Stonington Public Schools

Curriculum Handbook

2017

The Stonington Public Schools Curriculum Team

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Mission Statement

Stonington Public Schools, where we believe in all students. Through partnership with family and community, we will provide an innovative and inspirational educational environment where students succeed with confidence and develop a love of lifelong learning.

Vision Statement
- ❖ forward thinking
- ❖ fostering passions
- ❖ developing responsible citizens
- ❖ preparing for tomorrow's opportunities

Introduction

The Stonington Public Schools Handbook of Curriculum Development outlines the process for developing, revising, and evaluating curriculum, instructional programs, and assessment practices. The common process and format affords teachers, leaders, and families with a clear understanding of how curriculum will be developed, reviewed, and approved in the district.

Curricula reflects the District vision for teaching and learning to ensure all students are college and career ready upon graduation from high school. Each curriculum outlines the expectations for what students will know and do throughout the course. Significant tasks provide guidance on the delivery of the key learning experiences to help teachers in the development of critical unit lessons. Every curriculum also includes a "snapshot" cover sheet of key topics, essential questions, and instructional timelines to serve as a quick reference for both administrators and families at any point during the school year. Some curricula may include components such as, programs, texts, textbooks, technology, and consumables that support teaching and learning. It is the obligation of every teacher to implement the curriculum upon board approval.

Curriculum Needs Assessment and Analysis

The Curriculum Office will gather information to determine the curricular needs of the district and develop a list of curriculum priorities subject to the approval of the Superintendent of Schools and the Board of Education. Curriculum development and revision priorities will be informed by the following:

- Changes in national, state, or local curriculum standards
- Changes in national or state mandates
- Analysis of student data including local and state growth measures, trend data, and the essentials of student-centered learning
- Results of formal program evaluations
- Developments in research to inform instruction
- Student needs and interests

Curriculum analysis occurs annually based upon both the curriculum revision cycle driven by the factors listed above and curriculum revision requests. The curriculum revision cycle is a working document maintained by the Assistant Superintendent and outlines a five-year plan of priorities for review as well as the development of new courses. The plan will remain fluid to accommodate changing staffing and shifting priorities, but will be revisited by the district curriculum team and the Teaching and Learning Committee of the Board of Education to track the progress of curriculum development. Teachers or administrators may also propose the development of a new course based upon other pertinent data. These proposals may be sent to the Assistant Superintendent and the appropriate building leader for consideration (Appendix V).

The **Stonington Curriculum Development Guide** is used to identify areas in need during the review of existing curriculum. (Appendix I) Teacher input will also be utilized to revise curriculum within or outside of the normal review cycle. Any proposals to revise the curriculum outside the review cycle will be brought to and considered by the district curriculum team (Appendix V). Based upon the analysis, the Assistant Superintendent and the district curriculum team members will set goals and timelines for the development process. The Guide is to serve as an inventory tool for existing curricula and a checklist for the writers to ensure key components of high quality curricula are considered when the writing process is underway.

Curriculum Writing and Adoption

All curriculum writers will use the Stonington Curriculum Development Guide (SCDG) and the Stonington Curriculum Unit Template in the writing process. In addition to the SCDG, a common template will be used for all units in every curriculum document (Appendix II). To support curriculum writers and guarantee a shared understanding of the components of each unit, a curriculum template with descriptors of each feature is also provided in this Guide (Appendix III).

For each course that is under development or revision, a draft of the first unit will be submitted to the appropriate curriculum content specialist and the Assistant Superintendent for feedback before additional writing occurs. Upon approval of the first unit, the remainder of the curriculum will be drafted. The complete curriculum draft is then submitted and reviewed by the appropriate curriculum specialist. After the initial edits and or revisions are made, the curriculum will be forwarded to the Assistant Superintendent for approval. At this juncture, the curriculum may be sent back for further edits and revisions or move forward to the Teaching and Learning Committee for approval. The Teaching and Learning Committee will review the curriculum and make a recommendation to the full Board to adopt the curriculum. The Board of Education may, under its discretion, waive the second reading of the curriculum and adopt it upon the first reading.

Textbook/Trade book Adoption

Board Policy 6161 (a)

Any textbook or learning material that will serve as the function of a textbook must be processed through the district primary learning material adoption procedure and formally adopted by the Board of Education. This applies to a textbook or material that will be used as a primary learning tool on an ongoing basis with the majority of students in a class, course, or learning group within a class.

