

## Chapter IV: Category C

# **Standards-Based Student Learning: Instruction**

## ***Category C***

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**C1. To what extent are all students involved in challenging learning experiences to achieve the academic standards and the expected school-wide learning results?**

### *Results of Student Observations and Examining Work*

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DHS is committed to providing challenging learning experiences to students by hiring the best available teachers and by emphasizing a culture of high expectations for all students. In the 2008-2009 school year, the School Site Council supported administration by adopting a policy of increasing the number of staff credentialed in science or math. As a result, the school hired three new project teachers. One outcome was that the school was able to launch new, high interest projects to replace three projects that did not meet administrative expectations of level of rigor. Administrative walk-throughs, evaluations, and presence during field experiences, as well as peer observations and student work samples, now evidence far greater student engagement in learning that supports achievement of our ESLRs and Critical Academic Skills.

The decision to hire math and science teachers in order to develop new projects was based on the administration's and CPDC's evaluation of all projects, which indicated that student learning in the now-defunct projects was not facilitating achievement of the school's ESLRs or CAS. In short, those projects lacked the rigor necessary to help students grow academically and meet the school's performance standards. Because DHS is often the last formal educational experience many of our students have, it was unacceptable to offer projects that did not require mastery of specific, high school level academic skills. Staff and project changes occurred out of our commitment to modifying

our program accordingly in order to ensure greater student involvement in learning and achieving DHS standards. This modification was extremely critical because of the student population we serve. Given that our school personifies the district's achievement gap—comprised of disproportionately large percentages African American, Latino, and Polynesian students—we must consciously work to ensure we are offering our students an equitable opportunity to learn at a level that surpasses the low expectations their previous schools may have had for them. If we, as many students' last chance to earn a high school diploma, do not provide students with curriculum that engages them while assisting them in gaining academic skills, they may never achieve those competencies. We therefore cannot allow ourselves to accept a lack of learning.

Our new projects now engage students in curriculum appropriate for high school, particularly higher-level math and science. New partnerships resulting from changes in staff and project offerings have helped facilitate increased academic rigor and student learning in established projects as well. Evidence of student learning based on observations is significant, and well illustrated by a few choice examples of engaging activities that address CAS:

- EATS students work collaboratively in small groups with assigned roles (CAS 2a) to prepare and conduct a snack experiment (CAS 4c). Students prepare homemade snacks and compare rates of decomposition over time to similar store-bought snacks. Students research roles of additives and preservatives in food (CAS 4a) to formulate hypotheses and conclusions about which food rots faster. Observations occur over six weeks, leading up to a formal scientific write-up and presentations of student findings (CAS 1c).
- PRISM students worked in groups to build working robots during a unit about electrical circuits. Trial, error, and finally success reflected extended engagement in the scientific process. In a local robotics competition, their robots made it to the second round.
- MMARSS students constructed xylophones over several days in small groups (CAS 2c), using plywood, electrical conduit pipe, nails and rubber bands. They then used these xylophones to analyze musical notes and tones, as well as to calculate the surface area and volume of geometric solids, relating their calculations to pitch and

tone by analyzing how slight differences create variations in sound. Through this hands-on activity, students saw the relevant, real world application of math concepts (CAS 4b). Their xylophones produced notes that were in tune with one another and were used to play songs in class and at exhibition.

- GOAL students, while building a boat, learn about Bernoulli's Principle during a hands-on OHEC lab experiment, again engaging in the scientific process. They then apply Bernoulli's Principle to the construction of their own boat, which they launch into the San Francisco Bay, and take turns navigating, at a community boat launch event involving friends and family.
- WALC students created an editorial poster to educate the public about an issue of sustainability—preservation, restoration or environmental justice—and persuade them to take action (CAS 3b). To help them choose their issues, students had worked on preservation and restoration projects with Redwood National Park botanist and the city's Natural Areas Program and enacted environmental justice projects with Literacy for Environmental Justice (CAS 3a). The poster was designed to follow the format for thesis driven essay (CAS 1b): the headline was a thesis statement, the facts were supporting points, and the call to action was a conclusion. For their gallery style exhibition, students created presentations of their posters designed to further educate and persuade everyone in attendance (CAS 1c).

