

# **GREENWICH HIGH SCHOOL**

## **CAPSTONE EXPERIENCE**

### **A new graduation requirement for the Class of 2023**

#### **Overview for Parents and Students**

Greenwich High School is required by the State of Connecticut to add a 1 credit Mastery Based Assessment requirement for students graduating in 2023. In Greenwich Public Schools, we have utilized our pre-existing [Vision of the Graduate](#) as the basis for this assessment.

As a school community, we embedded skill assessment into pre-existing school projects to capture student mastery of critical skills, without putting an additional burden of work on our students. Over the course of 4 years, students are guaranteed to participate in experiences through their classes, which will allow them to demonstrate mastery within their core academic and elective classes. Student mastery will be scored by their teacher and documented in the Aspen Student Management system. Once students have demonstrated mastery in all 13 areas, they will be awarded one credit towards graduation.

## Vision of the Graduate Capacities Addressed through Assured Experiences

<b>Vision of the Graduate Capacities</b>	<b>Course where assessment</b>
<b><i>Academic Capacities</i></b>	
<b><i>Pose and pursue substantive questions</i></b>	Science - Biology
<b><i>Critically interpret, evaluate, and synthesize information</i></b>	Social Studies - US History
<b><i>Explore, define, and solve complex problems</i></b>	Math - Algebra 1, Geometry, Algebra 2, Pre-Calculus
<b><i>Generate innovative, creative ideas and products</i></b>	Art, Business, Computer Science, Family and Consumer Science, Music, Technology Education, Theater Arts, Video Production
<b><i>Personal Capacities</i></b>	
<b><i>Conduct themselves in an ethical and responsible manner</i></b>	Senior Experience
<b><i>Recognize and respect other cultural contexts and points of view</i></b>	World Language - Offered in all courses
<b><i>Pursue their unique interests, passions and curiosities</i></b>	Senior Experience
<b><i>Respond to failures and successes with reflection and resilience</i></b>	Senior Experience
<b><i>Be responsible for their own mental and physical health</i></b>	Physical Education
<b><i>Interpersonal Capacities</i></b>	
<b><i>Communicate effectively for a given purpose</i></b>	English - Jr/Sr English
<b><i>Advocate for ideas, causes, and actions</i></b>	Health & Wellness - 12th Grade Wellness
<b><i>Collaborate with others to produce a unified work and/or heightened understanding</i></b>	Science - Chemistry
<b><i>Contribute to community through dialogue, service and/or leadership</i></b>	Social Studies - Civics

# Detailed Overview of In-Class Capstone Projects

## Academic Capacities

### Pose and pursue substantive questions:

**Department/Course where students demonstrate this VOG capacity:** Science - Biology (all levels)

**Overview of the Assignment and alignment to the VOG Capacity:** Effective questioning allows students to learn more about the world around them. In science, questions are not only used to initiate an investigation, they are developed throughout and even after an investigation. At Greenwich High School, students should strive to develop questions that require deep exploration (i.e.: “How does penicillin work?”) as opposed to more shallow, narrow scope (“Who discovered penicillin?”). Our students also strive to develop questions that require multiple lines or pieces of information to answer. Also, a good question elicits an answer that requires synthesis, and can’t be answered with “yes” or “no”. Biology students engage in assured experience activities, one in each semester, which teach them how to develop the effective questions described below.

**Artifact that will be uploaded to the ePortfolio:** Students will add their question from the Homeostasis Lab and/or the Zone of Inhibition Lab to the ePortfolio.

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### Critically interpret, evaluate, and synthesize information

**Department/Course where students demonstrate this VOG capacity:** Social Studies - American History (all levels)

**Overview of the Assignment and alignment to the VOG Capacity:** An essential part of the Sophomore Social Studies curriculum is for students to experience the research process from start to finish. For the purpose of this project, the research process is defined as following all the steps identified through the Greenwich High School Social Studies Curriculum and the Greenwich Public Schools Media and Technology Literacy Curriculum. The project culminates in a thesis-driven, analytical essay that uses a variety of academic sources. Students select topics based on their own individual preferences, but all focus on an aspect of American Society. Students will gain firsthand knowledge of the importance of the research process and using information for a given purpose. In addition, they will demonstrate their ability to communicate their research through a well-supported thesis. After completing their research paper, students will write a reflection piece about their research process.

