

NEW MILFORD BOARD OF EDUCATION
New Milford Public Schools
50 East Street
New Milford, Connecticut 06776

COMMITTEE ON LEARNING
MEETING NOTICE

RECEIVED
TOWN CLERK
2019 MAR 29 P 2:58

NEW MILFORD, CT

DATE:	April 2, 2019
TIME:	7:30 P.M.
PLACE:	Lillis Administration Building – Room 2

AGENDA

New Milford Public Schools Mission Statement

The mission of the New Milford Public Schools, a collaborative partnership of students, educators, family, and community is to prepare each and every student to compete and excel in an ever-changing world, embrace challenges with vigor, respect and appreciate the worth of every human being, and contribute to society by providing effective instruction and dynamic curriculum, offering a wide range of valuable experiences, and inspiring students to pursue their dreams and aspirations.

1. Call to Order

2. Public Comment

An individual may address the Board concerning any item on the agenda for the meeting subject to the following provisions:

- A. A three-minute time limit may be allocated to each speaker with a maximum of twenty minutes being set aside per meeting. The Board may, by a majority vote, cancel or adjust these time limits.
- B. If a member of the public comments about the performance of an employee or a Board member, whether positive, negative, or neutral, and whether named or not, the Board shall not respond to such comments unless the topic is an explicit item on the agenda and the employee or the Board member has been provided with the requisite notice and due process required by law. Similarly, in accordance with federal law pertaining to student confidentiality, the Board shall not respond to or otherwise discuss any comments that might be made pertaining to students.

3. Discussion and Possible Action

- A. Review and Approval of Curriculum
 - 1. CP Algebra II
 - 2. Honors Algebra II
 - 3. Honors Geometry
- B. Next Generation Science Standards (NGSS)

4. Item of Information

- A. Graduation Requirements

5. Public Comment

An individual may address the Board concerning any item on the agenda for the meeting subject to the following provisions:


- A. A three-minute time limit may be allocated to each speaker with a maximum of twenty minutes being set aside per meeting. The Board may, by a majority vote, cancel or adjust these time limits.
- B. If a member of the public comments about the performance of an employee or a Board member, whether positive, negative, or neutral, and whether named or not, the Board shall not respond to such comments unless the topic is an explicit item on the agenda and the employee

or the Board member has been provided with the requisite notice and due process required by law. Similarly, in accordance with federal law pertaining to student confidentiality, the Board shall not respond to or otherwise discuss any comments that might be made pertaining to students.

6. Adjourn

Sub-Committee Members: **J.T. Schemm, Chairperson**
Angela C. Chastain
Bill Dahl
Tammy McInerney

Alternates: **Brian McCauley**
Wendy Faulenbach



NGSS Science Curriculum and Professional Learning Plan K-12

2019-2024



The Journey of Science Curriculum In NMPS

- 2016 K-5 written to align to standards
 - Limited understanding of NGSS
 - Training not widely available
- Professional Learning concentrated on NGSX training in 6-8
- Professional Learning in K-5 was based on interest
- PL in 2019 for all K-5 teachers in Elements
- Small group of K-5 Leaders received Practices in 2019



2018-2019 Training and Planning

- Early winter teachers at each level met with Science Center
 - Planned training
 - Spoke about current state of curriculum
- Training Conducted K-12 Winter of 2019
- PL plan to be extended for 2019-2020
- Curriculum and programs were discussed
- Recommended we go with CREC units of study



Pilot Plan Created

- Purchased CREC units for review
- Shared with Science Enrichment teacher for review
- Shared plan for implementation with administration
 - Reviewed
 - Shared perspectives
 - New plan crafted
- Spoke with area districts about implementation



CREC Units-What are They?

Bundled Units of study that incorporate the conceptual shifts of the NGSS including:

1. Interconnected nature of Science as it is Practiced and Experienced in the Real World
2. Student Performance Expectations
3. Science Concepts that Build Coherently from K-12
4. Focus on Deeper Understanding and Application of Content
5. Integration of Science and Engineering
6. Prep students for College, Career, and Citizenship
7. Alignment of NGSS with CCSS in LA and MA

(Summarized from NGSS Appendix A)



CREC Units-How were they created?

