons enjoy their meal undisturbed. CCLCS has made an inadequate facility work very well; but the program would benefit from a new facility with adequate natural lighting, less noise pollution from the happy buzz of classroom work, lab space, and additional classroom and library space. The need for a different facility is also driven by the desire of community members to expand the enrollment of the present program or add a high school program. Given the availability and cost of real estate on Cape Cod, identifying a new facility has not been possible to date.

- 37** The school's strong partnerships with the community ameliorate some of the school site's deficiencies and meet the school's mission of community learning. CCLCS students learn everywhere. Shuttled in vans to local theaters, playing fields, and other sites, they become involved in their community and exposed to many professionals who dedicate time, expertise, and resources to the school.

III. School

The school is organized to promote collaboration. In accordance with the school's charter, parents, faculty and students work together in a variety of governance structures. The school is still developing an accountability system appropriate for the high level of responsibility placed with faculty members. Support for the program is widespread, and many community organizations provide resources that significantly enhance the school.

ORGANIZATION AND MANAGEMENT

- 38** The CCLCS Board of Trustees was instrumental in the establishment of the school and has since worked to improve its facilities, establish community partnerships, and promote the charter's stated goal of "site-based management with shared decision making strategies." To accomplish the latter, the Board has delegated many responsibilities to committees comprised of Board members, faculty, and parents. While a collaborative decision-making process drives the school's activities at the committee level, the Board of Trustees, as a governance body, focuses on the evaluation of the Director, policy issues, and monitoring of the committee structure. The newly established evaluation process for the Director seeks input from faculty and parents through surveys. These surveys collect information on seven "work practices and standards." The completed surveys are compiled in an overall performance rating for the Director.
- 39** A well-developed committee structure involves faculty and parents in all areas of the program management except for curriculum development, which is the purview of faculty. There are a number of standing committees, including finance, personnel, and compensation. Other ad hoc committees address ongoing start-up issues and other concerns that arise from time to time. This collaborative and flexible decision-making structure is consistent with the school's goal to establish site-based management and has allowed CCLCS to meet the challenges of starting a new institution with limited human and financial resources.
- 40** The school's Director plays several roles in the site-based management structure. She is an ex officio member of the Board and provides it with status reports on the school's activities. She helps to determine committee membership and serves as an ex officio member of a number of committees. The faculty receive a great deal of support from the Director through her management of the complex meeting schedule and through individual attention to teacher's needs and through her efforts to secure resources for the ongoing development of curriculum. A committee makes hiring decisions at CCLCS, but the Director is ultimately responsible for staff evaluation and termination of employment. Her management style fits well with the school's administrative structure; and her efforts have helped the school meet its internal mission of collaborative governance while working towards the level of accountability required by Massachusetts charter school law.
- 41** Faculty members are deeply involved in the school's governance. Their primary responsibility is the design and implementation of the school's curriculum; but they also

serve on the Board and on committees, such as the personnel and compensation committees. Their dedication to both traditional academic responsibilities, as well as management responsibilities, requires long hours and true dedication to the school.

- 42** CCLCS has made excellent progress in establishing a site-based management structure; but stabilizing this achievement requires developing a rigorous and consistent accountability process for teachers that would document their hard work and ensure that the institution of CCLCS, separate from the dedicated individuals that now comprise the school, could exercise a better level of program oversight into the next century. Consistent with its mission, the school has placed a great deal of responsibility in the hands of faculty members. The spirit of the charter school law clearly links this level of autonomy with clear accountability. The school has been working towards a teacher evaluation process each year, including experimentation with peer evaluation, observations performed by the Director, and professional journals shared between teachers and the Director. Furthermore, the school has identified staff evaluation practices as an area of focus in its application for renewal. These efforts are necessary to ensure that the charter's commitment to site-based management can be sustained.