**Artifact that will be uploaded to the ePortfolio:** Students will add their paper to their ePortfolio in Schoology upon submission.

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## Explore, define, and solve complex problems:

**Department/Course where students demonstrate this VOG capacity:** Mathematics - Algebra/Geometry Course 1, Extended Algebra, Algebra 1, Geometry A, Honors Geometry, Algebra 2A, Honors Algebra 2, Honors Pre-Calculus.

**Overview of the Assignment and alignment to the VOG Capacity:** Each Mathematics course listed above has a Capstone assessment that has students asking questions to gather information to solve a complex problem, using their technology as a resource to explore elements of a complex problem, and then ultimately solving the complex problem posed to them after gathering all necessary information. These projects are all one block in-class projects designed for students to use all their mathematical skills to solve. All projects are posted on the schoology Capstone Group page for each course.

**Artifact that will be uploaded to the ePortfolio:** Students will add their in-class project and all work to their ePortfolio in Schoology upon submission.

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## Generate innovative, creative ideas and products: Electives

Students can meet this capacity through a variety of different elective courses in Art, Business, Computer Science, Family and Consumer Science, Music, Technology Education, and Video Production. See descriptions below.

### Generate innovative, creative ideas and products: Art

**Department/Course where students demonstrate this VOG capacity:** Intro to Drawing, Intro to Painting, Intro to Photography, Intro to Computer Arts, Intro to Printmaking, Intro to Ceramics, Art Appreciation, Art Experience, ArtWear, Lettering and Layout, Art and Nature, Sculpture, History of Art (Shapers), and AP Art History

**Overview of the Assignment and alignment to the VOG Capacity:** Each Art course listed above has a Capstone assessment that has students apply existing knowledge and research to produce original thinking and/or work. Students will also experiment with visual ideas and concepts. Students will elaborate, refine, analyze, and evaluate ideas in order to understand, improve, and maximize creative efforts. Students will synthesize and relate knowledge and personal experiences to generate new ideas and understandings. Students will also contribute a new perspective by demonstrating inventiveness and originality while generating new visual ideas through investigating media, processes, and techniques.

**Artifact that will be uploaded to the ePortfolio:** Students will add their artwork to their ePortfolio in Schoology upon submission.

### Generate innovative, creative ideas and products: Business

**Department/Course where students demonstrate this VOG capacity:** Accounting, Business Law, Entrepreneurship, Honors Financial Accounting, Investments, Marketing, Personal Finance.

**Overview of the Assignment and alignment to the VOG Capacity:** The Business Department courses offer all students the opportunity to develop skills to be able to generate innovative and creative ideas and projects. Students will be able to define problems or questions and create solutions to solve them. The students will need to elaborate, refine, analyze and evaluate ideas in order to create successful solutions.

**Artifact that will be uploaded to the ePortfolio:** Students will add their projects to their ePortfolio in Schoology upon completion.

## **Generate innovative, creative ideas and products: Computer Science**

**Department/Course where students demonstrate this VOG capacity:** Introduction to Computer Programming A, Introduction to Computer Programming B, javaScript Computer Science Principles, AP javaScript Computer Science Principles, AP Computer Science A, Computer Programming for Applications, Honors Computer Programming for Applications II

**Overview of the Assignment and alignment to the VOG Capacity:** Each Computer Science course listed above has a Capstone Assessment that has students generate innovative, creative ideas and products. These projects are culminating projects designed for students to use all their programming skills to complete. Students will create a short screencast of the code running as evidence.

**Artifact that will be uploaded to the ePortfolio:** Students will create a short screencast of the code running as evidence.