Primary learning materials are textbooks, paperback books, audiovisual kits, or other instructional materials which are:
- Used for the duration of a course or school year; the majority of assignments are derived from such material.
- Used by all student in a class, course, or learning group within a class.

Upon selection of a textbook, trade book, or other primary learning material, the appropriate curriculum leader will submit a Trade Book Approval Form (Appendix V) to the Assistant Superintendent along with the number, ISBN, and cost of the books or resources. The appropriate teacher or curriculum person will present the resource at the Teaching and Learning subcommittee of the Board of Education. The subcommittee will consider the request for adoption and make a recommendation to the Board. At the Board's discretion, a second reading may be waived for adoption upon the first reading.

To secure textbooks, trade books, and resources in a timely fashion, it is imperative the approval process occurs during the academic year preceding the implementation of the new course. If a change in a textbook, trade book or resource is anticipated for an existing course it must be approved by the Board in the preceding academic year. The only exception is a textbook, trade book, or resource for a semester course at the high school level that may be approved in the semester preceding the implementation of the semester course.

Appendix I: Stonington Public Schools Curriculum Development Guide

District/Program Name:	Grade Level/Course Name:	
Reviewer(s)/Writers:	Date of Review:	Date Board of Education Adopted the Curriculum:

Curriculum Development and Implementation Processes
This section references processes at the **district level** that are essential in all curriculum development. Evidence may be found in different documents, such as a curriculum development guide or professional development plan.

The following items are important components of curriculum development and should be evidenced in the inventory.	Evidence is present.	No evidence is present.	Comments/Next Steps
A philosophy/mission statement about the teaching and learning of all students in the course/content area.			
The curriculum development process follows a district plan for development, implementation, and evaluations/revision cycle for curriculum.			

The following items are important components of curriculum development and should be evidenced in the inventory.	Evidence is present.	No evidence is present.	Comments/Next Steps
A common defined model is used (e.g., UBD, Squires, Balanced Curriculum).			
A system to orient teachers and administrators in the implementation of the curricula includes professional development as needed.			
A list of current references/research used to guide the curriculum development is included in the curriculum or development guide.			
A plan showing alignment with a standards-based report card when applicable.			

Curriculum document includes:	Indicators	Comments/Next Steps
Standards- Based Curriculum: Alignment to Standards (CCSS, NGSS, CSSS, etc.)	● The curriculum aligns with state standards or national standards as appropriate	
Course Snapshot: Quick reference page for administrators, teachers, and families to provide general topics and the pacing of the curriculum delivery.	● Serves as the cover sheet for the curriculum document ● Approximate number of weeks for each unit.	
Learner Expectations: Learner expectations are clearly defined and will explain what students will be able to know and do.	● Learner expectations state what students will know or be able to do by the end of each unit. ● Learner expectations align with district goals for instruction/programming ● Learner expectations reflect all levels of cognitive demand. (Webb's Depth of Knowledge)	

Curriculum document includes:	Indicators	Comments/Next Steps
Pacing: The sequence in which skills and concepts will be taught along with suggested time frames are detailed.	● Skills and concepts are sequenced and evolve along a continuum of development from Pre-K-12. ● Standards used include a balance of content and processes (e.g. inquiry, design, and 21st Century Skills) ● Big Ideas and Essential Questions are stated for each unit. ● Timelines are included for each unit with reference to the length of standard length of class/laboratory meeting time.	
Educational Technology and Technological Literacy: Appropriate skills related to information, media, and technology are embedded into each unit.	● The appropriate use of information technology and educational technology is used to support teaching and learning and is embedded in the curriculum at each grade/course level. ● Using, searching, and evaluating Internet sources and other information are included in each curriculum/course. ● Content specific technology and technology applications are specified.	

	(lab equipment, probe-ware, software, applications, simulations, applets, etc.) ● There are varied and frequent opportunities for students to use technology and applications to demonstrate their understanding of content in each grade/course.	
Essential Learning Activities/Significant Tasks: The highest leverage learning activities are outlined in a narrative form and are guaranteed learning experiences for all students.	Every unit includes learning activities: ● Sequenced to target learner expectations that develop critical thinking and problem-solving skills ● Provide multiple types of learning experiences (presentations, investigations, case studies, debates, demonstrations) ● Use technology to enhance learning and or creativity when appropriate ● Incorporate activities that inherently develop collaboration, problem-solving, perspective, and creative thinking ● Capitalize on the student's' frame of reference	

