

## Landing Page Eastern Suffolk BOCES

### Library Leadership Academy: Learning the Fundamentals of the NYSSLS

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<b>Jamboard</b>		
<ul style="list-style-type: none"> <li>• What do you want to get out of today's session? (Frame 1)</li> <li>• NYSSLS Bridge (Frame 2)</li> <li>• What Makes a Good Phenomenon? (Frame 3)</li> </ul>	<a href="https://jamboard.google.com/d/1_QRvENhE0hTF6lcyJt6Vuwqepk-TszrxPftOPOWAbuY/edit?usp=sharing">https://jamboard.google.com/d/1_QRvENhE0hTF6lcyJt6Vuwqepk-TszrxPftOPOWAbuY/edit?usp=sharing</a>	
<b>FactCite Homepage</b>	<a href="https://www.factcite.com/">https://www.factcite.com/</a>	
<b>Tips for Teachers Matter</b>	<a href="https://docs.google.com/document/d/1J5aG86aBobqdQ_LmXKNn0hwgOyv00TSk/e/dit?usp=sharing&amp;oid=100418556386156369529&amp;rtpof=true&amp;sd=true">https://docs.google.com/document/d/1J5aG86aBobqdQ_LmXKNn0hwgOyv00TSk/e/dit?usp=sharing&amp;oid=100418556386156369529&amp;rtpof=true&amp;sd=true</a>	
<b>NYS p-12 science standards (NYSSLS)</b> Also, in NYSSLS Resources Google Folder	<a href="http://www.nysed.gov/common/nysed/files/programs/curriculum-instruction/p-12-science-learning-standards.pdf">http://www.nysed.gov/common/nysed/files/programs/curriculum-instruction/p-12-science-learning-standards.pdf</a>	
<b>PowerPoint Presentation from 11/29/2023</b> Available until Dec. 8th	<a href="https://docs.google.com/presentation/d/1TQn-z552wP4A_oAWdCnmhv-t77gupn7G/edit?usp=sharing&amp;oid=100418556386156369529&amp;rtpof=true&amp;sd=true">https://docs.google.com/presentation/d/1TQn-z552wP4A_oAWdCnmhv-t77gupn7G/edit?usp=sharing&amp;oid=100418556386156369529&amp;rtpof=true&amp;sd=true</a>	
<b>NGSS Evidence Statements for PEs</b> <i>(PEs added to NYSSLS by NYSED do not have evidence statements)</i> Also, in NYSSLS Resources Google Folder	<a href="https://drive.google.com/drive/folders/1AXj1Yu5f-6VX4Cj1hmGyYWcdY2ZfSZrz?usp=sharing">https://drive.google.com/drive/folders/1AXj1Yu5f-6VX4Cj1hmGyYWcdY2ZfSZrz?usp=sharing</a>	
<b>NYSED HS Course Maps: LS Biology, ESS, Chemistry, Physics</b> Also, in NYSSLS Resources Google Folder	<a href="https://drive.google.com/drive/folders/16u3igJ8edTfGmq04DUtjV9TecybcV2fd?usp=sharing">https://drive.google.com/drive/folders/16u3igJ8edTfGmq04DUtjV9TecybcV2fd?usp=sharing</a>	
<b>NYSSLS Progressions Matrices for SEPs, CCCs, DCIs</b>	<a href="https://drive.google.com/drive/folders/1yB7zRAe5VImh1a1eN0V1WawrwMO0ZgH?usp=sharing">https://drive.google.com/drive/folders/1yB7zRAe5VImh1a1eN0V1WawrwMO0ZgH?usp=sharing</a>	
<b>NYSSLS Resources Google Folder</b>	<a href="https://drive.google.com/drive/folders/1YpTeUaO8L4CGdB37bt hM_G1P3bT6Sy-p?usp=sharing">https://drive.google.com/drive/folders/1YpTeUaO8L4CGdB37bt hM_G1P3bT6Sy-p?usp=sharing</a>	
<b>NYSED Standards and Instruction Home Page (click on Science)</b>	<a href="http://www.nysed.gov/curriculum-instruction">http://www.nysed.gov/curriculum-instruction</a>	
<b>NYSED Office of State Assessment (OSA)</b>	<a href="https://www.nysed.gov/state-assessment">https://www.nysed.gov/state-assessment</a>	
<b>NYSED Implementation Resources (Office of Standards and Instruction)</b>	<a href="http://www.nysed.gov/curriculum-instruction/science-standards-implementation-resources">http://www.nysed.gov/curriculum-instruction/science-standards-implementation-resources</a>	
<b>NSTA Read the Standards (unpacking)</b>	<a href="http://nextgenscience.org/search-standards">http://nextgenscience.org/search-standards</a>	
<b>NYSED Sample Lesson Clusters</b>	Grade 5 Elementary-Level Science Test Sample Items	<a href="http://www.nysed.gov/common/nysed/files/programs/state-assessment/els-test-sample-items.pdf">http://www.nysed.gov/common/nysed/files/programs/state-assessment/els-test-sample-items.pdf</a>
	Grade 5 Elementary-Level	<a href="http://www.nysed.gov/common/nysed/files/programs/state-assessment/els-test-sample-rating-guide.pdf">http://www.nysed.gov/common/nysed/files/programs/state-assessment/els-test-sample-rating-guide.pdf</a>