While observations of students working and student work provide ample evidence that the majority of students are involved in learning that assists them in achieving our academic standards in the form of ESLRs and CAS, we have our share of challenges in trying to reengage students who are at our school because they disengaged from education at some point. Every project includes students who are more difficult to reach, so projects employ specific strategies to engage all students in learning. For example, each project is a self-contained small learning community. As such, the culture of the class has a direct impact on the teacher's ability to deliver instruction and on the students' ability to engage in learning. To strengthen the learning community and facilitate engagement with academics, teachers utilize a variety of team building activities to at the beginning of each semester, and throughout the semester as needed, due to the open entry/open exit nature of student enrollment.

The degree to which students are involved in learning is also directly correlated with attendance. Teachers create curriculum on an ongoing basis, providing hands-on activities in class and field experiences with real-world connections, in order to better engage students who have not been successful in traditional school settings and encourage them to attend school. Students who are absent are not able to recapture the experiential component of the instruction even if they are able to make up the bookwork. Therefore, students who regularly attend school are better able to grasp content and complete their assignments, especially to accomplish the culminating tasks such as participating in the semester-end school-wide exhibition and writing a response to literature essay based on the whole-class book.

The open entry/open exit nature of student enrollment also has an impact on student achievement. Students who are enrolled in a project from or near the beginning of the semester usually have more buy-in. Students who come in later and are able to catch up on the work are often still able to be successful in the project. Unfortunately, students who enroll late in the semester frequently have difficulty accessing the project curriculum because they missed much of the process provided through direct instruction and hands-on learning activities.

In order to address the realities of imperfect attendance and open entry enrollment, projects prioritize depth of learning and mastery of skills over breadth of information. While students who are truant or who enroll late may miss activities designed to engage them in learning, they can still access project curriculum conceptually, applying the specific lessons they do experience to project themes so that they do, in fact, learn. As an example, one of WALC's semesters is devoted to studying the concept of sense of place by focusing on geology. Students learn about rock types, local rock formations, plate tectonics, tectonic forces, and gradational forces. While a student who is present every day has a broader scope of learning, a student who spends two days in WALC may still analyze text about mechanical weathering or conduct an experiment about convection cells in the earth's mantle, and be able to apply that learning to the overarching goal of understanding how the land is formed and shaped. A similar depth over breadth

approach in every project results in the observation that project lessons on any given day, for any given student, can help students work toward achieving DHS academic standards if they choose to engage, keeping in mind that our entire project-based program is designed as an alternative approach that entices students to learn.

This year, we were able to launch an after-school tutoring program with funds from a grant, as a component of ExCEL. Most students in the tutoring program are referred by teachers or through our Student Assistance Program (SAP). SAP is a “learning support” umbrella structure that brings together all support service providers at a school site. SAP focuses on referred students, and coordinates programs and services to promote their academic success. Students referred to tutoring by SAP receive one on one help from ExCEL staff in completing assignments. This focused attention assists those students who have difficulty meeting learning goals in the classroom.

Teachers have seen improvements in student writing, evidencing a higher level of achievement of the “Communicate Effectively” ESLR and the CAS related to writing. We believe this is due to the Literacy Initiative, with the recurring practice students get in every project through the whole-class book and culminating response to literature essay. Because each project requires this essay and uses the same rubric, students enrolled in DHS for more than one semester are repeatedly exposed to the same writing guidelines. We have noticed that student success on the essay also correlates with their interest in and accessibility of the whole-class book. Work around new initiatives for Math and Scientific Inquiry—creation of pilot curriculum, professional development workshops, and demonstrations—has begun in order to establish a comparable set of expectations and assessments that involve students in learning that leads them to accomplish ESLRs and CAS. Longer-term plans may include a social studies/social justice initiative.

Finally, as an integral component of a project-based curriculum, each project produces a product or products that reflect their semester of teaching and learning. Students present their projects at exhibition. For some students who underperform in daily academic tasks, this is an area where they can be accomplished due to hands-on application of project concepts and information. Projects and exhibition provide an

alternative venue for students to demonstrate their learning, understanding of course content and/or mastery of academic skills. An example is a WALC student who does not complete WALC Book assignments and participates in fewer than half of the field experiences, but is able to express understanding of the course content through the final art project where students synthesize project themes and subject matter in the context of their own life story and people's history. An EATS teacher recalls a student who turned in almost no class work during the semester, but participated frequently and emphatically in discussion. By taking on the role of opening presenter during exhibition, he set the stage for the EATS exhibition and shined, displaying his demonstrating his learning through oratory skills. While each project's exhibition is assessed using a school-wide rubric, we plan to develop a means of assessing the extent to which individual student learning is evident through their participation.