FACULTY AND STAFF

- 43** Widely identified as the heart of the school, the CCLCS faculty is a talented and experienced group of educators. Many staff members have advanced degrees and professional careers outside of teaching. Others are award-winning educators with long histories in public schooling. They are generally drawn to CCLCS by its collaborative atmosphere and its commitment to allowing teachers to shape the academic program. The application for renewal describes "teacher autonomy" as a vital aspect of CCLCS and one that should be reemphasized in any new charter document. Part of "teacher autonomy" is letting educators develop their own teaching voice and techniques within a supportive culture. One faculty member commented that the school "lets teachers find their own way." This approach is, in part, responsible for the faculty's deep investment in the school's curriculum and the general excitement about teaching and learning that permeates the school. It is important to note that "teacher autonomy" does not mean that faculty members are left to their own devices or that they design their courses in isolation. Through its colloquial style of curriculum management and through a number of professional development avenues, the school ensures that teachers' personal development is aligned with the needs of students and that best practices in pedagogy are widely shared.
- 44** Though it varies from grade level to grade level and from one subject area to the next, there is a high level of communication and collaboration between faculty. All faculty members value this communication because it allows them to learn from each other and to develop curriculum that maximizes their individual talents and interests. In frequent grade-level and subject-area meetings that spill over into the summer, the staff discusses teaching and learning, the articulation of the CCLCS curriculum, and the needs of their students. For new teachers experimenting with their pedagogical style, this interchange is absolutely vital for their health and professional growth. For veteran teachers, the continual professional

collaboration is intellectually stimulating and allows them to share their wealth of knowledge and experience.

- 45** A mentoring program pairs new and experienced teachers in a variety of ways. Mentors are usually assigned by subject area, but teachers are free to seek out other mentoring relationships as well. Some mentoring pairs meet weekly to discuss curriculum development and address whatever the needs of the less experienced teacher might be. Other pairs find it more productive to meet as necessary. The heart of the program is simply to make resources available to new teachers as they find their voice in the classroom.
- 46** Like the mentoring program, professional development is individualized to suit the needs of each staff member. There are in-service days, grants for curriculum development, and opportunities to attend workshops. The school's Director takes the lead in making these opportunities available. The school also pursues faculty-wide development, such as plans to work with a professor from Boston College to review parts of the school's academic program.
- 47** Many of the school's founding teachers are still teaching at CCLCS. The majority of those who left have moved into new professional interests first germinated at CCLCS. One teacher who began the school's Japanese Homestay program and helped to found the school's "TeachAsia" program is now teaching in China. The school encourages younger teachers to view CCLCS as a starting place in their careers where they will receive support and direction from an experienced staff. This philosophy is somewhat codified in the school's personnel policies. The handbook calls for always maintaining some staff with three or fewer years of teaching experience.
- 48** The CCLCS faculty is deeply committed to the Cape Cod community. They have made extraordinary and successful efforts to engage community members in the school's programming and to engage students in learning about Cape Cod. The application for renewal, school newsletters, and annual reports outline hundreds of activities that meet the school's mission of creating a school that extends into the community. It is beyond the scope of this report to describe the breadth of these activities. However, the high quality of these endeavors clearly indicates a faculty at work far beyond the usual level of service. Their efforts provide an excellent model for students who will be stewards of their communities.

PARENTS AND COMMUNITY

- 49** CCLCS communicates regularly with families through a number of avenues. The school's open door policy allows parents to approach the staff at any time. Some teachers provide their home phone numbers to families, and many volunteer time beyond the regular school day to work with students and their families to meet academic challenges. The school's monthly newsletter informs families about upcoming events and academic programs at each grade level. Its volumes are often filled with thanks to parent volunteers for their help with the school's fieldtrips, seminars and sports program. Each semester, parents are invited to subject area seminars that lay out the school's goals for families. Finally, progress reports and report cards provide a regular formal update to families.
- 50** Parent express a high degree of satisfaction with the school and show their support through volunteerism and supportive feedback. At their urging and with their help, the school has launched a successful sports program that now offers soccer, basketball and softball. Many of the school's excursions to nearby resources are made possible by parent helpers. The school's music program also benefits from donations made by families. Other examples of parent support abound.
- 51** The school has made excellent progress towards its goal of establishing local resource partners that enrich the school's academic program and teach students to be responsible citizens. The Town of Orleans and CCLCS are working together to create the "Sea Call Farm", a community learning center that will provide classroom space for use by local schools and the general public. CCLCS has raised grant money to fund the center's coordinator and to provide stipends to instructors. The Town of Orleans is providing a building and renovation funds. Through its partnership with Massachusetts Audubon Society, CCLCS students have presented their studies of endangered species. Many other vibrant partnerships are described in the school's application for renewal. While wonderfully varied in focus, all of these partnerships encourage students to become involved in life-long learning while enriching their present academic studies.
- 52** The school has wisely sought evaluation from the greater community. CCLCS faculty members have a strong relationship with the local high school where many of the CCLCS graduates complete their secondary studies. CCLCS seeks feedback from the high school on the preparedness of its graduates and works to ensure that CCLCS graduates make a successful transition to the larger and differently organized high school.