Curriculum document includes:	Indicators	Comments/Next Steps
Assessments: The ways to measure and monitor students' progress and inform instructional decisions.	<u>Every unit includes varied methods of assessments:</u> ● Assessments aligned with content and learner expectations ● Assessments provide clear criteria for student success ● Multiple methods at varied cognitive levels (Webb's DOK) ● Some assessments allow for student choice in the format in which they deliver their evidence of their understanding	
Safety Considerations: Explicit reference to science, art, Tech Ed safety in the classroom, laboratory or field setting is documented.	● Safety protocols for student use of equipment are specified ● Safety protocols for handling and disposal of chemicals or specimens are detailed ● Use of safety goggles, aprons, etc. notes when appropriate	

Curriculum document includes:	Indicators	Comments/Next Steps
Resources: Materials that support inquiry or performance-based learning	● Evidence of proper training on the use of equipment (e.g. kilns, burners, saws) ● Guidance on all necessary resources (consumables, non-consumables, technology, etc.) for specific laboratory investigations or activities within each unit.	
Teacher notes: Advice on specific implementation of activities, grouping, timing, resource location, etc.	● Suggestions on finding, securing, preparation of laboratory/art/Ed tech, etc. activities. ● Specific instructional advice provided for implementation including accommodations for ELL students, students with disabilities, differentiation for variation in reading abilities, etc. ● Suggestions for improvements of any unit lessons, labs, activities to inform curriculum revision. ● Common vocabulary to be used within each unit	

Appendix II: Unit Template for Curriculum Development with Descriptors

Name of Unit:	Length of unit: (number of classes/minutes per meeting):

Content Standards Addressed in the Unit:

Big Idea(s):	Essential Question(s): (~2-3 per unit)
Concise statement, principle, or generalization May be recursive across disciplines as well as vertically Essence of the unit(s) May occur across disciplines It "connects the dots" among the individual objectives, lessons, and activities.	Provocative questions without an obvious answer. Invite debate and foster critical thinking. Reveals the complexity of a subject Recursive both horizontally and vertically Raise other questions that connect to the big idea Link the lessons of the unit together Students responses to the EQ evolve over time.

Examples: ● **Structure dictates behavior.** ● **Technology impacts human relationships.** ● **The storyteller rarely tells the meaning of the story.**	**Examples:** ● **Is biology destiny?** ● **What do we fear?** ● **Is U.S. history a history of progress?** ● **Does art reflect culture or shape it?** ● **What distinguishes a fluent non-native speaker from a native speaker?**
Students will know: What skills, facts, concepts will students need to master to apply the new knowledge. **Webb's DOK Levels 1 and 2** **Webb's Depth of Knowledge** **DOK Examples in Core Content Areas**	**Students will be able to:** What applications, innovations, problem-solving-activities will students do that promote strategic and extended thinking. **Webb's DOK Level 3 and 4** **Webb's Depth of Knowledge** **DOK Examples in Core Content Areas**

Significant tasks:

- Serve as the central focus for teachers to plan central lessons and accounts for 60% of the instructional time in a unit of study. Each task will encompass several lessons. Lessons are not included in a curriculum unit.
- May be one or several per unit.
    - Typically, more at the elementary level and approximately 1 per week at the secondary level.
- Focus on linking the standards to student performance (what the students should know and do), but gives teachers flexibility on how the students will demonstrate understanding (assessment).
- Includes technology skills as applicable.
- At Stonington High School these tasks may also explicitly assess one or more of the 4 C's (Convince, Communicate, Consider, Connect).

Significant Task Examples

Example: Algebra 1, Unit 8

**Significant Task 1: Quadratic Functions in Vertex Form and Solving Using Square Root Property**
This is the last task of the course and depending on time not all students will be able to complete the entire task. The first portion of the task the entire class would complete. Working in small groups or partners students will investigate the effects of the parameters a, h and k on the graph of a parabola, identify the vertex and determine whether the parabola opens up or down. Students will reverse the process and write an equation in vertex form for a parabola given its vertex and one other point. Full class discussion should focus on the reasoning and evidence and the groups should defend their conclusions.

Students will learn to apply the Square Root property and the principle of "undoing" to solve equations of the form.   They will then apply this skill to finding the x-intercepts of parabolas with functions in vertex form and applications of functions given in vertex form.