<b>(Also, in NYSSLS Resources folder)</b>	Science Test Sample Rating Guide	
	Grade 8 Intermediate-Level Science Test Sample Items	<a href="http://www.nysed.gov/common/nysed/files/programs/state-assessment/ils-test-sample-items.pdf">http://www.nysed.gov/common/nysed/files/programs/state-assessment/ils-test-sample-items.pdf</a>
	Grade 8 Intermediate-Level Science Test Sample Rating Guide	<a href="http://www.nysed.gov/common/nysed/files/programs/state-assessment/ils-test-sample-rating-guide.pdf">http://www.nysed.gov/common/nysed/files/programs/state-assessment/ils-test-sample-rating-guide.pdf</a>
<b>January 2023 NYSED memo, "Implementation Schedule for New Regents Exams" – Zach Warner, Assistant Commissioner OSA</b>		<a href="https://drive.google.com/file/d/15BJ1GecWVBkKw9ewFjih2lcKQhmwRQGit/view?usp=share_link">https://drive.google.com/file/d/15BJ1GecWVBkKw9ewFjih2lcKQhmwRQGit/view?usp=share_link</a>
<b>NYSED memos on Required Investigations for the Elementary and Intermediate Level Science Tests – Zachary Warner (Also, in Resources Folder)</b>		<p><b>May 2022 Memo</b>  <a href="http://www.nysed.gov/common/nysed/files/programs/state-assessment/els-ils-required-investigations-2022.pdf">http://www.nysed.gov/common/nysed/files/programs/state-assessment/els-ils-required-investigations-2022.pdf</a></p> <p><b>October 2022 Memo</b>  <a href="http://www.nysed.gov/common/nysed/files/programs/state-assessment/availability-els-ils-required-investigations-2022.pdf">http://www.nysed.gov/common/nysed/files/programs/state-assessment/availability-els-ils-required-investigations-2022.pdf</a></p>
<b>Educator Guide to the 2024 Elementary-level (Grade 5) and Intermediate-level (Grade 8) Science Tests</b>		<a href="https://www.nysed.gov/sites/default/files/programs/state-assessment/5-8-science-educator-guide-2024.pdf">https://www.nysed.gov/sites/default/files/programs/state-assessment/5-8-science-educator-guide-2024.pdf</a>
<b>Frequently Asked Questions Related to Investigations for the Elementary-level and Intermediate-level Science Tests</b>		<a href="https://www.nysed.gov/sites/default/files/programs/state-assessment/els-ils-new-investigation-faq.pdf">https://www.nysed.gov/sites/default/files/programs/state-assessment/els-ils-new-investigation-faq.pdf</a>
<b>Frequently Asked Questions Related to Virtual Laboratory Experiences and the 1,200 minute Laboratory Requirement</b>		<a href="https://www.nysed.gov/sites/default/files/programs/curriculum-instruction/virtual-lab-faq.pdf">https://www.nysed.gov/sites/default/files/programs/curriculum-instruction/virtual-lab-faq.pdf</a>
<b>NYSED Performance Level Descriptions</b>		<a href="https://drive.google.com/drive/folders/1Wn0bVUiZ_OS6W3wl_Z7LK7kFOt3_NLGP?usp=sharing">https://drive.google.com/drive/folders/1Wn0bVUiZ_OS6W3wl_Z7LK7kFOt3_NLGP?usp=sharing</a>
<b>ILS investigation "How's the Weather Up There?" support activities</b>		<a href="https://drive.google.com/drive/folders/1aA-GQIEzJy6wsMQBQU4c-96njCH6275L?usp=sharing">https://drive.google.com/drive/folders/1aA-GQIEzJy6wsMQBQU4c-96njCH6275L?usp=sharing</a>
<b>NYSSLS Unit Planning Template</b>		<a href="https://drive.google.com/drive/folders/1-y25xq8MsOGO5yqcgUW6_tchBjgNVUaz?usp=sharing">https://drive.google.com/drive/folders/1-y25xq8MsOGO5yqcgUW6_tchBjgNVUaz?usp=sharing</a>
<b>NYSSLS Lesson Planning Template</b>		<a href="https://drive.google.com/drive/folders/1ULQTgzfyvSc7psGUCxTQbla53XmWS04g?usp=sharing">https://drive.google.com/drive/folders/1ULQTgzfyvSc7psGUCxTQbla53XmWS04g?usp=sharing</a>
<b>California Item Specifications</b>		<a href="https://drive.google.com/drive/folders/1xglc_4TcjYndrnobUFE-NGSGygw7rd ?usp=share_link">https://drive.google.com/drive/folders/1xglc_4TcjYndrnobUFE-NGSGygw7rd ?usp=share_link</a>
<b>Iceland Item Cluster and Rating Guide</b>		<a href="https://drive.google.com/drive/folders/1DvuVF8CZ0ktPnvsqNfeDQZlJycBSIDSI?usp=sharing">https://drive.google.com/drive/folders/1DvuVF8CZ0ktPnvsqNfeDQZlJycBSIDSI?usp=sharing</a>
<ul style="list-style-type: none"> <li>• <b>Item Cluster Writing Files</b></li> <li>• <b>Instructions/Guidelines Templates</b></li> </ul>		<a href="https://drive.google.com/drive/folders/1XyU7BpazxtqrWGkrHUvv4KtjAEhP0aog?usp=sharing">https://drive.google.com/drive/folders/1XyU7BpazxtqrWGkrHUvv4KtjAEhP0aog?usp=sharing</a>