### *Student Understanding of Performance Levels*

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Due to the nature of continuation high school, classrooms include students of widely varying abilities. Some students enter our school with first grade reading levels, while others have been involved in the Gifted and Talented Program. Due to the wide range of skills, students are not assessed at discreet levels. Teachers focus upon quality of work completed and improvement in student work over time. We take students where they are, and then help them to move forward, regardless of whether they are high performing or low skilled.

The primary goal for the majority of students is to earn credits. Final grades are given on a quarterly basis at the end of nine weeks. Students are eligible to earn up to 22.5 credits every quarter. Up to 17.5 credits are based on class work completed during actual seat time or productive attendance. All teachers use the DHS Student Credit Schedule, which is a chart published quarterly that identifies credit eligibility based on periods in attendance. Up to five credits can be earned for project work accomplished outside of class, where twelve hours of work is equal to one credit. We are still emerging in this area as teachers seek out a variety of learning opportunities that integrate with the

theme of their projects. Some of the activities thus far include homework, extended hours for field trips, community service, participation in demonstrations, and attending a concert or movie and writing a summary/review. Every project has a student contract and a syllabus that clearly state, from the moment students enroll in a project, expectations of students and the requirements they must fulfill in order to earn all of their credits. The school also has an intake contract that states all students are expected to maintain 80% attendance and earn at least 15 credits each quarter.

Projects demand student inquiry and help students connect to existing knowledge, construct meaning, elaborate beyond content, and monitor their own learning. Across projects, every student is expected to read a book and write a response to literature essay that is scored using a common rubric. In addition, students are expected to apply knowledge and learning across disciplines as exemplified by the culminating exhibition. Students are explicitly told of the class book and school-wide essay and exhibition expectations, however it is often not until the end of a semester that students in their first semester at DHS fully grasp these expectations. Returning students, on the other hand, are fully aware of the ongoing and end of semester demands. They often ask, from early in the semester, which book they will be reading, when they must do their essay, and what the project will require for exhibition. Again, we have identified the need to implement a wider array of standardized assessments that become understood school-wide expectations embedded in the school culture in the same way as the books, essays and exhibitions have.

Certain projects, such as Hollywood, where students know they are working toward a movie as the culminating product from the very beginning—from writing monologues and screenplays to casting, directing, sound, lighting, and editing—observe that students are more fully able to comprehend the expectations of project-based learning. Regardless, at the end of the day, the most fundamental performance expectations—which they are reminded of many times daily—are for students to complete their assignments and have consistent attendance.

Project-based learning at DHS was designed to be accessible for all students. Staff is creative and inventive regarding methods of instruction, redesigning, and modifying coursework on an ongoing basis to ensure that curriculum is challenging, satisfying, and aligned with ESLRs and CAS for students across the wide diversity of ability levels in the school. We encourage rigor in our projects, whereby students strive to constantly raise their personal bars through process-oriented assignments, such as research, artwork, development of a project, the scientific process, and the writing process. Students may complete multiple drafts of a single essay, movie script, painting, or poem. Growth is measured through the individual's improvement, rather than by comparison to others. Accessible rigor is also in evidence in math instruction. While many students come to DHS with considerable deficits in math education—not knowing times tables or how to do long division—those gaps do not preclude them from learning higher-level math. For example, while a teacher may begin a unit with a short sequence on ratio and proportionality, the review of those concepts is then used as a springboard to launch into circular trigonometry and radians.

Teachers at DHS are also necessarily committed to scaffolding. For instance, scaffolded literacy strategies employed by all teachers include previewing, oral group reading, various vocabulary-building activities, providing class book readers so that students can talk to the text, use of Bloom's Taxonomy, and a variety of graphic organizers to support reading comprehension and the writing process. Alternatives to textbook instruction are also the norm at DHS. Some math strategies include visual and oral presentations of concepts, real-world applications such as measuring the dimensions of a planter box to calculate volume of soil required, and use of manipulatives to teach fractions and decimals. In science, many teachers incorporate a multitude of field studies where students are able to see examples of project content in action. Art is widely used at DHS as a tool with which students can express their learning. Differentiation for English Learners can include extra time, home language dictionaries, and modification of written assignments. Other strategies that are widely used to differentiate include mixed

ability groups, leveled groups, cloze notes, and differentiated products assigned such as oral versus written.

