



# **Teaching is The Core**

## **Assessment Design Professional Development**

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## Overview of the Teaching is The Core Grant

The primary purpose of the TiTC Grant is to improve the quality of local assessments that are currently in use, while simultaneously reducing the number of local assessments that are perceived not to inform instruction.

The New York State Education Department (NYSED) recognizes that:

- The assessment of student learning is integral to instruction when it provides an accurate source of feedback to guide educator instruction, student learning activities, and decision-making.
- Instructional objectives are best supported when students interact with multiple assessment strategies, that is, various forms of assessment that deviate from traditional, fill-in-the-blank methods.
- While testing is an important part of the instructional cycle and necessary to monitor student academic progress and contribute to decisions at the classroom, school, district, and state levels, the amount of testing should be the minimum necessary to inform effective decision-making.
- Assessment results should be used only as one of multiple measures of progress, and assessments should reflect our instructional priorities.

The Grant aims to support districts as they work to:

1. determine which assessments support the instructional goals of the district/charter school/consortium;
2. determine an appropriate action plan that will minimize unnecessary assessment and increase the use of diverse and quality assessment practices by developing or selecting new assessments if possible;
3. **use diversified assessment strategies, including a review of local assessments for all purposes, including annual professional performance review, APPR;**
4. **establish a professional development program that will aid teachers in identifying high-quality assessments and improving assessment practices.**

## Overview of Professional Development Program

Day 1 (**December 1**): The first day of the Assessment Institute will focus on the foundations of quality assessment design. Content will include an overview of performance-based and portfolio assessments and professional development on attending to reliability and validity in performance-based and portfolio assessment design. The day will focus on such questions as:

- How can assessment designers ensure that performance-based and portfolio assessment tasks are aligned to the NYS and Common Core Learning Standards?
- How do designers best attend to congruency between the standards and the type of assessment designed?
- What are common challenges when attending to validity?
- What role do test blueprints play in attending to validity? What issues of validity should designers attend to when revisiting or modifying tasks?
- How do designers attend to rigor and authenticity in performance-based and portfolio tasks?
- How can designers best ensure that the assessments are an authentic reflection of meaningful and relevant learning?
- How should designers ensure that assessments ask students to engage in complex and challenging thinking?

Day 2 (**December 17**): The second day of the Assessment Institute will continue to address the foundations of quality assessment design with a focus on decreasing threats to validity of performance-based and portfolio tasks. The morning of will address such questions as:

- How do designers create scoring rubrics that can also be used to inform instruction and learning?

The teams will begin designing their assessments in the afternoon. This design period will allow teams to identify potential problems, troubleshoot solutions, and plan for off-site design.

Offsite work to be completed by the design teams: Between Day 2 and 3, teams will work off-site on their assessment. It is expected that they bring a draft blueprint, including scoring rubric and standards documentation on Day 3. It will be the responsibility of each team to coordinate offsite work.

### Content-Specific Webinars:

- Art
- Languages other than English
- Mathematics
- Music
- PE, health
- English Language Arts/ELA

Day 3 (**February 6**): The third day of the Assessment Institute will be an opportunity for teams to engage in peer review. Using protocols, they will give and get warm and cool feedback, become more familiar with the explicit parameters of psychometrics as they relate to PBA's and portfolios and use rubrics to assess the quality of the tasks.

At the end of Day 3 or by **March 10**, participants will submit their draft assessment package for feedback. The submitted assessment should include, at a minimum, the draft physical assessment measure (e.g. the PBA or the portfolio outline with tasks) and corresponding blueprint including scoring criteria. BOCES and LCI staff will review these materials on *March 11<sup>th</sup>* for potential threats to validity; alignment to the Common Core Learning Standards, New York State content standards, the 1999 APA Standards; and depth of rigor.

Day 4 (**March 19<sup>th</sup>**) Day 4 of the Assessment Institute will enable teams to review their feedback and work. The day will also include explicit discussion around attending to bias in assessment design, along with conversations around planning for field testing and reliability checks.

Segment 4A Offsite 3 to be completed by the teams: Between Days 4 and 5, teams will field test their assessment. On Day 5, it is expected that they bring scored student work samples with them, including work from students with disabilities, English Language Learners (if applicable), and any subgroups identified during bias discussion. It will be the responsibility of each team to coordinate the offsite work.

Day 5 (May 1): Day 5 of the Assessment Institute will focus on identifying attributes of Inter-Rater Reliability and engaging in a final peer review. Teams will have the opportunity to revise their assessments based on the IRR data and the final peer reviews. At the end of Day 5 teams will submit their final assessment package to LCI. It will be the responsibility of the district point person to follow up with any teams who have not submitted their assessment package by the established deadlines.

- Science
- Social Studies
- Early childhood, special education, ELL, gifted education
- Technology, Career and Technical Education, Family and Consumer Science

# Essential Question:

## *Are we assessing what matters?*

### Day 1 Agenda

- 8:30 Overview of the Teaching is the Core Grant and of LCI's Role  
***Are we measuring what matters?***
- 9:00 Understanding the attributes of a quality assessment system
- 10:00 Understanding the attributes of a balanced assessment system
- 10:30 Text-based discussion  
***How might story thinking increase student engagement and involvement in assessment?***
- 11:15 Considering the timing of our assessments  
***How does the timing of assessments impact their use and influence?***
- 12:00 LUNCH
- 12:45 Attending to variety in the system
- 1:15 Variety Check 1: Congruence
- 1:45 Variety Check 2: Alignment
- 2:15 Attending to authenticity and meaningfulness through essential questions
- 2:45 End of Day Team Reflection and preparing for Day 2

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# Quality Assessment System Checklist

## **Quantity: *Are we spending the “right” amount of time on assessment?***

- ☐ When teaching and learning are interrupted for assessment, the evidence collected from students is useful, meaningful, trustworthy, and helps us measure what matters.
- ☐ The amount of time we spend testing is reasonable given that the majority of assessments are indistinguishable from the learning that is occurring in our schools.

Not yet. Some steps we may take to address this in our system:

Some examples of how we address this in our system:

## **Alignment<sup>1</sup>: *Are we capturing the evidence of learning that we want and intent to?***

- ☐ The creation of documentation that allows us to consider the alignment between assessments and the identified learning targets (for example, test maps or blueprints) is systematic and routine.
- ☐ When we compare the demands of the majority of assessments with the intended outcomes and standards, there is a strong connection to the intended targets.
- ☐ Students routinely experience assessments in different settings of comparable difficulty and complexity, engaging with standards at increased levels of complexity as they move through grade levels.

Not yet. Some steps we may take to address this in our system:

Some examples of how we address this in our system:

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<sup>1</sup> Teaching is the Core (TiTC) required review criteria from the RFP (page 10) of Rigorous (A.i.1), reliable and valid (A.i.2), Comparability (B.i.1, B.i.2) are attended to under Alignment and Reliability.

**Reliability: *Are we routinely ensuring that data generated by assessments are accurate and trustworthy?***

- ☐ Teachers can consistently make claims about the reliability of their assessments through the use of statistics, design protocols, “final eyes” feedback, and anchored rubrics.
- ☐ Protocols and structures that allow us to attend to measurement error are systematic and routine.

Not yet. Some steps we may take to address this in our system:

Some examples of how we address this in our system:

**Impact on Instruction<sup>2</sup>: *Is there a feedback loop between evidence of student learning and teachers’ instructional decisions?***

- ☐ There are ongoing assessment moments within the system in which teachers can provide students with feedback that goes beyond a letter grade. Students have opportunities to receive written feedback about their strengths, weaknesses, and recommendations for next steps.
- ☐ There are ongoing assessment moments within the system in which teachers get sufficient information needed to group students, including those with identified learning differences, for future instruction based on their strengths and needs.