**Timeline:** 5 classes @ 50 minutes

_____

Common Learning Experiences: Class discussions, video clips, speakers, reading assignments with protocols to promote academic discussion, instructional games, practice sessions
(list of specific activities that all students will experience)

Key vocabulary: Identify new academic vocabulary that make prevent students' from accessing the content without instructional support. For tips on teaching academic vocabulary visit: [Marzano's 6 Steps to Teach Vocabulary](#)

Example-

Key vocabulary: Algorithm, Binomial, Coefficient, Constant Term, Expanded Form, Leading Coefficient, Line of Symmetry, Quadratic Function, Quadratic Equation, Parabola, Parameter, Square Root Property, Standard Form, Vertex, Vertex Form, x-intercepts

Evidence of Understanding - Common Assessments: *Common assessments outside of the significant tasks*
- Formative assessments to inform instruction and differentiation
  - Examples: Page Keeley's Formative Assessment Probe, "What is a Chemical Bond?" or "My Favorite No!" to assess students' understanding of a best fit line.
- Question sets, laboratory exercises, classwork, exit tickets, academic prompts, Socratic seminars, Spiderweb discussions
- Homework assignments
- Self-assessments
- Specific performance tasks
- Case studies
- Unit tests/quizzes
- Identify the assessments that incorporate the 4 C's

Teacher notes:
- Resources, Tier I and Tier II materials
- Differentiation Strategies - Accommodations for ELL students and students with disabilities, differentiation for variation in reading abilities, etc.
- Anticipated student misconceptions
- Background knowledge/skills necessary prior to beginning the unit
- Possible interdisciplinary connections
- Safety considerations in Science, Technical Education, Art
- Suggestions for improvements of any unit lessons, labs, activities to inform curriculum revision

Appendix III: Blank Unit Template for Curriculum Development

Name of Unit:	Length of unit: (number of classes/minutes per meeting)
Content Standards Addressed in the Unit:	

Big Ideas:	Essential Question(s):
Students will know:	Students will be able to:

Significant tasks:

Common Learning Experiences:

Key vocabulary:

Evidence of Understanding - Common Assessments

Teacher notes:
- Resources:

- Anticipated Student Misconceptions:

- Differentiation Strategies:

- Safety Considerations:

- Prior Knowledge:

- Interdisciplinary Connections:

Appendix IV: Course Outline

Critical Areas of Focus (Course Description)

Pacing Guide (Semester /Year Course)	
1st Marking Period	2nd Marking Period

Appendix V: New Course Proposal

COURSE PROPOSAL	
Title of the Course:	
School:	__ High School __Middle School __ Elementary School
Length of Course:	( ) Required ( ) Elective
Credit Value:	
Prerequisite:	
Options for next course:	
Rationale for the proposed course:	
Course Description:	

Essential Learning Outcomes: **(Course Standards)**	
Common Learning Experiences:	
Evidence of Understanding: **(Common Assessments)**	
Resources:	
Anticipated Materials:	

Appendix VI: Glossary

Accommodation- Changes that allow a person with a disability to participate fully in an activity. Examples include, extended time, different test format, and alterations to a classroom.

Big Ideas - Big ideas emphasize the common characteristics of a unifying concept, is a concise statement, principle, or generalization, promotes in-depth understanding and applies across disciplines.
Example: Words are power. Non-example: Word origins unlock the potential for learning vocabulary.

CCSS - Connecticut Core State Standards

Common Assessments - Periodic or interim assessments collaboratively designed by grade-level or course teams of teachers.

Common Vocabulary- Academic words that are used throughout all grades across a discipline.

Curriculum - The courses of study offered by a school or district.

District Curriculum Team- A group of curriculum leaders from across grades K-12 and all disciplines that come together to make curricular decisions.

Educational Technology - Educational technology is the study and ethical practice of facilitating learning and improving performance by creating, using and managing appropriate technological processes and resources.

Essential Questions - Essential questions have no right or wrong answer, promote inquiry, focus student learning toward the big idea, foster critical thinking and deeper meaning, and engage students in a real life problem-solving. Example: Where do artists get their ideas? Non-example: Did nature influence Monet?

Formative Assessments - Formative Assessments, including diagnostic testing, is a range of formal and informal assessment procedures conducted by teachers during the learning process in order to modify teaching and learning activities to improve student attainment.

Four C's - The Four C's include communication, collaboration, critical thinking and creativity.

Inquiry - Inquiry includes: seeking or request for truth, information, or knowledge, an investigation, as into an incident, the act of inquiring or of seeking information by questioning;interrogation, and/or a question; query.

Modification - Substantial changes in what the student is expected to demonstrate: includes changes in instructional level, content, and performance criteria, may include changes in test form or format; includes alternative assignments.