All of our scaffolding and the variety of instructional strategies we employ work together to create projects wherein all students can access the curriculum and demonstrate learning in some way. A classic example would be a student with limited English Language Arts skills who is therefore reluctant to complete reading and writing tasks. In a project like WALC, for example, that student may struggle during one hour of literacy a day or one hour of a science lesson that includes text to read. However, the same student also receives an hour of art instruction per day, does an art project to demonstrate understanding of science concepts, and has at least one hands-on field study during the week. The impact on student learning is that all students have an entry point from which they can begin to build academic skills.

As described in Category B, students with IEPs are provided with paraprofessional support and/or resource program pullout, in addition to extra time for assignments, and other IEP supported accommodations and modifications. We also have two SDC teachers whose student load is 8:1, where a general education teacher is 25:1. In practice, this means that two projects out of six have a lower student load of 33 students total versus 50 students so that SpEd students and their general education peers receive more assistance with learning. More importantly, we believe that the vast majority of our students have special needs, identified or not; the scaffolding and differentiation teachers incorporate into lessons to aid for SpEd students can thus actually benefit the entire class.

On a macro level, differentiation is provided through student choice of projects, where students are guaranteed one of their top three project selections each semester. Within the projects, a variety of strategies can be observed. GOAL is an outdoor-based experiential project where students learn by doing, acquiring leadership skills in the process. WALC involves students in scientific inquiry through OHEC and multiple field studies, allowing them to explore real world applications of the curriculum, and then teaches students to articulate their learning using art. PRISM takes its theme from

integration of physics and social justice concepts, incorporating both hands-on science and a heavy emphasis on analyzing text and other media. Because of the diverse approaches represented in our array of project choices, students can work with their strengths as learners. A kinesthetic learner might be attracted to GOAL, while a visual learner could gravitate to WALC. In this way, the differentiated instruction is embedded in the project-based structure of the school, allowing students to capitalize on their learning styles in order to better achieve learning goals.

### *Student Perceptions*

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In informal conversations with students, it is clear they recognize rigor and high teacher expectations. Nevertheless, the majority of students are more concerned about number of credits earned, which reflects work completion and attendance, than about the grade, which reflects quality of work. Students also want teachers to be explicit in their instruction. In general, our students are more comfortable at the lower levels of Bloom’s Taxonomy where their answer is either right or wrong, as opposed to applying higher order thinking skills to understand the overarching themes and making connections across disciplines.

However, students do articulate that they want to learn; they want the curriculum to be substantive, challenging, and parallel to comprehensive high schools in content and rigor. Before we dismantled the three aforementioned projects that were not meeting expectations of rigor, students complained that they were not learning enough, or that the assignments were not high school level work. Even though some students sought out those “easier” projects, most appreciate that they learn in a different way at DHS, but yet still feel accomplished in their learning and take pride in tackling academic subject matter peers at other schools may reference: forces of motion, evolution, trigonometry, plant physiology, political ideologies. Our students often express that they brag to their comprehensive high school friends about the things they get to do at DHS—make movies, learn Photoshop, go camping, build a boat, robots, or telescopes—in the process of learning high school content. While students sometimes complain, “I thought this

was a continuation school,” or, “This isn’t a real school,” as a preface to, “Why are we doing so much work?” and “If I wanted to do this much work, I could have stayed at my old school!” they can also appreciate that we see ourselves as a “real” school and them as “real” students.

In addition, even though students may complain about doing work, they also experience great satisfaction and pride when they demonstrate through challenging assignments, essays, and the exhibition process that they have mastered project content. Over the last two years, the exhibition has finally emerged as a venue where students are proud to demonstrate their accomplishments, as evidenced by the spirit of competition between projects that students are voicing. This change can be attributed to a shift in school culture brought about by new staff who have embraced the higher expectations that the school is striving toward.