- These bundles were created by the CREC Consortium represented by 40+ Districts from Connecticut.
- Writers received extensive training in Pedagogy and standards architecture.
- Unit “Bundles” are thematic to:
 - show connections between the sciences
 - facilitate phenomenon driven ideas
 - save instructional time



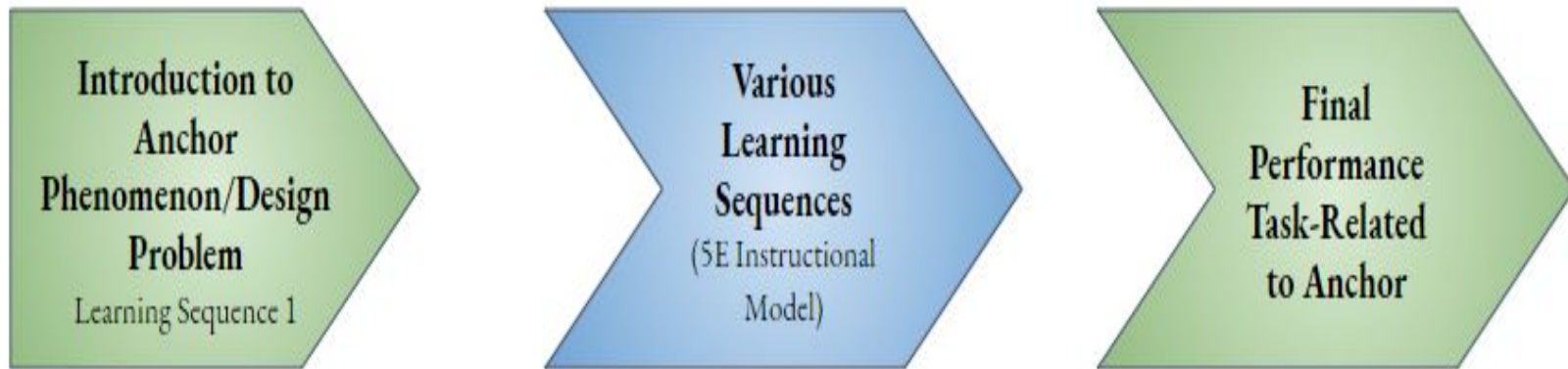
Units of Study (Bundles) Topics by Grade Level

Grade K (Thematic)	Grade 1 (Thematic)	Grade 2 (Thematic)
<p>Bundle 1: Mystery Class Pet</p> <ul style="list-style-type: none"> ● K-LS1-1 ● K-ESS2-1 ● K-ESS2-2 ● K-ESS3-1 ● K-ESS3-3 ● K-2-ETS1-1 <p>Bundle 2: Waiting for Weather</p> <ul style="list-style-type: none"> ● K-PS3-1 ● K-PS3-2 ● K-ESS2-1 ● K-ESS3-2 ● K-2-ETS1-1 ● K-2-ETS1-2 <p>Bundle 3: Push, Pull, Play</p> <ul style="list-style-type: none"> ● K-PS2-1 ● K-PS2-2 ● K-ESS2-1 ● K-2-ETS1-1 ● K-2-ETS1-3 	<p>Bundle 1: Shadows on the Playground</p> <ul style="list-style-type: none"> ● 1-PS4-2 ● 1-ESS1-1 ● 1-ESS1-2 <p>Bundle 2: Science of Film-Light and Sound</p> <ul style="list-style-type: none"> ● 1-PS4-1 ● 1-PS4-3 ● 1-PS4-4 ● 1-ESS1-2 ● K-2-ETS1-1 <p>Bundle 3: Learning from Nature through our Senses</p> <ul style="list-style-type: none"> ● 1-LS1-1 ● 1-ESS1-2 ● K-2-ETS1-2 ● K-2-ETS1-3 <p>Bundle 4: Seasons Change and so Does Nature</p> <ul style="list-style-type: none"> ● 1-LS1-2 ● 1-LS3-1 ● 1-ESS1-2 	<p>Bundle 1: 4th Little Pig House Design Challenge</p> <ul style="list-style-type: none"> ● 2-PS1-1 ● 2-PS1-2 ● 2-PS1-3 ● K-2-ETS1-1 <p>Bundle 2: Koa Tree</p> <ul style="list-style-type: none"> ● 2-PS1-4 ● 2-LS2-1 ● 2-LS2-2 ● 2-LS4-1 ● 2-ESS2-3 ● K-2-ETS1-2 <p>Bundle 3: Beavers, Nature's Engineers</p> <ul style="list-style-type: none"> ● 2-ESS1-1 ● 2-ESS2-1 ● 2-ESS2-2 ● K-2-ETS1-3