Not yet. Some steps we may take to address this in our system:

Some examples of how we address this in our system:

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<sup>2</sup> TiTC required review criteria of **informs instruction** (C) and **supports learning goals** (D, D.i) are attended to under **Impact on Instruction**.

**Authenticity: *Are we routinely asking students to do things that are worthwhile and interesting?***

- ☐ There are multiple assessment moments in which students are involved in plausible or realistic problems, tasks, or questions with audiences and purposes beyond the classroom.
- ☐ There are multiple assessment moments in which students are required to work both independently and cooperatively to research or give feedback.

Not yet. Some steps we may take to address this in our system:

Some examples of how we address this in our system:

**Thinking Demands: *Are we routinely using a thinking demands taxonomy to assess the degree to which we ask students to engage in deep thinking and apply their learning to new contexts or situations?***

- ☐ There are multiple assessment moments in which students are asked to show their understanding and use different types of knowledge to engage, analyze, or create in response to questions and problems.
- ☐ There are multiple assessment moments in which students are asked to apply their learning to new situations or contexts.

Not yet. Some steps we may take to address this in our system:

Some examples of how we address this in our system:

**Variety<sup>3</sup> (Diversified and Balanced): *Are there a variety of ways in which we ask students to show their learning?***

- ☐ Students have multiple and ongoing opportunities to show what they know in a variety of ways (i.e. types: recall, product, demonstration, process) throughout their day, week, month, semester, and year. These tasks combine different ways of showing what they know (e.g. short response questions combined with extended response, creation of art work with written summary, speech supported by a written report).
- ☐ Students have multiple and ongoing opportunities to show what they know at a variety of moments throughout the learning cycle (before, during, and after), including pre- and post-assessments in order to reflect upon their growth as a learner.
- ☐ The diversity of students taking assessments regularly informs assessment design. This diversity includes explicit learning differences such as disabilities or language development and implicit differences such as talents, interests, backgrounds, and needs.

Not yet. Some steps we may take to address this in our system:

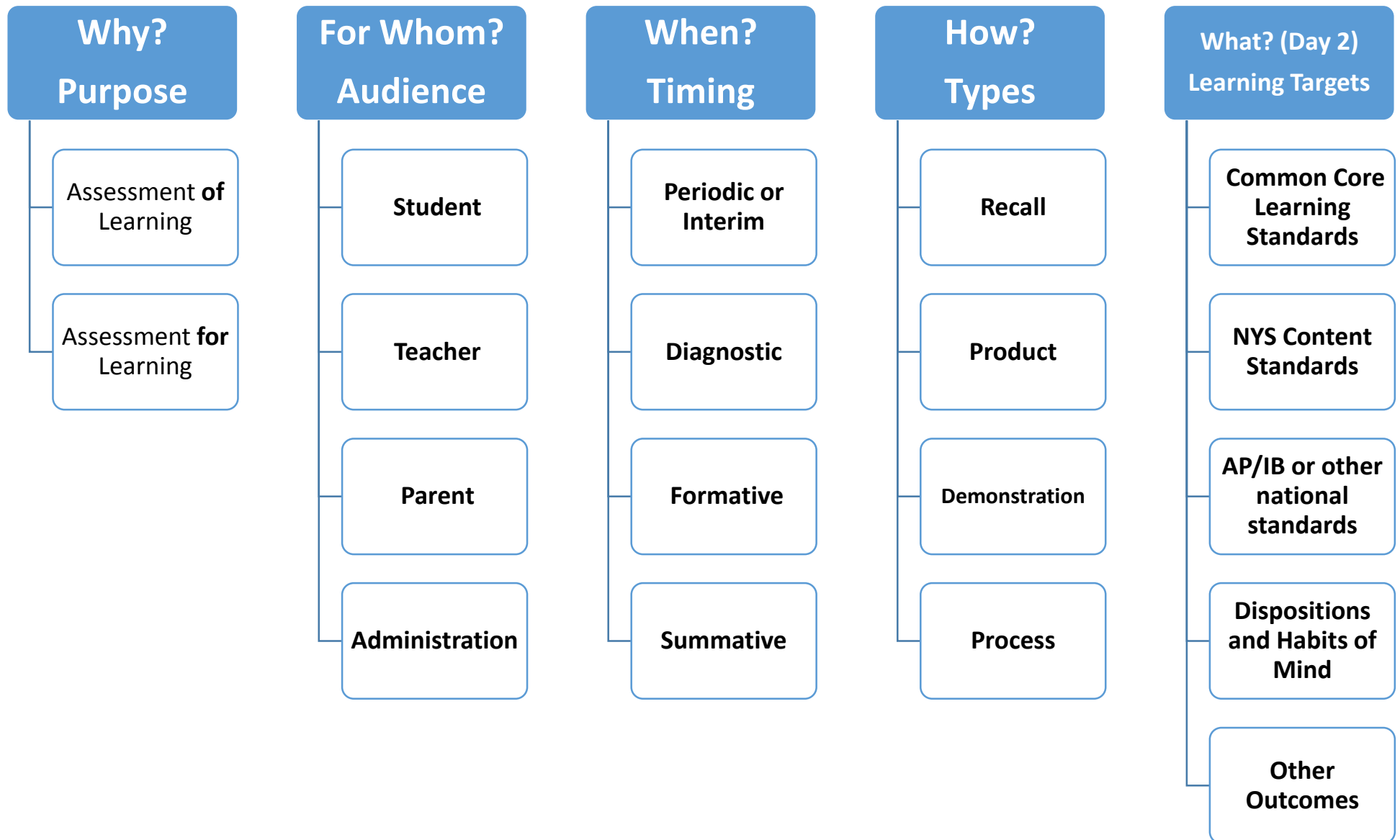
Some examples of how we address this in our system:

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<sup>3</sup> TiTC required review criteria of diverse set of assessment techniques (E) is attended to under Variety (Balanced and Diversified).



## Framework for Balanced and Diversified



### **Rich Text Protocol<sup>4</sup>**

Purpose: Enables group to take apart a text element by element.

Time: 33 minutes

Size: 5-8 participants

Steps:

1. Assign facilitator, recorder and timer.
2. Facilitator describes the content of the text and previews the steps involved in reading. This includes the modeling of descriptive statements on step 4. (2 minutes)  
*"I noticed that the author positions students as  $x$  in their learning"*  
*"The author develops an argument about teachers' role in designing assessment using three premises."*  
*"The last paragraph describes a previously unstated assumption about teachers' roles."*
3. The group re-reads the text using the guiding question, jotting down ideas on the margins, underlining sections, etc. (5 minutes)

#### ***How might story thinking increase student engagement and involvement in assessment?***

4. In a go-around, each participant shares 1-3 elements they noticed without any interpretation. No interpretation is allowed. The recorder records everyone's observations. (7 minutes)
5. The facilitator asks the group if any observation needs "checking out" by revisiting the text. (2-3 minutes)
6. The facilitator guides the group in the selection of 1-3 items on the chart that would be fruitful in discussing further and encourages participants to generate interpretations of those items. No direct challenges to the interpretations are allowed. (7 minutes)
7. The facilitator asks participants to select one idea from the text under study and to write about it, based on a particular perspective or theory they have. (5 minutes)
8. Participants pair off and share their writing with each other, challenging each other as appropriate. (5 minutes)
9. One at a time, participants share their answer to the guiding question, based on their experiences with the text and the protocol. (2 minutes)

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<sup>4</sup> This protocol was adapted from McDonald, Joseph, et. al., *The Power of Protocols: An Educator's Guide to Better Practice*. Teachers College Press, 2003

## ***Engaging Students Through Story Thinking (Kami Thordarson)***

Storytelling is central to moving people persuasively and is a key component of the design process. It plays a role in social media, creates a buzz in advertisements, and is critical to brand success. In Jonathan Gottschall's book, *The Storytelling Animal*, he says, "Human minds yield helplessly to the suction of story."