Websites for Phenomena		
Phenomena for NGSS	<a href="https://www.ngssphenomena.com/">https://www.ngssphenomena.com/</a>	
Phenomenon – The Wonder of Science	<a href="https://thewonderofscience.com/phenomenal">https://thewonderofscience.com/phenomenal</a>	
#ProjectPhenomena Database San Diego County Office of Education Science Resource Center	<a href="https://ngss.sdcoe.net/Phenomena-and-the-NGSS/-ProjectPhenomena-Database">https://ngss.sdcoe.net/Phenomena-and-the-NGSS/-ProjectPhenomena-Database</a>	
Phenomena Resources Wisconsin Department of Education	<a href="https://dpi.wi.gov/science/standards/phenomena">https://dpi.wi.gov/science/standards/phenomena</a>	
The Digigogy Collaborative	<a href="#">phenomena - The Digigogy Collaborative</a>	
Georgia Science Teachers Association Science GSE Phenomena Bank	<a href="#">Georgia Science Teachers Association - GSE Phenomena</a>	
What NGSS Phenomena Ideas Do You Have? Tell us! The Teaching Channel – Kyla Burns	<a href="#">What NGSS Phenomena Ideas Do You Have? Tell us! (teachingchannel.com)</a> <b>View submissions:</b> <a href="#">NGSS Phenomena Idea List (Responses) - Google Sheets</a>	
Chemistry Phenomena List	<a href="https://docs.google.com/document/d/1adZKM9gj4fikHpoe_VwZV4DrwdlwQ19JQOL5pSHMfoM/edit?usp=sharing">https://docs.google.com/document/d/1adZKM9gj4fikHpoe_VwZV4DrwdlwQ19JQOL5pSHMfoM/edit?usp=sharing</a>	
Other useful websites	NGSS homepage - Achieve	<a href="https://www.nextgenscience.org/">https://www.nextgenscience.org/</a>
	NGSS Storylines (K-12)	<a href="https://www.nextgenscience.org/resources/examples-quality-ngss-design">https://www.nextgenscience.org/resources/examples-quality-ngss-design</a>
	NSTA Hub	<a href="https://ngss.nsta.org/">https://ngss.nsta.org/</a>
	NSTA Classroom Resources (many activities)	<a href="https://ngss.nsta.org/Classroom-Resources.aspx">https://ngss.nsta.org/Classroom-Resources.aspx</a>
	NSTA Read the Standards (unpacking)	<a href="http://nextgenscience.org/search-standards">http://nextgenscience.org/search-standards</a>
	Amplify Science	<a href="https://amplify.com/programs/amplify-science/">https://amplify.com/programs/amplify-science/</a>
	OpenSciEd Home Page	<a href="https://www.openscienced.org/">https://www.openscienced.org/</a>
	OpenSciEd Chemistry Unit: “Thermodynamics in Earth’s Systems” (Includes several ESS PEs)	<a href="https://drive.google.com/drive/folders/1lIDmu19OA2atlwCl-kzgTzSZ-9k5021t?usp=share_link">https://drive.google.com/drive/folders/1lIDmu19OA2atlwCl-kzgTzSZ-9k5021t?usp=share_link</a>
	New Visions for Public Schools	<a href="https://curriculum.newvisions.org/science/">https://curriculum.newvisions.org/science/</a>
	The Wonder of Science – Paul Andersen	<a href="https://thewonderofscience.com">https://thewonderofscience.com</a>