Grade 3 (Thematic)	Grade 4 (Thematic) Under Construction-In Editing	Grade 5 (Thematic) Under Construction-In Editing
<p>Bundle 1: Forces and Motion (A-Secret Agents-Odd Motion/B-Playground Engineers)</p> <ul style="list-style-type: none"> ● 3-PS2-1 ● 3-PS2-2 ● 3-PS2-3 ● 3-PS2-4 ● 3-ESS2-1 <p>Bundle 2: Harper's Fossil Find</p> <ul style="list-style-type: none"> ● 3-LS1-1 ● 3-LS3-1 ● 3-LS3-2 ● 3-LS4-1 ● 3-ESS2-1 <p>Bundle 3: Monarch Butterfly</p> <ul style="list-style-type: none"> ● 3-LS2-1 ● 3-LS4-2 ● 3-LS4-3 ● 3-ESS2-1 <p>Bundle 4: Changing Environments -Seashells in the Grand Canyon</p> <ul style="list-style-type: none"> ● 3-LS4-1 ● 3-LS4-4 ● 3-ESS2-2 ● 3-ESS3-1 ● 3-5-ETS1-1 ● 3-5-ETS1-2 	<p>Bundle 1: Changing Earth (A-Satellite Images of United States, B-Oldest Mountain NOT the Tallest Mountain)</p> <ul style="list-style-type: none"> ● 4-PS3-1 ● 4-PS3-3 ● 4-ESS1-1 ● 4-ESS2-1 ● 3-5 ETS1-2 <p>Bundle 2: Biomimicry (A-Mimicking the Natural World, B-Bear Sense)</p> <ul style="list-style-type: none"> ● 4-PS3-2 ● 4-PS4-2 ● 4-PS4-3 ● 4-LS1-1 ● 4-LS1-2 ● 3-5 ETS1-2 <p>Bundle 3: Earth's Energy (A-Moodus Noises, B-Connecticut River Changes)</p> <ul style="list-style-type: none"> ● 4-PS3-4 ● 4-PS4-1 ● 4-ESS2-1 ● 4 ESS2-2 ● 4-ESS3-1 ● 4-ESS3-2 	<p>Bundle 1: Patterns of Earth, Moon and Sun: (A- Super Blue Blood Moon, B-Shooting Stars)</p> <ul style="list-style-type: none"> ● 5-PS1-1 ● 5-PS1-2 ● 5-PS1-3 ● 5-PS1-4 ● 5-ESS1-1 ● 5-ESS1-2 ● 3-5-ETS1-3 <p>Bundle 2: Habitats: (A-Golden Jellies, B-Extreme Organisms)</p> <ul style="list-style-type: none"> ● 5-PS1-1 ● 5-PS3-1 ● 5-LS1-1 ● 5-LS2-1 ● 5-ESS1-2 ● 5-ESS3-1 ● 3-5-ETS1-1 <p>Bundle 3: Stability and Change in Earth's Systems: (A-Stranded in the Antarctic, B-Phenomenal Bodies of Water)</p> <ul style="list-style-type: none"> ● 5-PS1-1 ● 5-PS2-1 ● 5-ESS1-2 ● 5-ESS2-1 ● 5-ESS2-2 ● 3-5-ETS1-2



CREC Units-What do they look like?





CREC Units-Let's look inside!