Good teachers, in turn, are natural storytellers. They know how to hook students into a topic by weaving a story that captures their interest and imagination. "Story thinking"—observing, applying, and reflecting on story elements outside of literature—is not only a powerful tool that engages students but also a necessary skill for learners to master.

When students create portfolios, for example, they learn how to craft a story while building their personal brand. Eighth graders in our district have the opportunity to meet with community members to share their best work through an e-portfolio interview and showcase. Here, they present what they achieved through a traditional story arc, offering exposition through background, building interest through sharing their journey, and culminating with their greatest accomplishment and reflections.

There are many ways to apply story thinking in the classroom. Consider the following entry points:

- **Reframe student experiences.** When students think about a particular subject, images float through their brains and emotions arise. Based on their school experiences, students may get excited about math or dread it. You can draw students into the story by reframing a subject with relevance. Differentiate based on interests, not just skills. I remember one 6th grader who excelled at art and design but continually struggled with math. As part of a group history project, he was tasked with drafting an elaborate floor design for a community building, and he spent hours calculating its area, perimeter, and cost. Part of his reflection: "For the first time, I figured out why I might want to learn more about math."
- **Find a hook.** You know after reading the first few pages of a book if you will continue. Students know in the first few minutes of class if they will stay engaged. Referencing current trends or popular movies can help. When our 5th grade American history class studied the triangular trade routes, we became Pirates of the Caribbean, looking at lucrative shipping routes and what types of treasure to gather. Another way to hook interest is to post a message on a whiteboard at the beginning of class that sparks curiosity. You could also pass around an object that students can interact with, become a "special guest speaker" by dressing up in costume, or create suspense by dropping clues leading up to a topic and using intriguing statements or images that evoke conversation.
- **Develop empathy.** What sticks with you at the end of a great story? Usually you have empathized with the characters or with their journey. By fostering empathy, you can create more meaningful connections to the text.

Try observing your students from the back of the classroom and listening to the stories they tell each other. This can give you incredible insight into how they are connecting and understanding concepts. Challenge your own assumptions of what they are learning, and identify new opportunities and commonalities as they arise. See where their stories take you.

**You can also cultivate empathy—and creativity—in your students by modeling great questions and giving them time to generate their own; the process in looking for the answer is as much a part of the story as the final solution.** Story thinking requires students to see the many perspectives that influence a story plot. By asking questions and discovering empathy for characters, students can see opportunities for design solutions that they might have missed if limited to their own insights. Exploring empathy also lifts engagement since the learning becomes a personal journey and students have a real need to know the ending.

Storytelling, a part of our DNA, and story thinking can be powerful strategies in engaging students. Think back to your classroom. What stories do you tell?

## **Education Updated October 2014 | Volume 56 | Number 10**

Available from: [www.ascd.org/publications/newsletters/education-update/oct14/vol56/num10/Engaging-Students-Through-Story-Thinking.aspx](http://www.ascd.org/publications/newsletters/education-update/oct14/vol56/num10/Engaging-Students-Through-Story-Thinking.aspx)

## How does the timing of assessments impact their use and influence?

Moment and Summary		As we review the timing of assessments, consider the impact on students' stories
<b>DIAGNOSTIC OR BASELINE</b>		<i>How do you view these assessments? Why?</i>
<i>Description:</i>	BEFORE teaching – the initial phase of assessment <b>for</b> learning	<i>How do students view these assessments? Why?</i>
<i>Use:</i>	to gather data in order to plan for instruction, place students, or secure additional services	
<i>Stakes:</i>	Low	
<i>Examples:</i>	pre-test, mind-map, free response question	
<b>PERIODIC OR INTERIM</b>		<i>How do you view these assessments? Why?</i>
<i>Description:</i>	Assessments that sit outside of teaching and learning cycle, calendar-driven	<i>How do students view these assessments? Why?</i>
<i>Use:</i>	to gather data in order to make systematic decisions, inform instruction	
<i>Stakes:</i>	Low	
<i>Examples:</i>	STAR, DIBELS, TerraNova, AIMSweb, F and P, iReady	
<b>FORMATIVE</b>		<i>How do you view these assessments? Why?</i>
<i>Description:</i>	DURING teaching – focus is on assessment <b>for</b> learning	<i>How do students view these assessments? Why?</i>
<i>Use:</i>	to gather data in order to adjust instruction and provide feedback	
<i>Stakes:</i>	Low	
<i>Examples:</i>	Ticket out the door, rubric reflection, class discussion with checklist	
<b>SUMMATIVE OR CUMULATIVE</b>		<i>How do you view these assessments? Why?</i>
<i>Description:</i>	AFTER teaching – focus is on assessment <b>of</b> learning	<i>How do students view these assessments? Why?</i>
<i>Use:</i>	to evaluate and make decisions regarding grades, promotion, graduation; enable students to share what they've learned	
<i>Stakes:</i>	High	
<i>Examples:</i>	Science fair, report, letter to editor, math test	
<b>PRE/POST or PARALLEL</b>		<i>How do you view these assessments? Why?</i>
<i>Description:</i>	Paired assessment given early in and at the end of learning cycle	<i>How do students view these assessments? Why?</i>
<i>Use:</i>	to assess growth	
<i>Stakes:</i>	Low (diagnostic) High (summative)	
<i>Examples:</i>	writing a letter to superintendent about PE requirements before learning about relationship between physical activity and health paired with letter to Congresswoman about PE exemptions, after unit	

## What is the value of pre/post assessment?

**Pairs/Triads:** Think together:

1. What is the value of a pre/post assessment?

2. How can they be used by teachers? Students? Schools? Districts?

Make a list of uses:

3. Review one of the pre/post assessment examples provided on the next few pages and consider the following questions:

- What are these assessments measuring? content knowledge? process? skills? strategies? reasoning?

4. Can you imagine a pre/post assessment that would support your practice? What might it look like?

## Example 1: Social Studies and Literacy<sup>5</sup>

PRE-ASSESSMENT TASK	POST-ASSESSMENT TASK
<p>During the Reconstruction unit, students develop a written argument to Congress defending one perspective/point of view regarding national reconstruction plans. They:</p> <ul style="list-style-type: none"> <li>• Read a variety of informational texts on the Reconstruction period</li> <li>• Choose, re-read and take notes on three familiar articles, each representing key perspectives of the Reconstruction period</li> <li>• Select one role (perspective) and prepare to defend that position in a written argument</li> <li>• Generate an outline for the argument to Congress (<u>F</u>)</li> <li>• Draft a written argument to persuade Congress to adopt specific reconstruction plans (NYS SS 1.4a,b) (CCS RH 6-8.1, W6-8.1a,b)(CTS 1d). The argument: <ul style="list-style-type: none"> <li>- states the position</li> <li>- explains the position and the biases and values behind it</li> <li>- distinguishes the position from others</li> <li>- cites specific textual evidence from the sources to support the position (CCS RH 6-8.1)</li> </ul> </li> <li>• Complete a self-assessment using the checklist provided</li> <li>• Submit draft for feedback (F)</li> <li>• Revise using feedback and submit a final argument</li> </ul>	<p>Current Civil rights issue. Students have already studied 60's civil rights unit, and will now apply to modern day civil rights issues. They choose a packet on a specific civil rights issue, and prepare an argument with evidence and at least one counter perspective. Prior to developing their argument they identify an audience that could use or benefit from their argument.</p> <p>In their argument, they:</p> <ul style="list-style-type: none"> <li>• Identify a current civil rights issue (Examples: gay rights, health care, gender equality, bullying (including cyber bullying), racial profiling, death penalty, immigration)</li> <li>• Read a variety of informational texts on the issue</li> <li>• Choose, re-read and take notes on 2-4 texts, each representing key perspectives on the chosen issue</li> <li>• Select one perspective and prepare to defend its position in a written argument</li> <li>• Generate an outline for the argument</li> <li>• Draft and submit a written argument, (NYS SS 1.4a,b) (CCS RH 6-8.1, W6-8.1a,b)(CTS 1d) that: <ul style="list-style-type: none"> <li>- states the claim</li> <li>- explains the perspective and the biases and values behind it</li> <li>- distinguishes the perspective from others</li> <li>- cites specific textual evidence to support the argument (CCS RH 6-8.1)</li> </ul> </li> <li>• Complete a self-assessment using the checklist provided</li> <li>• Submit draft and self-assessment for feedback.</li> <li>• Revise using feedback and submit a final argument to their selected audience</li> </ul>