NGSS - Next Generation Science Standards https://www.nextgenscience.org/

Performance Based Learning - Performance-based learning and assessment represent a set of strategies for the acquisition and application of knowledge, skills, and work habits through the performance of tasks that are meaningful and engaging to students.
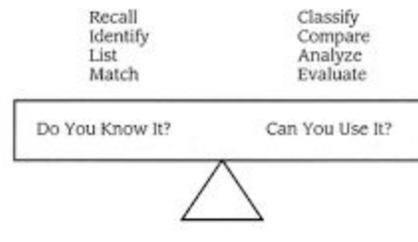
Performance Tasks - A performance task is any learning activity or assessment that asks students to *perform* to demonstrate their knowledge, understanding and proficiency. Performance tasks yield a tangible product and/or performance that serve as evidence of learning.

Professional Learning Community (PLC)- A group of colleagues who meet around a common need. Examples include professional reading, looking at student work, examining student data, creating common assessments, reviewing school goals.

Significant Task/Squire - Significant tasks are used to to encompass an objective and the instructional process that leads to an assessable student product that includes both standard objectives (the what) and the instructional process (the how). It also describes the learning immediately before and after the performance component. [Significant Task Examples](#)

Student Centered Learning - An approach to education focusing on the needs of the students, rather than those of others involved in the educational process, such as teachers and administrators.

Student Misconceptions - Examples include in math when a student says I always divide the larger number by the smaller number when we know this isn't always true. In science, an example would be when students think a heavier object falls faster than a lighter object. In language arts, an example would be when students confuse author's point of view with the point of view of a story. In social studies, an example would be the confusion of modern versus ancient timelines.

Students will know- Student learning outcomes should be phrased in terms of observable or measurable behaviors that a student should be expected to demonstrate as a result of taking the course. Examples include:

> *identify* five key provisions of the clean air act
> *outline* the procedure for calibrating a gas chromatograph
> *interpret* poetry in the cultural context of its period
> *distinguish* between conduction and convection
> *apply* structured and semi-structured interviewing techniques
> *calculate* the probability
> *explain* which economic and political factors contributed to the outbreak of W.W.II
> *design* an experiment to determine the effect of temperature on…
> *formulate* a letter in the foreign language for a pen pal
> *evaluate* the usefulness of various research methods

Students will be able to - "Students will be able to" statements are another commonly used format for learning objectives, and the abbreviation SWBAT may be used in place of the full phrase. For example: SWBAT explain how the Constitution establishes the separation of powers among the three branches of the United States government—legislative, executive, and judicial—and articulate the primary powers held by each branch

Summative Assessments - The goal of summative assessment is to evaluate student learning at the end of an instructional unit by comparing it against some standard or benchmark. Summative assessments are often high stakes, which means that they have a high point value. Examples of summative assessments include: a midterm exam, a final project.

Textbook - A manual of instruction or a standard book in any branch of study. They are classified by both the target audience and the subject. Textbooks are usually published by specialty printers to serve every request for an understanding of every subject that can be taught.

Trade book- Trade book is defined as a book that is to be sold to the public through booksellers. An example of a trade book is a bestselling novel in a paper cover.

Understand By Design - Understanding by Design, or UbD, is an educational planning approach. UbD is an example of backward design, the practice of looking at the outcomes in order to design curriculum units, performance assessments, and classroom instruction. UbD focuses on teaching to achieve understanding.

Webb's DOK - Depth of Knowledge also referred to as D.O.K., is the complexity or depth of understanding required to answer or explain an assessment related item or a classroom activity. The concept of depth of knowledge was developed through research by Norman L. Webb in the late 1990's.

Works Cited

Dictionary.com. (n.d.). Retrieved October 06, 2017, from http://www.dictionary.com/

EdGlossory.com Retrieved October 10, 2017, from http://edglossary.org/

Hibbard, K. Michael. *Performance-Based Learning and Assessment. a Teacher's Guide*. Association for Supervision and Curriculum Development, 1996.

News. (n.d.). Retrieved October 06, 2017, from https://www.sausd.us/

Parent Information Center of NH. (n.d.). Retrieved October 06, 2017, from http://www.picnh.org/

Special Education Terms and Definitions. (n.d.). Retrieved October 06, 2017, from http://www.understandingspecialeducation.com/special-education-terms.html

Squires, D. A. (2005). *Aligning and balancing the standards-based curriculum*. Thousand Oaks, Calif: Corwin Press.