## **Generate innovative, creative ideas and products: Family and Consumer Science**

**Department/Course where students demonstrate this VOG capacity:** Cardinal Cooks, Baking & Pastry Arts, Cultures and Cuisine, Fashion 1, and Interior Design

**Overview of the Assignment and alignment to the VOG Capacity:** The Family and Consumer Department has a Capstone Project in each of its beginning courses. The Cooking courses, Cardinal Cooks, and Cultures and Cuisines have a research project with a Powerpoint presentation, cooking lab, and reflection paper. The Baking and Pastry Arts class project will require the student to self-design a cake, learn decorating techniques and execute the design on their cake. A reflection paper will be written on the process and their final outcome. Fashion students will complete a garment of choice and write a reflection paper on this process. Interior Design students' Capstone Project will be the Final Design Project in which students will digitally design floor plans and used their classroom knowledge to decorate the floor plan and write a reflective paper on the process.

**Artifact that will be uploaded to the ePortfolio:** Students will add their final project and reflection to their Portfolio in Schoology upon completion.

## **Generate innovative, creative ideas and products: Music**

**Department/Course where students demonstrate this VOG capacity:** Concert Band, Concert Orchestra, Concert Choir, Percussion Ensemble, Guitar, Introduction to Electronic Music

**Overview of the Assignment and alignment to the VOG Capacity:** In order to thoroughly address the capacity for performance ensemble participants, the final project requires:

1. For performance ensembles: participation in one of the spring semester concerts and to write a reflection on their personal progress, the group's progress, and overall quality of the performance with regard to expectation for musical development.
2. For Guitar: end of semester recital reflection
3. For Introduction Electronic Music: students will create a piece according to the final project requirements.

**Artifact that will be uploaded to the ePortfolio:**

1. For performance ensembles: a written reflection
2. For Guitar: a written reflection
3. For Intro to EMusic: an audio or video file

## **Generate innovative, creative ideas and products: Technology Education**

**Department/Course where students demonstrate this VOG capacity:** Transportation Technology, Design A/B, Design Build, Architecture, Graphics (Intro), 3D Computer Graphics, Honors Game Making, Engineering Technology, Honors Engineering

**Overview of the Assignment and alignment to the VOG Capacity:** One common feature of all technology education classes at Greenwich High School is that students develop skills to generate innovative and creative ideas and products. This work requires students to define a problem or a question and then design solutions to address the problem/question. The process typically involves a procedure in which solutions are systematically tested and refined and the final design is improved by trading off less important features for those that are more important.

**Artifact that will be uploaded to the ePortfolio:** Artifacts of products will be limited to photographs, PDF's, screenshots, web links, and other electronic representations of student work.

## **Generate innovative, creative ideas and products: Video Production**

**Department/Course where students demonstrate this VOG capacity:** Introduction to Video Production

**Overview of the Assignment and alignment to the VOG Capacity:** All students in Introduction to Video Production will complete a short film project. Within groups, students select a topic of their choosing to create a maximum 5 minute film. Students will storyboard, pitch their idea and work in a team to create a video that incorporates critical skills, such as using different camera shots, editing, and sound.

**Artifact that will be uploaded to the ePortfolio:** Students will upload a link to their video in Schoology.

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## **Personal Capacities**

### **Be responsible for their own mental and physical health**

**Department/Course where students demonstrate this VOG capacity:** Physical Education - Fitness 10

**Overview of the Assignment and alignment to the VOG Capacity:** Fitness10 is a mandatory class designed to teach students the concepts of physical fitness and how to live a healthy and active lifestyle. Students will learn how to utilize equipment in the weight room as well as body weight training. In addition, the CAHPERD Physical Fitness Test will be administered during this unit. This state mandated requirement will assess the following areas: cardiovascular endurance, flexibility, muscular strength, and muscular endurance.

In order to align with the VOG Capacity 13, students will be required to complete a personalized fitness inventory. Students will complete a pre/post journal entry

The pre-journal entry will identify an area of fitness to focus on. Students will create a fitness goal and action plan to achieve that goal. The action plan will include strategies to accomplish their goals, possible obstacles that may prevent them from achieving their goals, and strategies to overcome those obstacles.

In the post-journal entry students will reflect on their efforts and conduct a self-assessment to determine if they achieved their original goal.

**Artifact that will be uploaded to the ePortfolio:** Two journal assignments (pre/post)

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## **Recognize and respect other cultural contexts and points of view:**

**Department/Course where students demonstrate this VOG capacity:** World Language (all courses and levels)

**Overview of the Assignment and alignment to the VOG Capacity:** Each World Language Department course designates one of its cultural projects as a Capstone Project. In order to thoroughly address the capacity, the project entails examination of a target culture custom, tradition, or perspective, and requires students to compare these with their own. The final product represents the student's reflection on this new learning in comparison to their own experiences.