<sup>5</sup> This and the subsequent examples were adapted from tasks developed by teachers from Chappaqua School District

## Example 2: Foreign Language

PRE-ASSESSMENT TASK	POST-ASSESSMENT TASK
<p>Students write a photojournalistic essay in the target language (NYS LOTE 2b) that explains a community or global problem, states an opinion, supports their opinion and proposes a course of action. (CTS 1f,g). To complete this work, they:</p> <ol style="list-style-type: none"> <li>1. select a problem, generate an inquiry question about the problem and get teacher approval</li> <li>2. find and read 2-3 articles about the problem to analyze causes (NYS CCS W9/10.7) (CTS 1f)</li> <li>3. create a brief outline of a visual essay that will teach about the causes of the problem, that expresses an opinion, supports the opinion and that calls for specific action (CTS 1f,g)</li> <li>4. self-assess outline using a checklist</li> <li>5. gather or take photos to illustrate the key ideas, position and suggested action</li> <li>6. write simple explanations in the target language for all photos and organized them logically (NYS LOTE 2b)</li> <li>7. submit first written draft of essay for feedback from teacher (NYS LOTE 2b) teacher uses rubric to provide feedback</li> <li>8. revise written work based on the feedback from teacher</li> <li>9. create a sound recording (voice over) to accompany the photos and messages</li> <li>10. submit the final photojournalistic presentation to the teacher</li> <li>11. post essay on class website and review and comment on others' essays</li> </ol>	<p>Students revise the original photojournalistic essay using the target language (NYS LOTE 2b)</p> <ol style="list-style-type: none"> <li>1. Identify an audience that could benefit from your photojournalistic essay.</li> <li>2. Find and read 1-2 additional articles on the problem.</li> <li>3. Add to and revise the photojournalistic essay to strengthen the support of their opinion (or revise it) by including more/current information, presenting different perspectives or new developments, and elaborating on each photo (NYS LOTE 2b).</li> <li>4. Submit new written draft for feedback</li> <li>5. Revise based on feedback</li> <li>6. Create a new sound recording (voice over) to accompany the revised essay.</li> <li>7. Submit the revised photojournalistic presentation to the teacher.</li> <li>8. Share the revision with identified audience.</li> </ol>

### Example 3: Art

PRE-ASSESSMENT TASK	POST-ASSESSMENT TASK
<p>Students apply design elements taught in unit 1 to create an original postcard illustration dedicated to the ideal of friendship (NYS 1c) (CTS1e) and write OR present an evaluative process statement (NYS CCS W or LS).</p> <ol style="list-style-type: none"> <li>1) sketch multiple thumbnails in his/her sketchbook to convey a message about friendship</li> <li>2) participate in guided peer review to gather different perspectives on the sketches (NYS1e)(CTS 1d, 3d)</li> <li>3) select a sketch to develop</li> <li>4) revise and refine their work (CTS3b) based on self-assessment, peer and teacher feedback (NYS1e) – rubric is used for self, peer and teacher feedback</li> <li>5) submit final piece (NYS 1c) with a written process statement (NYS CCS W6.2) OR a two-minute video (NYS CCS SL 6.4,6.5, 6.6), reflecting on how the design elements taught in the unit were applied, analyzing the effectiveness of artistic choices made (NYS 1d) (CTS 1a), and setting process goals for the next project (CTS 3a)</li> <li>6) submit the postcard image to the online exhibition of the Eye to Eye Project. (<a href="http://media.learn.org/projects/eyetoeye">http://media.learn.org/projects/eyetoeye</a>)</li> </ol>	<p>Students apply design elements taught throughout the year to create an original postcard illustration to convey a message about a concept or theme explored in another class (history, science, English, health...) (NYS 1c) (CTS1e) and write OR present an evaluative process statement (NYS CCS W or LS).</p> <ol style="list-style-type: none"> <li>1) share theme and message with the teacher to get approval</li> <li>2) sketch multiple thumbnails in his/her sketchbook to convey a message about the theme</li> <li>3) participate in a guided peer review to gather different perspectives on the sketches (NYS1e)(CTS 1d, 3d)</li> <li>4) select a sketch to develop</li> <li>5) revise and refine their work (CTS3b) based on self-assessment, peer and teacher feedback using rubric (NYS1e)</li> <li>6) submit final piece (NYS 1c) with a written process statement (NYS CCS W6.2) OR a two-minute video (NYS CCS SL 6.4,6.5, 6.6), reflecting on how specific design elements were applied, analyzing the effectiveness of artistic choices made (NYS 1d) (CTS 1a), and evaluating the attainment of process goals set at the start of the year.</li> <li>7) create an online exhibit of postcards for a digital card service.</li> </ol>



## Example 4: Mathematics

PRE-ASSESSMENT TASK	POST-ASSESSMENT TASK
<p>Students:</p> <ul style="list-style-type: none"> <li>practice using the four operations (add, subtract, multiply, divide) by completing a word problem each day <b>(OA 4.3)</b></li> <li>work with peers to share strategies and solutions</li> </ul> <p>During week 2, students</p> <ul style="list-style-type: none"> <li>“bring” a real world math problem to school and write about it in their math journal:</li> </ul> <ol style="list-style-type: none"> <li>1) explain the background of the math problem;</li> <li>2) write the problem as a multi-step word problem</li> <li>3) write the problem mathematically as an equation, representing the unknown quantity with a letter, using a symbol for the unknown number and representing all operations</li> <li>4) solve the problem and show all work</li> <li>5) explain how they solved the problem <b>(OA 4.3) (CTS 2a,b,c,e)</b></li> </ol> <ul style="list-style-type: none"> <li>work with a peer to self- and peer-assess using a checklist for quality.</li> <li>revise their work, set a goal for improvement on the next problem and submit the original and the revision to the teacher for feedback. <b>(CTS 3ab)</b></li> </ul>	<p>Students:</p> <ul style="list-style-type: none"> <li>“bring” a real world math problem to school and write about it in their math journal:</li> </ul> <ol style="list-style-type: none"> <li>1) explain the background of the math problem;</li> <li>2) write the problem as a multi-step word problem</li> <li>3) write the problem mathematically as an equation, representing the unknown quantity with a letter, using a symbol for the unknown number and representing all operations</li> <li>4) solve the problem and show all work</li> <li>5) explain how they solved the problem <b>(OA 4.3) (MP1, MP 6) (CTS 2a,b,c,e)</b></li> </ol> <ul style="list-style-type: none"> <li>work with a peer to self- and peer-assess using a checklist for quality.</li> <li>revise their work, reflect upon whether they were able to achieve the goal set earlier in the year <b>(CTS 3ab)</b></li> </ul>