*Strengths and Prioritized Growth Areas*

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<b>Strengths</b>	<b>Evidence</b>
1. Qualified and committed faculty	<ul style="list-style-type: none"> <li>• Credential data</li> <li>• Attendance at professional development workshops (on and off-site) and faculty meetings</li> <li>• Participation in district support programs</li> <li>• Curriculum plans and lesson plans</li> <li>• Projects with multiple semesters of curriculum</li> </ul>
2. Common academic requirements and assessments across projects: whole-class book, response to literature essay, exhibition, credit eligibility based on attendance	<ul style="list-style-type: none"> <li>• Whole-class books in each project, with supporting curriculum</li> <li>• Response to Literature Essay Rubric</li> <li>• Student essays</li> <li>• Exhibition Rubric</li> <li>• Exhibition products</li> <li>• Exhibition video</li> <li>• DHS Student Credit Schedule</li> </ul>
3. Diversity of projects and project activities designed to engage students	<ul style="list-style-type: none"> <li>• Project curriculum plans</li> <li>• Project descriptions</li> <li>• Project agreements</li> <li>• Project exhibitions</li> </ul>

	<ul style="list-style-type: none"> <li>• Lesson plans</li> <li>• Field experiences</li> <li>• CBO partnerships</li> </ul>
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<b>Prioritized Growth Areas</b>	<b>Evidence</b>
1. Develop criteria and systems (such as student portfolios) to assess individual student progress	<ul style="list-style-type: none"> <li>• Lack of assessment data measuring student progress over time</li> <li>• Lack of assessment data measuring mastery of all ESLRs and CAS</li> </ul>
2. Fully develop and implement school-wide initiatives in math and scientific inquiry, then social studies	<ul style="list-style-type: none"> <li>• Lack of common requirements and assessments in these curricular areas</li> <li>• Fewer PD workshops dedicated to these subjects</li> </ul>
3. Further develop expectations and assessments of students for exhibition	<ul style="list-style-type: none"> <li>• Exhibition rubric assesses the exhibition as a whole</li> <li>• No similar rubric for each student</li> </ul>

**C2. To what extent do teachers utilize a variety of strategies and resources, including technology and experiences beyond the textbook and classroom, that actively engage students, emphasize higher order skills, and help them succeed at high levels?**

Current Knowledge

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Project-based learning combines a variety of innovative teaching methods employed on an ongoing basis and is supported by research and the school’s own commitment to professional development. Wednesdays are minimum days for students so that we can conduct professional development activities for a three-hour block in the afternoons. During these workshops, teachers engage in training and collaboration designed to help them hone their skills as project-based instructors. We continue to use our professional development time to reflect on our own practice, develop curriculum, determine improvements to our program, demonstrate best practices, and learn more about topics such as integrating literacy, incorporating benchmarks, and backward design. Wednesday professional development time has be the vehicle for our school-wide

Literacy Initiative, which is now integrated into one hundred percent of all projects on campus. The Literacy Committee provides support and training for this initiative during our Wednesday professional development. Other committees, such as Math and CPDC, lead professional development trainings to share and bolster best practices in order to support the academic standards in all projects.

In addition to relying on our in-house experts to conduct professional development, we have also paid for outside experts. Facing History and Ourselves conducted a series of four seminars where staff explored the lingering effects of eugenics on our society and the implications for us as educators. At the start of this school year, we had two sessions on classroom management from an expert in the field.

In the past two years, staff members have also participated in various off-site trainings funded either by the site or by the district. They include the California Association of Bilingual Educators, the Yale National Initiative to Strengthen Teaching in Public Schools, Culturally Responsive Teaching and Learning by Dr. Sharroky Hollie, offerings through the Sierra Nevada Field Campus of SFSU, Teaching American History, Performance Fact, Facilitation in Chaotic Times, CAHSEE preparation, and advanced SDAIE strategies. The district is also continuously upgrading technology, requiring staff training in programs such as School Loop, to provide better communication about student progress with students and their families, and Data Director for staff to access and manipulate a host of student data including test scores and demographics. Staff members also participate in various educational trainings on their own time such as KQED's digital story telling, the Museum of Modern Arts' educator trainings, and Stanford University's National Board Candidate Support Program. This vast array of professional development encompasses both instructional content and methodology, allowing our staff to remain extremely current in their knowledge.