Units are in the Schoology Platform

All units can be downloaded to Google Drives

After download all are editable



Updates

Discussions (2)

Albums

Members (822)

Resources

Conferences

Leave this group

Grade 3

Notifications

Resources

Title	8 of 8
Unit 1 Added by NGSS Consortium · Jan 10, 2019	
Unit 2 Added by NGSS Consortium · Jan 10, 2019	
Unit 3 Added by NGSS Consortium · Jan 10, 2019	
Unit 4 Added by NGSS Consortium · Jan 10, 2019	
Assessment Writing Resources - Published Added by Julie Christianson · Jan 9, 2019	
Understanding NGSS and Curricular Documents Added by NGSS Consortium · Apr 3, 2018	
Bundle Evaluation https://goo.gl/forms/nnAbairJnMLOHvMA3 Please complete this survey AFTER implementing a unit bundle. The information generated will be used to revise and improve units. Added by NGSS Consortium · Apr 17, 2017	
CREC NGSS Unit and Assessment Status	





Updates

Discussions (2)

Albums

Members (822)

Resources




Conferences

Leave this group

Grade 3

Notifications

Resources > Unit 1

Title	3 of 3
 Unit 1A: Secret Agents in The Motion Detection - Published Added by NGSS Consortium · Jan 9, 2019	⚙️
 Unit 1B: "Motioneers" - Engineering Better Motion on the Playground - P... Added by NGSS Consortium · Jan 9, 2019	⚙️
 Unit 1-Launch Session https://docs.google.com/presentation/d/1rfyM_tzFNT1kIWII2v0IcuO70igt7Fb3FBrFfg6h3w/edit?usp=sharing Added by Jaime Rechenberg · Jan 9, 2019	⚙️



Unit overview



Unit 1A Overview: Motion Detection

https://docs.google.com/document/d/1P704kKv39GaDBFxrF_3v4K_jNOi0IXaOxqmY81Z8O_k/edit?usp=sharing

g

Added by NGSS Consortium · Jan 9, 2019


PROGRESSION OF LEARNING

Learning Sequence 1: Student Engagement with the Anchoring Phenomenon

- Essential Question: What makes objects move the ways they do?
- [Learning Sequence 1](#)
- Relationship to Anchoring Phenomena/Design Problem: This is the introduction to the anchoring phenomenon.
- Student Expected Outcomes:
 - Students will ask questions and investigate relationships to observe patterns of motion.

Learning Sequence 2

- Essential Question: How do different strengths of forces affect motion? How does the direction of a force affect motion?
- [Learning Sequence 2](#)
- Relationship to Anchoring Phenomena/Design Problem:
 - Students use data from their investigations on the the strength and direction of force to provide evidence for the strange motions associated with the anchor phenomena. Each of the phenomena have a force strength that can be used to describe the object's motion.
- Student Expected Outcomes:
 - Students will measure and collect data on the strength and direction of forces and their outcome on objects motion.
 - Students will identify patterns in data and use them to predict an object's future motion.



*In these units, students are no longer being “told about” Science.
They are being asked to “figure out” Science!*

Proposed Plan for Curriculum Implementation

School Year	Grades 1, 3, 4, 5, and 6 Bundles (Units)	Grades K, 2, 7 and 8 Bundles (Units)
2019-20	Unit 1	No Units
2020-21	Unit 1 and 2	Unit 1
2021-22	Units 1, 2 and 3 (Grade 5 Complete)	Unit 1 and 2
2022-23	Units 1,2,3,4 (Grades 1,3,4 and 6 now complete)	Units 1, 2, and 3 (K, 2, 7 Complete)
2023-24		Units 1-4 (Grade 8 only) Complete



Pilot/Curriculum Writing

- Plan is to pilot with grades 1, 3-5 and grade 6
- Units will all be aligned with Equip SEAL by start of school 2019
- Start slowly, one unit per grade level per year with support from CT Science Center and CREC on unit plan design and implementation as well as assessments
- Teachers will have the option to implement additional units
- CREC updates curriculum and all updates rest in Schoolology
- Next steps include identifying units and when they will be implemented by grade



Professional Learning Plan

- (Handout Provided for 2018-2019 School Year)
- 2019 and beyond:
 - Assessment Workshops Grades 6-12
 - In class planning and coaching support with unit implementation (pilots)
 - CREC support for curriculum (looking into)

Questions?