## Considering Variety in the System – Types of Assessment

TYPE	EXAMPLES	<i>Place Post-its here:</i>
<b>INFORMATION RECALL</b> objective tasks that require recall or recognition; limited by assessors' thinking	<ul style="list-style-type: none"> <li>■ multiple choice test</li> <li>■ quiz</li> <li>■ spelling test</li> <li>■ calculation-dependent math game</li> </ul>	
<b>PRODUCT</b> tangible products produced	<ul style="list-style-type: none"> <li>■ Glogster</li> <li>■ Wiki entry</li> <li>■ blog post</li> <li>■ sculpture</li> <li>■ math game designed by students</li> <li>■ YouTube video</li> </ul>	
<b>DEMONSTRATION</b> students demonstrate their learning in in some way that must be observed	<ul style="list-style-type: none"> <li>■ oral/panel presentation</li> <li>■ role play</li> <li>■ debate</li> <li>■ oral reading</li> <li>■ basketball game</li> <li>■ choral performance</li> </ul>	
<b>PROCESS</b> focus is on HOW students think, learn, work, write, problem solve  <i>metacognition</i>	<ul style="list-style-type: none"> <li>■ written explanation of how</li> <li>■ journal entry</li> <li>■ verbal reflection</li> <li>■ showing all work</li> <li>■ think alouds</li> <li>■ process statements</li> </ul>	

Note: "A performance task (PBA) is an assessment that requires students to demonstrate achievement by producing an extended written or spoken answer, by engaging in group or individual activities, or by creating a specific product. (Nitko, 2001)" PBA's are available as an alternative to traditional multiple choice tests.

## Attending to Variety in the System

*Guiding Questions: What are the different ways we can collect evidence of student learning at the end of a learning cycle or period?*

**Task:** Match the outcomes or targets in the first column with the type of assessment that is the best fit for capturing evidence of that target. Write the pertinent targets for each type in the second column.

LEARNING TARGETS	"BEST FIT"	TYPE*
1. analyze complex texts 2. draw inference from texts 3. engage in discourse 4. recognize the right answer 5. explain thinking 6. find the right answer 7. follow a series of steps		<b>Selected Response</b> Objective tasks that require recall or recognition; limited by assessors' thinking
8. use technology to research information 9. interpret graphs or other data 10. make text-based claims 11. present information to different audiences 12. produce original work 13. provide a correct response 14. recognize appropriate result		<b>Constructed Response</b> tangible products produced
15. reconcile different perspectives 16. retell stories 17. create a poem 18. set learning goals 19. solve complex problems 20. conduct an experiment 21. use technology to produce writing		<b>Demonstration</b> students perform in some way that must be observed

**\*TYPE also includes PROCESS ASSESSMENTS – metacognitive prompts that require the learner to explain their thinking**

## Variety Check 1: Congruent Assessments

An assessment is congruent if the type of assessment selected is the best match for the learning target it assesses.

Pairs/Triads: Work with a partner to identify an assessment you would use for each of the sample learning targets on the left-hand side. Then label that as recall, product, demonstration, or process. Be ready to defend your choice. (Note: *Remember, a process assessment explicitly requires students to be metacognitive.*)

Learning Target	Type(s) of Assessment Needed			
	Selected Response	Construct: Product	Construct: Demonstration	Process
1) <b>RL.1.2</b> Retell stories, including key details, and demonstrate understanding of their central message or lesson.		X	X	
2) <b>CC.K.5</b> Count to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.				
3) <b>RI.2.6</b> Identify the main purpose of a text, including what the author wants to answer, explain, or describe.				
4) <b>Standards for Mathematical Practices #1:</b> Make sense of problems and persevere in solving them (.... they continually ask themselves, “Does this make sense?”)				
5) <b>W.3.4</b> With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose.				
6) <b>SS.6</b> The three basic economic questions that must be addressed by every society are: What goods and services shall be produced and in what quantities? How shall goods and services be produced? For whom shall goods and services be produced?				
7) <b>Next Generation Science - MS.LS-GDRO.f.:</b> Students who demonstrate understanding can provide explanations of how changes (mutations) to genes, which are located on chromosomes, affect specific inherited traits resulting in harmful, beneficial, or neutral effects.				
8) <b>6.RP.3</b> Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.  a. Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane. Use tables to compare ratios.				
9) <b>21st century outcome:</b> Identify etiquette norms for today's wired society.				
10) <b>W.8.6</b> Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas efficiently as well as to interact and collaborate with others.				
11) <b>RST.6-8.3</b> Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.				

# Thinking about Congruent Assessments

Learning Target	Type(s) of Assessment Needed			
	Selected	Product	Demo	Process
1) <b>RL.1.2 Retell</b> stories, including key details, and demonstrate understanding of their central message or lesson.		✓	✓	
	A congruent “retelling” assessment could ask the learner to provide either a written or verbal response			
2) <b>CC.K.5 Count</b> to answer “how many?” questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, <b>count out</b> that many objects.	✓		✓	
	While the word “count” suggests a demonstration, the skill is recalling number to object relationship. For young students, most assessments involve a verbal component but this skill is primarily asking a student to recall knowledge.			
3) <b>RI.2.6 Identify</b> the main purpose of a text, including what the author wants to answer, explain, or describe.	✓	✓		
	The target is demanding that learners “identify” the main purpose from a list or generate an extended response			
4) <b>Standards for Mathematical Practices #1:</b> Make sense of problems and persevere in solving them (... they continually <b>ask themselves</b> , “Does this make sense?”)				✓
	The explanation of the standard requires that the student explicitly reflect on their process. An assessment could include the question, “How do you know this makes sense?”			
5) <b>W.3.4</b> With guidance and support from adults, <b>produce</b> writing in which the development and organization are appropriate to task and purpose.		✓		✓*
	*While a student needs to go through a process to determine appropriateness, the assessment will need to explicitly ask the student how they knew their writing was appropriate to be congruent.			
6) <b>SS.6</b> The three basic economic questions that must be addressed by every society are: What goods and services shall be produced and in what quantities? How shall goods and services be produced? For whom shall goods and services be produced?		✓		
	As stated, a learner is required to provide a written response to these questions. If the assessment task also incorporates specific content (i.e. Egyptian society), a recall task may be all that is needed. While the learner could present a speech on the topic, it would cumbersome to assess considering the complexity of the target.			
7) <b>Next Generation Science - MS.LS-GDRO.f:</b> Students who demonstrate understanding can <b>provide explanations</b> of how changes (mutations) to genes, which are located on chromosomes, affect specific inherited traits resulting in harmful, beneficial, or neutral effects.		✓	✓	
	A congruent assessment would require the learner to provide their response verbally or in writing.			
8) <b>6.RP.3 Use</b> ratio and rate reasoning <b>to solve</b> real-world and mathematical <b>problems</b> , e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.	✓	✓		
	Although the learning target is a thinking process (“use reasoning”) a well-crafted MC or an extended problem would be a congruent assessment.			
a. <b>Make</b> tables of equivalent ratios relating quantities with whole-number measurements, <b>find</b> missing values in the tables, and <b>plot</b> the pairs of values on the coordinate plane. Use tables to compare ratios.	✓	✓		
	Although the target asks the learner to make, find, and plot, a well-crafted MC or an extended problem would be a congruent assessment.			
9) <b>21st century outcome:</b> <b>Identify</b> etiquette norms for today's wired society.	✓			
	Identification of the norms requires recalling or recognizing.			
10) <b>W.8.6</b> Use technology, including the Internet, to <b>produce and publish</b> writing and present the relationships between information and ideas efficiently as well as to <b>interact and collaborate with others</b> .		✓	✓	
	While the first part of the learning target requires a straight-forward product assessment to be congruent, “interacting” with others requires a demonstration assessment.			
11) <b>RST.6-8.3 Follow</b> precisely a multistep procedure when carrying out experiments, <b>taking</b> measurements, or <b>performing</b> technical tasks.			✓	
	A demonstration task (actually having the students follow the procedure, take measurements, perform tasks) would offer the strongest congruence.			