The staff members at DHS are also a resource to one another in many ways. On an ongoing basis, the staff communicates ideas during school-wide planning time, via email, at our Wednesday professional development meetings, through our new teacher cohort, and informally through social gatherings. We continue to benefit from the

experience of long-term staff and from the energy of new recruits to the profession. We strive to recruit teachers who are capable of teaching outside their credential subject area or who have experience developing interdisciplinary curriculum. Because continuation high school teachers may teach any subject as long as they hold at least one credential, we are able to maintain an entirely integrated curricular structure. We are very proud of the fact that out of eleven teachers district-wide who completed their National Board certification last year, two teachers are from Downtown High School. What is even more outstanding is that they both earned their certification outside of their credential areas. We also have several teachers who have multiple credentials, including supplemental credentials.

Many projects have partnerships with Community Based Organizations (CBOs) that help support and enrich the project curriculum. Partnerships with the Urban Debate League, Writer's Corps, Literacy for Environmental Justice, Southern Exposure, Facing History and Ourselves, to name only a few, have helped engage and integrate students beyond the classroom and into their communities. CBOs therefore play a key role in helping teachers to remain current on relevant issues affecting our students.

### *Teachers as Coaches*

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All projects and teachers are committed to student engagement and success through the implementation of the Core Tenets of project-based curriculum. Project-based learning inherently facilitates student learning through experience and guided reflection. In projects, students benefit from a wide variety of instructional methods. These include collaborative learning, lecture, peer instruction, group-work, field experiences (including overnight trips), exhibition, jigsaw, multimedia projects, hands-on activities, artistic applications, service learning, lab experiments, dramatic production, guest speakers, film and music, and CBO partnerships. Students are regularly engaged in collaborative, hands-on activities in small cooperative learning groups. At other times, students are stationed at computers or are working with technology. The core of project-

based learning stresses diverse, multi-sensory approaches to learning and our teachers continue to refine their craft in this area.

The multitude of instructional strategies that are used require the active involvement of the learner and help students develop an array of techniques to organize, access and apply knowledge. Furthermore, the goal of project-based learning is fundamentally to actively engage students in educational experiences beyond the textbook and classroom. Students engaged in screenwriting attend a film festival; students studying biodiversity participate in habitat restoration at a local natural area; students studying leadership train as facilitators of a local ropes course. Through these various modes of accessing and applying knowledge, teachers act as coaches in facilitating student learning. The end-of-semester school-wide exhibition is an opportunity for students to demonstrate mastery of their project content through a presentation process. Preparing students for and coaching them through the process is a grueling but rewarding task for teachers that exemplifies our role as coaches and facilitators within the project-based model.

### *Additional Examination of Student Work*

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#### **Field 1:**

One of Downtown High School's Core Tenets of Project-Based Curriculum is Applied Learning. Projects are designed such that:

- a. Students apply the knowledge they are learning to the ongoing creation of a related product.
- b. Students present what they have learned and exhibit what they have created in a public forum.
- c. The project offers students opportunities to develop meaningful skills that can be used outside of the classroom.

The culmination of project-based curriculum is when students apply and communicate classroom learning in the development and presentation of a product. For example, for a unit focusing on watersheds, students in WALC created a to-scale model of a watershed

and a mural of a watershed including all major components. Students in MMARSS construct their own musical instruments, compose and perform their own musical pieces based on studying music appreciation and the science of sound all semester. In EATS, students apply what they have learned about food safety and plant biology to the crops they grow in the school garden. Hollywood students not only apply what they have learned about systems of oppression to the screenplays they write and then produce as films, they also utilize everything they have learned about acting, sound, lighting, and editing in order to create their final products. All of these projects require students utilize their learning to in order to complete their final products.

Developing exhibition presentations further challenges students to organize, access, and apply knowledge they acquired during the semester. Not only must students have something to show their audience (they exhibit to every project as well as staff members, invited parents/guardians, CBOs, and support providers), they must also have something to say about their work. Last year, for instance, WALC students set up an art gallery in the gym displaying paintings that represented “Where We’re From: Land, History, and Self.” They designated certain students to be docents, explaining the theme of the show, and taking guests around to each artist’s painting, where they were waiting to explain how their work reflected a geologic formation they could relate to, a historical image important to their community, and a self portrait to represent their identity. Hollywood students created an exhibition that simulated a movie premiere, complete with a red carpet and popcorn. They not only showed their films, but also conducted panel discussions during which screenwriters, directors, actors, and technicians explained their roles in the production of each film. These presentations force students to recall project themes and content, organize the information they wish to share, and apply their expertise to the exhibition.