**Artifact that will be uploaded to the ePortfolio:** Students will add their project and reflection to their ePortfolio in Schoology upon submission.

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## **Conduct themselves in an ethical and responsible manner**

### **Pursue their unique interests, passions and curiosities**

### **Respond to failures and successes with reflection and resilience**

**Department/Course where students demonstrate this VOG capacity:** Guidance/Office of Student Life - Senior Experience (Project or Internship)

**Overview of the Assignment and alignment to the VOG Capacity:** Having a choice of Internship or project allows students to participate in a culminating activity in which they apply the knowledge and skills they have acquired throughout high school to an area of personal interest. By helping to foster independence and decision-making skills, the Senior Experience provides students an opportunity to make a smoother transition from high school to college, the work place, or military service. Journal prompts throughout the course of the internship or project will encourage students to reflect upon the three designated capacities of the Vision of the Graduate. GHS Faculty Mentors and Site Supervisors (for students participating in internships) will provide guidance and feedback to the students on their demonstration of these three capacities, as well as other capacities in the VOG, throughout the experience.

**Assessment tool:** Faculty Mentors will assess the journal responses and provide a passing rating when students have thoroughly responded to each question contained in the prompt.

Prompt #1: In what ways is this internship or project allowing you to pursue your unique interests, passions and curiosities? What have you learned about yourself that might help you develop and/or refine your future goals?

Prompt #2: For internship, schedule a time to discuss ethical issues with your site supervisor to answer this question: What ethical considerations have come up with your internship or project? For project, explore ethical considerations when working independently or with your team. For assistance reach out to your Faculty Mentor.

Prompt #3 What are your strengths and weaknesses within this internship or project? How have you demonstrated your ability to respond to successes and failures with reflection and resilience during this experience? What challenges have you faced in your internship or project? How did you adapt to ensure continued success?

Prompt #4 Please reflect on your overall experience. Any positive or negative aspects? In what ways has your high school education prepared you to enter the professional world or to continue studying in your area of interest? If you had to do this over again, what would you do differently?

**Artifact that will be uploaded to the ePortfolio:** Student ePortfolios will be complete before student exit for Internship of Project. Students will complete journal entries in the Senior Options website on which they will be assessed by their Faculty Mentor and, for internship, Site Supervisor. Students who complete a Senior Project will also have a final presentation of learning in a group exhibition.

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## Interpersonal Capacities

### Communicate effectively for a given purpose:

**Department/Course where students demonstrate this VOG capacity:** English Dept. - All Jr/Sr courses

**Overview of the Assignment and alignment to the VOG Capacity:** Each Jr/Sr course designates a student presentation as a Capstone Project. These require students to compose and deliver effective presentations in which they:

- Present information and supporting evidence conveying a clear and distinct claim
- Integrate and evaluate a variety of information to formulate an argument or address a question; address alternate or opposing perspective if appropriate
- Cite strong and thorough evidence to support analysis/argument.

Post presentation, students reflect on the process: what challenged, what worked well, what they would refine and how they would do so.

**Artifact that will be uploaded to the ePortfolio:** Students will add their reflections to their e-Portfolio in Schoology upon submission.

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### Advocate for ideas, causes, and actions:

**Department/Course where students demonstrate this VOG capacity:** Health and Safety Education, Senior Health and Safety Education, Health and Safety Project

**Overview of the Assignment and alignment to the VOG Capacity:** A requirement of the Senior Health and Safety Education Curriculum is the completion of the Senior Health and Safety Education Project, where a collaborative team of 3 students pursue in-depth research on an issue of their choice, develop an action plan to help resolve the issue, and educate by giving a TED-like Talk to fellow students. The research components include: Identifying and sharing opposing viewpoints from databases, websites,

books, periodicals, interviews and surveys, documented in MLA format, arranging a meeting with a community connection, a professional in their field, and summarizing their findings, developing an individual action plan based on their research, constructing a multi-media infographic containing research photos, graphs, videos. Educating others on the issue and their plan to solve the problem. Reflection on outcomes of research and their plan.