Important things to remember about congruence:

- A process assessment explicitly requires students to be **metacognitive (aware of their self-regulation)**
- Congruence is about finding a “best fit” to the learning target. While different types of assessments may provide evidence of the learning target, congruence can often best be achieved by matching the expectations of the target, not exceeding or making it more complicated

## Variety Check 2: Degrees of Alignment

Strong Alignment	<p>The assessment/learning activity clearly aligns to the target; the assessment/activity and the target are almost one in the same. The language of the standard is explicit.</p> <p><b>The students' work is evidence enough to confidently infer or conclude the level of student learning/understanding for the target.</b></p>
Moderate Alignment	<p>The assessment/learning activity addresses the target; the target is included in the learning experience but is not the primary focus. The language of the standard is only partially used.</p> <p><b>You would need an additional evidence to confidently infer the level of student learning/understanding for the target.</b></p>
Weak Alignment	<p>The assessment/activity misses the target. Weak does not mean bad. The activity might prepare students for the target (or scaffold their learning), but doesn't explicitly address it.</p> <p><b>You could not assess level of student learning/understanding for the target.</b></p>

ST.9/10. 6 Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text, defining the question the author seeks to address.

Activity	How would you rank the alignment of this task to the intended target?
1. Students read different opinions by two different authors about the impact of Social Media (Twitter, Facebook, Instagram, etc.) on teenagers face to face interactions. They then develop an inquiry question to inform the design of an experiment to student the impact of Social Media in their own lives.	
2. Students analyze a variety of data charts related to Social Media use by teenagers. They develop hypothesis for the reasons behind the data in the charts and provide an explanation for what they think happened using the data.	
3. Students read a first person account by a teenage girl who tracked all of the data in her life – sleeping, eating, studying, Social Media use, interacting with family, families, etc. Students write an analysis articulating the author's question and explaining the ways in which the author' used facts to support her opinion.	
4. Students choose an article and explain how the author used results from an experiment to support his explanation.	

**Alignment Task 1:** Below are five health assessments that Health teachers used to collect evidence of student mastery of the standard: **CM.I.3 Demonstrate healthy ways to express needs, wants and feelings.** How would you describe the alignment of the teachers' tasks? What changes would you recommend to strengthen the alignment of the task?

Assessment Task	Degree of Alignment	Assuming the alignment is moderate, what changes could improve it?
1. Students read a short story about a young person dealing with a challenging issue. After discussing if they agree with the student's solution, they write a vignette and trade with other students and then offer solutions.		
2. Students have 30 minutes to write an explanation of the meaning of the quote, "If you don't have something nice to say, don't say anything at all." <i>Thumper from Bambi.</i>		
3. Students answer 15 multiple choice questions about effective communication strategies.		
4. Students read an excerpt on Habit 5 from "The 7 Habits of Highly Effective Teens" by Covey and assess how effective they are as communicators.		
5. Students brainstorm a negative communication experience they had and then re-write the dialogue using the words and responses they wish they had used. They self-assess their new response against a teacher-created rubric.		

## Activity #1: Degrees of Alignment

**Activity:** Please select one of the examples on the following seven pages and determine the level of alignment for each assessment using the given target.

<b>Example 1: Elementary Level</b> Standard/Target: RL.3.2 Recount stories, including fables, folktales, and myths from diverse cultures; determine the central message, lesson, or moral and explain how it is conveyed through key details in the text.	
<b>Assessment</b>	How would you rank the alignment of this task to the intended target?
A. Students read summaries of six classic fairy tales and select one to read that think will help them answer the essential question, “What is beauty?” After reading the full text of the fairy tale (either Grimm’s or a modern re-telling depending on their reading level), they use a graphic organizer to identify which details from the story support the essential question.	
B. The teacher reads three versions of <u>Stone Soup</u> to the class. She leads a class discussion on the common central message of the stories and how it is conveyed in each. The teacher documents who contributes.	
C. Students read a Greek myth, “ <i>King Midas and the Golden Touch</i> ” and recount the story in their journal.	
D. The teacher reads several of Aesop’s fables to the class. The class creates a chart that identifies the key details and moral of each story.	
E. Students keep a reading response log as they read “Little Red Riding Hood” stories from different cultures. In their log students <ul style="list-style-type: none"> <li>recount key details from each story and identify its message</li> <li>explain the cultural setting of the story</li> <li>explain how the cultural setting impacts the story</li> <li>explain how the stories explain the same message</li> </ul>	

After completing the task, please reflect on **one** of the following prompts:

What new learning did this task **uncover** for you?

What familiar content or learning did this task **reinforce** for you?

What **new questions** emerged for you as a result of completing this task?



**Example 2: Middle School STEM**

Standard/Target: 7.G.01.S: Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.

Assessment	How would you rank the alignment of this task to the intended target?
A. Students respond to true-false questions about scale and geometric figures.	
B. The teacher leads a discussion about how to reproduce a scale drawing and documents who contributes.	
C. Students are asked to draw 2 pictures, one that shows a geometric shape and $\frac{1}{4}$ scale and one at 2x scale and explain how they decided to make the conversions.	
D. Students are provided a scale drawing of the NYC skyline and provided the actual heights of several key buildings. They are charged with determining the scale of the drawing and the actual height of two additional buildings in the drawing.	
E. Students are given an architect's scaled blueprints for a mosaic in a hotel lobby and need to identify the actual size of the tiles for the lobby. They are also provided a cost list for various geometric shapes from a floor supplier and need to calculate the cost of the floor. As a part of their project, they can decompose shapes to create other shapes (using a square tile to make 2 triangles).	

After completing the task, please reflect on **one** of the following prompts:

What new learning did this task **uncover** for you?

What familiar content or learning did this task **reinforce** for you?

What **new questions** emerged for you as a result of completing this task?

### Example 3: Intermediate Physical Education

Target: Students will develop and implement a personal fitness plan based on self-assessment and goal setting, understand physiological changes that result from training, and understand the health benefits of regular participation in activity.

Assessment	How would you rank the alignment of this task to the intended target?
A. The teacher reads a story about Arthur Ashe to the class. The students draw a picture about something they learned from listening to the story and then write three facts about Ashe's life.	
B. Students develop a plan based on the kind of athlete they want to be. They develop goals based on the life of their favorite athlete and write a letter to the athlete with suggestions for improving his or her performance.	
C. The students work in small groups to develop a health profile for their team. They support each other as they complete self-assessments by counting push-ups, timing runs, etc. Each group sets a team goal and each member sets a smaller objective to support the team goal. Throughout the year, the team helps support each other as they work towards their goal. Students write a reflection each marking period on their progress.	
D. The students learn about goal setting by listening to several visiting athletes. After each guest speaker, the students set a goal and determine one health benefit of participating in that particular sport. They write a letter to their healthier selves congratulating themselves on meeting goals.	

After completing the task, please reflect on one of the following prompts:

What new learning did this task uncover for you?

What familiar content or learning did this task reinforce for you?

What new questions emerged for you as a result of completing this task?