Other models for products and exhibitions require students to utilize their learning as a framework with which to do original research, gathering information related to project themes for the purpose of presenting it in the context of project teachings. For example, in a PRISM unit about imperialism, students expanded knowledge from the classroom related to historical case studies of American imperialism by doing their own research in

order to create impressive Photoshop murals of imperialism and resistance following the path of an electrical circuit. Students had to discover for themselves who would be considered the conductors and resistors, and which events reflected the current and the outcome. In WALC's semester about sustainability, the final project required students to research an environmental issue of their own choosing, then use the information they gathered to create a work of art designed to educate people about that issue and persuade them to take action. These projects are examples of ways in which students research, gather, create, and discover knowledge. Exhibiting these projects further pushes students to communicate their learning.

### **Field 2:**

Given that one of our ESLRs is that students will think critically, there is a great deal of student work demonstrating thinking, reasoning, and problem solving. In EATS, one of the projects is to work in groups to create a sustainable utopia, which necessitates that students find reasonable solutions for current unsustainable practices. Debate is a major component of PRISM curriculum; as students grapple with social issues, they must investigate and learn to articulate arguments on either side of a controversy. WALC students engage in field studies during which they must use observable evidence to support their hypotheses about natural phenomena they encounter. Assignments and projects like these demand student inquiry and investigation, helping students connect to existing knowledge, construct meaning, elaborate beyond content, and monitor their own learning. Our school-wide project exhibitions, at the end of each semester, provide students with a public forum in which to share the results of their inquiries, the solutions to the problems they have investigated, and their stances on the issues they have studied.

### **Field 3:**

Technology has become a focus within our PBL program and an integral tool in the learning process for students. DHS is rich in technology, with two computer labs that include color laser printers, a roaming laptop lab, scanners, a digital keyboard, digital cameras and digital video cameras, a theater system, a large format printer, projectors and laptops for teachers. Teachers are now able to move towards high-tech multimedia

projects such as digital video production using Final Cut Pro, Photoshop mural production, PowerPoint presentations and iMovie digital stories. Student work can be shown in large screen format in our own “theater.” These resources are exciting to students and teachers alike, and enable students to articulate their learning through technology. For example, for the last exhibition, BIKE students produced full color bike tour brochures using Microsoft Word to lay out graphic designs; this semester they are teaching students In Design, a more complex graphic arts program. MMARSS students used Garage Band to create and record original musical compositions. Students in GOAL used iMovie to create digital stories that analyzed their wilderness experience, class book, and Native American history in the context of their project theme. PRISM students presented statistical analysis of educational inequity by projecting charts and graphs created in Microsoft Excel. WALC students used original art, scanned into the computer and laid out with text, to create political posters to educate and persuade the public about environmental issues. EATS’s utopia project was presented in Power Point. Every student in the school has access to technology, and every project utilizes it to assist students in demonstrating achievement of academic standards.

#### **Field 4:**

Utilization of instructional resources beyond textbooks is a way of life at DHS, where we are working with students who did not respond well to traditional educational structures. Most projects create their own materials for students using a multitude of on-line and print resources. Course content is presented in print, web, video, and audio form. In addition, beyond the school building, students engage in a variety of activities that are an extension of their classroom. Teachers often call field study sites their second (or third or fourth or fifth) classroom. WALC students participate in weekly field studies where they either complete habitat restoration projects with the San Francisco Recreation and Park Department’s Natural Areas Program or engage in full day field investigations of geologic formations, the health of nearby tributaries, the ecology of a forest, or the adaptations of wildlife. Sketches, written observations, and analyses from these field studies form the basis for final art projects. In addition to building a boat, running a ropes course, and learning to swim off campus, GOAL students also walk to KQED public television station, where staff teach them to use iMovie in order to

produce digital stories to synthesize the major themes of the project with their vast array of experiential learning. MMARSS students have been trained in the use of Garage Band at a hands-on workshop at the Apple Store. EATS students observe and engage in urban farming activities at Alemany Farm, then apply their experience to their own garden plots at school. This wide variety of experiences, activities, and resources link DHS students to the real world and facilitate greater engagement in academics.