**Artifact that will be uploaded to the ePortfolio:** The Health and Safety Education Template will be uploaded to the ePortfolio

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### **Collaborate with others to produce a unified work and/or heightened understanding:**

**Department/Course where students demonstrate this VOG capacity:** Science - Chemistry (all levels)

**Overview of the Assignment and alignment to the VOG Capacity:** Collaboration to produce a unified work or heightened understanding is a critical aspect of science. Professionals in the field frequently collaborate to contribute unique knowledge or skills to a unified work or endeavor, such as research and publications. At Greenwich High School, students in science are required to collaborate with peers in order to share ideas, to contribute to investigations, and to participate in the communication of science to others. A key component of these collaborations is the contributions of all student stakeholders, as well as the development of interdependence among group members.

**Artifact that will be uploaded to the ePortfolio:** Students will add their scores from the collaboration rubric from the “Impossible Burger Lab” and/or the “Ocean Acidification Project” to the ePortfolio.

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### **Contribute to community through dialogue, service, and/or leadership:**

**Department/Course where students demonstrate this VOG capacity:** Social Studies - Civics (all levels) and AP U.S. Government and Comparative Politics

**Overview of the Assignment and alignment to the VOG Capacity:** Each student taking the Civics or AP US Government course completes a Community Service Project. In order to fulfill this capacity, students show civic engagement through five hours of participation with a community organization. The process of completing Community Service includes the design of an initial project plan, research into the scope of the work done by community organizations and sharing a final project that offers an analysis of the effectiveness of community organizations in addressing public needs.

**Artifact that will be uploaded to the ePortfolio:** Students will add their final project to their ePortfolio in Schoology upon submission.

# Capstone FAQs:

## **What is the Capstone Experience?**

The Capstone Experience is a four-year process through which students demonstrate proficiency in the capacities of the Vision of the Graduate (VoG). While the Capacities of the Vision of the Graduate are embedded in all courses throughout the curriculum, designated assured experiences ensure that students have the opportunity to focus specifically on each capacity during their four year High School experience.

## **Why do students complete a Capstone Experience?**

The State of Connecticut requires all students to earn one credit toward graduation in a Mastery Based Diploma Assessment. Greenwich High School fulfills this requirement through the GHS Capstone Experience, which allows students to develop and demonstrate the Vision of the Graduate capacities.

## **How will the Capstone Experience be assessed?**

As students complete assignments or activities required for the Capstone Experience, they receive assessment and feedback from their teachers using common rubrics for assessment. A student who does not meet expectations on a capacity through one of the assured experiences will have other opportunities within the curriculum to demonstrate proficiency of the capacity. Progress on Capacities will be scored on a Pass/Fail basis and documented in Aspen.

## **How can I track my students' progress toward the Vision of the Graduate?**

Vision of the Graduate Capacity scores will be displayed on a separate standards progress summary. This report can be viewed through the ASPEN Portal. Directions to access ASPEN can be found on the Greenwich High School website.

## **Is the Capstone Experience a graduation requirement?**

Beginning with the Class of 2023, the Capstone Experience will count as one credit towards graduation. Students will be awarded partial credit as each assured experience is successfully completed.

## **How does a student who does not attend GHS for four years meet the Capstone Experience requirement?**

GHS staff will work with individual students on a case-by-case basis to determine how to meet these requirements.

## **Where can I find more information on this requirement from the State of CT?**

State of Connecticut [Public Act No. 17-42](#), *An Act Concerning Revisions to the High School Graduation Requirements*, "Commencing with classes graduating in 2023, and for each graduating class thereafter, no local or regional board of education shall permit any student to graduate from high school or grant a diploma to any student who has not satisfactorily completed a minimum of twenty-five credits, including not fewer than: ... a one credit mastery-based diploma assessment."

The State of CT has given local schools and BOEs autonomy in how to best implement this assessment, but "The general goal of mastery-based learning is to ensure that students are acquiring the knowledge and skills that are deemed to be essential to success in school, higher education, careers, and adult life." ([FAQs about MBL from CT](#)).