<b>Example 4: Intermediate Music</b> <b>Target:</b> <i>create short pieces consisting of sounds from a variety of traditional, electronic, and nontraditional sound sources</i>	
<b>Assessment</b>	How would you rank the alignment of this task to the intended target?
A. Students respond to true-false questions about different types of traditional sound sources.	
B. The teacher leads the class in creating an original song using a piano and empty pots and pans.	
C. Students are asked to draw 2 pictures: One that shows examples traditional instruments, one showing non-traditional source sources.	
D. Students are asked to create a four-bar musical piece using their bodies and any instrument they find in a grab bag (i.e. triangle, tambourine, etc.) They work with the teacher to add a keyboard component.	
E. Students listen to pieces of music on non-traditional sound sources and write a critique of the quality of the music.	

After completing the task, please reflect on **one** of the following prompts:

What new learning did this task **uncover** for you?

What familiar content or learning did this task **reinforce** for you?

What **new questions** emerged for you as a result of completing this task?

### Example 5: Commencement Art

Target: *analyze and interpret the ways in which political, cultural, social, religious, and psychological concepts and themes have been explored in visual art.*

Assessment	How would you rank the alignment of this task to the intended target?
A. Students read a series of articles about the role of art in refugee camps in Rwanda. They write a letter to the camp supervisor with suggestions for new pieces of art that convey “perseverance”.	
B. Students complete a graphic organizer, matching major pieces of art with the political, cultural, social, and religious themes of the time period.	
C. Students pick a time period and determine a piece of art from that period that reflects the political, cultural, social, religious, and psychological concepts of the time were conveyed.	
D. Students select a political, cultural, social, religious or psychological concept (i.e. family, sexual assault, power, change) and research art work that conveyed that theme.	
E. Students profile the religious, cultural, psychological, and political background of their favorite artist. They then re-create one of the artists’ best known pieces in the style of someone with a different cultural experience. (i.e. re-conceptualizing a Frida Kahlo painting as an Andy Warhol painting)	

After completing the task, please reflect on **one** of the following prompts:

What new learning did this task **uncover** for you?

What familiar content or learning did this task **reinforce** for you?

What **new questions** emerged for you as a result of completing this task?

**Example 6: Grade 7 Social Studies**

Target/Standard: RH.6-8.1 Cite specific textual evidence to support analysis of primary and secondary sources.

Assessment	How would you rank the alignment of this task to the intended target?
A. Students respond to true-false questions after reading a short excerpt from the textbook on the American Revolution.	
B. Students explain the meaning of a quote from an editorial on President Obama's budget proposal using information from a variety of text they read in class.	
C. Students read and summarize a newspaper article about recent events in Libya.	
D. Student use a variety of primary and secondary sources to complete a double-bubble map that compares the northern and southern view of states' rights.	
E. Students analyze the governmental structure of the United States by providing examples from primary documents such as the Preamble and First Amendment of the U.S. Constitution as well as secondary sources such as Linda R. Monk's <i>Words We Live By: Your Annotated Guide to the Constitution</i> .	

After completing the task, please reflect on **one** of the following prompts:

What new learning did this task **uncover** for you?

What familiar content or learning did this task **reinforce** for you?

What **new questions** emerged for you as a result of completing this task?

### Example 7: Grades 9/10 English Language Arts

Target/Standard: RI. 9 – 10. 1 Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

Assessment	How would you rank the alignment of this task to the intended target?
A. Students read an article about the brain and memories entitled “Reconstructing Memories with the Stories We Tell” by Arthur P. Shimamura. As they read, they text tag the article, taking note of their connections and questions.	
B. Students complete a pyramid graphic organizer as they read <i>Speech to the Second Virginia Conference</i> . The pyramid is topped with a summary of the argument being made by Patrick Henry and the remainder used to identify evidence used by Henry to support his argument.	
C. Students read an excerpt from George Washington’s <i>Farewell Address</i> . They complete 5 multiple choice items that all begin with “According to the author...”. The distractors are all choices that are illogical inferences based on the text.	
D. Students write a multi-paragraph essay on how Lincoln explains the events leading to the Civil War in his <i>Second Inaugural Address</i> .	
E. Students determine the purpose and point of view of Martin Luther King’s “I Have a Dream” speech. They use evidence from the text to discuss how he uses rhetoric to advance his position.	

After completing the task, please reflect on **one** of the following prompts:

What new learning did this task **uncover** for you?

What familiar content or learning did this task **reinforce** for you?

What **new questions** emerged for you as a result of completing this task?

# Ensuring Variety in the System

A TOS, sometimes called a test blueprint, is a table that helps teachers align objectives, instruction, and assessment (e.g., Notar, Zuelke, Wilson, & Yunker, 2004). This strategy can be used for a variety of assessment methods but is most commonly associated with constructing traditional summative [tasks]. When constructing a [summative task], teachers need to be concerned that the [task] measures an adequate sampling of the class content at the cognitive level that the material was taught. The TOS can help teachers map the amount of class time spent on each objective with the cognitive level at which each objective was taught thereby helping teachers to identify the types of items they need to include on their [tasks]. There are many approaches to developing and using a TOS advocated by measurement experts (e.g., Anderson, Krathwohl, Airasian, Cruikshank, Mayer, Pintrich, Raths, & Wittrock, 2001, Gronlund, 2006; Reynolds, Livingston, & Wilson, 2006).

Fives, Helenrose & DiDonato-Barnes, Nicole (2013). Classroom Test Construction: The Power of a Table of Specifications. *Practical Assessment, Research & Evaluation*, 18(3). Available online: <http://pareonline.net/getvn.asp?v=18&n=3>

## Considering the Different Types of TOS's:

Minimum

Basic

Articulated

Curriculum-  
Based

What are the  
advantages to this  
approach?

What are the  
disadvantages to  
this approach?

# 7<sup>th</sup> Grade Science and Technology Education<sup>6</sup>

## LCI Design Blueprint (Stand Alone Performance Task)

### Section 1: Rationale

#### *Why is this assessment measure designed in this way?*

Relevant 1999 Standards for Educational and Psychological Standards for Testing (AERA, APA, NCME):  
Validity 1.2, 1.5, 1.11, 1.22 Development 3.2, 3.3

#### A. Rationale

##### **1. What purposes will this assessment serve?**

This assessment will:

1. measure students' growth in understanding key learning about the interaction of body systems and how medical technology has evolved to diagnose, treat, prevent, and manage various diseases.
2. support teacher assessment of curriculum and instruction that would enable the development of research, reporting, and presentation of the selected disease

##### **2. How is this assessment supported by the research on best practices in assessment?**

1. Task-specific rubrics make expectations clear and allow students to self-assess.
2. These same rubrics provide specific, descriptive feedback when used by the teacher during the learning process.
3. The assessment task and the rubric are explicitly aligned to targeted learning standards, therefore increasing the likelihood that valid conclusions can be drawn from the results.

#### B. Context

##### **1. When and during what time frame will students complete this assessment?**

**Baseline assessment (pre-)** Fall 2013. Allow 40 minutes for final task – final draft of letter

**Summative assessment (post-)** Spring 2014. Allow 40 minutes for final task – timeline summary

##### **General Overview:**

The project will take place during the body systems unit and the invention timeline unit. Students will pick an illness/disease/disorder that preferably affects someone they know. Students will interview the person, research background information about the disease and explore the evolution of the treatment of that disease. Students will learn about the body systems affected by the disease, the interaction of body systems and how technology has evolved to treat the illness. They will also learn what they can do to have an impact. Students will use research, presentation, and writing skills to convey the information they compiled.

Essential Question: Should society work to preserve life at all costs?

Guiding questions:

- How is the human body affected by disease?
- How does medical technology impact the diagnosis, prevention, treatment or management of diseases?
- What can the students do to have a positive impact?