### *Real World Experiences*

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As discussed extensively in Category B, our real world focus is a Core Tenet of our project-based curriculum, of great importance as it prepares our students for the challenges of life beyond school. All projects have a real world component integrated into their curriculum, whether it is civic engagement, alternative modes of transportation, music appreciation and technology, horticulture skills, environmental justice and stewardship, or field-based learning. It is an additional expectation for teachers to develop partnerships with CBOs that can work with students in the classroom and beyond, and hopefully even beyond their matriculation at Downtown High School. The school is also very excited about several new opportunities that are opening to us now and in the next year. This spring, our site is hosting a Career Technical Education evening class to prepare students for a career in stationery engineering. Next school year, two CBOs have submitted grant proposals to partner with our school to provide job training and jobs to our students.

As every project is expected to work with community partners, all of our students have ongoing access to a multitude of real world experiences. CBO partners provide a wealth of services, as well as access to opportunities and adults that connect our students to the community at large. Some partnerships provide employment for our student population during summertime or upon graduation. A partial list of our CBO partners include KQED, Rayko Center, Literacy for Environmental Justice, Alemany Farm, The Center for Land Based Learning, Natural Areas Program, Pacific Leadership Institute, the Golden Gate National Recreation Area Parks Conservancy, Writers Corps, Urban Debate

League, Southern Exposure, YMCA, and the San Francisco Maritime National Historic Park Association.

All projects at DHS further require community involvement. Some projects offer opportunities to explore apprenticeships and community service. At Fort Miley, GOAL students provide leadership to other school groups (elementary, middle and high schools) who participate in the ropes course. WALC students do restoration work at McLaren Park, Heron’s Head Park, Redwood National Park, and Candlestick Point State Recreation Ares. Together, GOAL and WALC have created a native plant garden on campus with help from the California Native Plant Society. EATS students volunteer at Alemany Farms and the Center for Land Based Learning. These hands-on experiences provide students with opportunities to apply and understand curricular concepts in a meaningful way. These service projects link students to the communities around them in a positive way and can be leveraged into jobs, internships, or career exploration when students and community partners personally connect.

The project-based structure at DHS has broadened the depth of the academic program and has enabled us to offer students a more challenging and engaging course of study. Through working in teams around thematic projects, students can see the relevance of school and of learning as they participate in the application of their knowledge. When an engaging curriculum is offered, students are more likely to come to school and to become “real students”: members of a community of learners. DHS is committed to constantly refining our method of instruction to best meet the needs of our students.

*Strengths and Prioritized Growth Areas*

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<b>Strengths</b>	<b>Evidence</b>
1. Teacher engagement in a broad array of professional growth activities, both at DHS and beyond, leads to a current, well-trained, highly qualified faculty	<ul style="list-style-type: none"> <li>• Weekly records of participation in Wednesday professional development workshops</li> <li>• Teacher involvement in off-campus professional growth activities</li> </ul>

	<ul style="list-style-type: none"> <li>• Curriculum-based teacher collaboration with CBOs</li> </ul>
2. Diversity of innovative and engaging alternative instructional strategies utilized by teachers	<ul style="list-style-type: none"> <li>• Lesson plans</li> <li>• Student work</li> <li>• Student projects</li> </ul>
3. Availability of a wide range of technology and depth of integration of that technology in project curriculum	<ul style="list-style-type: none"> <li>• Technology inventory of equipment</li> <li>• Student assignments and larger projects utilizing technology</li> <li>• Lesson plans utilizing technology and teaching students to use technology</li> </ul>
4. Multitude of real world experiences and connections embedded in projects	<ul style="list-style-type: none"> <li>• Project curriculum plans</li> <li>• CBO partnerships</li> <li>• Field experiences</li> <li>• Service projects</li> </ul>

<b>Prioritized Growth Areas</b>	<b>Evidence</b>
1. Develop common expectations for field experiences in order to facilitate maximum integration with project curriculum	<ul style="list-style-type: none"> <li>• Success of fully integrated field studies, evidenced by student engagement</li> <li>• Variety of field assignments completed by students</li> <li>• Differing approaches to and expectations for field experiences (i.e. field trip vs. field study)</li> </ul>