NGSS Science Assessment (NGSA) task portal Collaborative of Researchers at <ul style="list-style-type: none"> <li>University of Illinois at Chicago</li> <li>West, Michigan State University</li> <li>Concord Consortium</li> </ul>	<a href="https://ngss-assessment.portal.concord.org/">https://ngss-assessment.portal.concord.org/</a>
inquiryHub: Research-based Curricula Supporting NGSS (Biology, Chemistry, simulations for Biology and Chemistry)	<a href="https://www.colorado.edu/program/inquiryhub/curricula">https://www.colorado.edu/program/inquiryhub/curricula</a>
PhET simulations	<a href="https://phet.colorado.edu/en/simulations/filter?type=html,prototype">https://phet.colorado.edu/en/simulations/filter?type=html,prototype</a>
Discovery Education	<a href="https://www.discoveryeducation.com">https://www.discoveryeducation.com</a>
DATA Nuggets	<a href="http://datanuggets.org/">http://datanuggets.org/</a>
Phenomenal GRC Lessons (Brett Moulding)	<a href="https://sites.google.com/3d-grcscience.org/going3d/home?authuser=0">https://sites.google.com/3d-grcscience.org/going3d/home?authuser=0</a>
SAGE (Seismological Facility for the Advancement of Geoscience)	Incorporated Research Institutions For Seismology (IRIS) “Determining Earth’s Layered Interior” activity <a href="https://www.iris.edu/hq/inclass/lesson/determining_and_measuring_earths_layered_interior">https://www.iris.edu/hq/inclass/lesson/determining_and_measuring_earths_layered_interior</a>

### Resources that will be useful for developing a lesson

All are in the NYSSLS Resources Google drive: <https://tinyurl.com/Resources-NYSSLS>

1. The NYSSLS document: “NYSSLS (p-12 Science-Learning-Standards.pdf)”
2. Core Curriculum for your course: In the folder titled, “Core Curricula – NYSED.”
3. Evidence statement for the PE(s) you select. In the folder “Evidence Statements- All Elem-MS-HS PE’s
4. Disciplinary Core Ideas Progressions: “DCI NYSSLS Matrix GC 2018...”
5. Paul Andersen’s Lesson Screener: In the folder, “Lesson Screeners”

### Small Steps to transition and implementation of NYSSLS.

1. Begin with phenomena or problem to solve.
2. Change activities to “ABC” Activity Before Content
3. Use the [Science and Engineering Practices \(SEPs\)](#) (What students are doing to learn)
4. Explore before explaining (5E)
5. Student Centered: Students “figure out,” construct explanations, discourse in groups.
6. Post Paul Andersen Posters (reference [SEPs](#) and [Crosscutting Concepts - CCCs](#))
7. Add [Crosscutting Concept](#) language to lessons.
8. Many of the activities you already have can be used with some adjustments.
9. Do a crosswalk with the NYSSLS [DCIs](#) (content). (Identify changes)

## Instructional Principles of Implementing Crosscutting Concepts

1. SEP and CCC Posters on the wall/use the language.
2. Explicate (direct) instruction of the CCC before using them for science ideas.
3. Present phenomena and have students ask questions focusing on CCCs.
4. Focus on the applications of the CCCs/SEPs
5. Use simple exit tickets with CCC/SEP prompts. (formative)
6. Use graphic organizers. (Can serve as student notes)
7. Use the earlier grade band progressions but aim for your level.
8. Don't teach the CCCs all at once. (Context matters)
9. Don't assess the CCCs by themselves. (Connect with DCI/content)
10. Don't forget to build on prior grade bands. (Assess prior understandings)
11. Don't limit the CCC to the specific one in the Performance Expectation.
12. Don't address only the elements from the grade band. (Use earlier elements)