<sup>6</sup> Task modified based on work by a district participating in the Performance Assessment Design Initiative (PADI)



## Section 2: Description of Assessment Task(s)

### How will students demonstrate understanding?

Relevant 1999 Standards for Educational and Psychological Standards for Testing (AERA, APA, NCME):  
Validity 1.2, 1.3, 1.6, 1.8, 1.16 Development 3.14

#### A. Target Standards

Which content standards is this assessment designed to <i>formally assess</i> ?	Which Common Core Standard(s) for Literacy is this assessment designed to <i>formally assess</i> ?
<p><b>NYS Standard 4 – Living Environment</b>  <b>Major Understanding 1.2j:</b> Disease breaks down the structures or functions of an organism. Some diseases are the result of failures of the system. Other diseases are the result of damage by infection from other organisms (germ theory). Specialized cells protect the body from infectious disease. The chemicals they produce identify and destroy microbes that enter the body.</p> <p><b>Technology Standard 6 Impact of Technology</b>  Technology can have positive and negative impacts on individuals, society, and the environment and humans have the capability and responsibility to constrain or promote technological development.</p>	<p><b>CCLS.ELA-Literacy.WHST.6-8.2:</b> Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes</p> <p><b>CCLS.ELA-Literacy.WHST.6-8.2a:</b> Introduce a topic clearly, previewing what is to follow; organize ideas, concepts, and information into broader categories as appropriate to achieving purpose; include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension.</p> <p><b>CCLS.ELA-Literacy.WHST.6-8.2b:</b> Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples.</p> <p><b>CCLS.ELA-Literacy.WHST.6-8.2c:</b> Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts.</p> <p><b>CCLS.ELA-Literacy.WHST.6-8.2d:</b> Use precise language and domain-specific vocabulary to inform about or explain the topic.</p> <p><b>CCLS.ELA-Literacy.WHST.6-8.2e:</b> Establish and maintain a formal style and objective tone.</p> <p><b>CCLS.ELA-Literacy.WHST.6-8.2f:</b> Provide a concluding statement or section that follows from and supports the information or explanation presented.</p> <p><b>CCLS.ELA-Literacy.WHST.6-8.4:</b> Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> <p><b>CCLS.ELA-Literacy.WHST.6-8.5:</b> With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed.</p> <p><b>CCLS.ELA-Literacy.WHST.6-8.8:</b> Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.</p> <p><b>CCSS.ELA-Literacy.RST.6-8.1:</b> Cite specific textual evidence to support analysis of science and technical texts.</p> <p><b>CCSS.ELA-Literacy.RST.6-8.2:</b> Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.</p> <p><b>CCSS.ELA-Literacy.RST.6-8.8:</b> Distinguish among facts, reasoned judgment based on research findings, and speculation in a text.</p>

## B. Task(s) Description & Teacher Documentation with Explicit Standards Alignment

PRE-ASSESSMENT TASK	
<b>Before the assessment the teacher should:</b> <ul style="list-style-type: none"> <li>Construct a health survey for the faculty</li> <li>Post a link to the survey on the teacher website</li> <li>Identify staff or community members who are comfortable talking about health issues to act as resource for students who do not have a personal connection</li> <li>Tell students of upcoming task in the days prior so they have to identify a friend or family member who is living with a chronic disease (provide a list of 8-10 common diseases to keep the tasks manageable)</li> <li>Based on students' responses and the results of the staff survey, identify a variety of technical texts (at both grade appropriate complexity and below for struggling readers) that explain how medical technology interacts with the identified disease</li> </ul>	
What will the <b>student</b> do or produce to demonstrate their understanding and abilities? What is the task?	What will the <b>teacher</b> do? (includes formative assessment)
<p>Science Class 1: Students will use and interactive health software program [school version of WebMD] to identify how human body systems are effected by diseases (<b>LE 4 1.2 f</b>). After completing a round in the software, students will use the program to learn about a disease that has impacted someone they know. (Options available for students who do not have a ready answer). Students then select a text that explains how medical technology is used to diagnose, treat, and manage the disease (<b>Technology 6</b>).</p> <p>Prior to Technology Class 1: Students independently read text.</p> <p>Tech Class 1: Students re-read their texts and debrief with peers or teacher. Purpose of debrief is to identify facts (<b>RST.6-8.8</b>) and an accurate summary (<b>RST.6-8.2</b>).</p> <p>Science Class 2: Students will use evidence (<b>RST.6-8.1, 6-8.2.b</b>) from the article they read to compose a letter or article that can be understood by someone with the disease explaining how technology was used to diagnose their disease and how it will be used to treat and manage their disease (<b>Technology 6, WHST.6-8.2</b>) Criteria for success: introduction, headings (<b>WHST.6-8.2a</b>), well-chosen facts from the article (<b>WHST.6-8.2b</b>) with accurate citations (<b>RST.6-8.1</b>), precise language (<b>WHST.6-8.2d</b>), transitions between ideas (<b>WHST.6-8.2c</b>), a formal and objective tone (<b>WHST.6-8.2e</b>), and a concluding statement (<b>WHST.6-8.2f</b>).</p> <p>Prior to Technology Class 2: Students share their letter with the person they identified to explore how their understanding compares to the reality of being a person living with that disease. (<b>WHST.6-8.5</b>)</p> <p>Technology Class 2: Students work in "disease-alike" groups to provide feedback, collect additional evidence (<b>WHST.6-8.8</b>), and revise their letters (<b>WHST.6-8.5</b>).</p> <p>Science Class 3: Students independently edit their letters and submit for teacher feedback.</p>	<p>Reserve a lab for the students to use, ensure software is working on all machines. Facilitate student work during lab period.</p> <p>Provide students with appropriate text.</p> <p>Provide scaffold reaching guides according to special education team's guidance.</p> <p>Review definition of fact and how to write an effective summary. Establish reading groups based on student needs. Facilitate as needed.</p> <p>Facilitate writing process as needed. Provide students with a writing checklist.</p> <p>Ensure faculty members are still willing to participate. Schedule meetings between student and staff if needed.</p> <p>Group students. Provide editing rubric.</p> <p>Collect and evaluate student work using rubric. Store for use again at the end of the year.</p>

## POST-ASSESSMENT TASK

### Before the assessment the teacher should:

Ensure faculty members are still willing to participate.

Return student work.

What will the <b>student</b> do or produce to demonstrate their understanding and abilities? What is the task?	What will the <b>teacher</b> do? (includes formative assessment)
<p>Select a disease for their final project. Meet with teacher to determine final topic.</p> <p>Identify an audience for their final project.</p> <p>Research their disease in more detail to identify the history of the disease and the medical technology identified to diagnose, treat, and manage (<b>RST.6-8.8</b>). Write summaries of texts cited (<b>RST.6-8.2</b>).</p> <p>Students will use evidence (<b>RST.6-8.1, 6-8.2.b</b>) from the sources they read to prepare a timeline and a written product that helps his/her audience understand how technology was used to diagnose the identified disease and how it will be used to treat and manage (<b>Technology 6, WHST.6-8.2</b>) Criteria for success: introduction, headings (<b>WHST.6-8.2a</b>), well-chosen facts from the article (<b>WHST.6-8.2b</b>) with accurate citations (<b>RST.6-8.1</b>), precise language (<b>WHST.6-8.2d</b>), transitions between ideas (<b>WHST.6-8.2c</b>), a formal and objective tone (<b>WHST.6-8.2e</b>), and a concluding statement (<b>WHST.6-8.2f</b>).</p> <p>Students work in “disease-alike” groups to provide feedback, collect additional evidence (<b>WHST.6-8.8</b>), and revise their product (<b>WHST.6-8.5</b>).</p> <p>Students independently edit their timeline summaries and submit for teacher feedback.</p> <p>Students revise and send their product and timeline to his/her identified audience.</p>	<p>Return student’s work. Facilitation a conversation about selecting a new disease for the final project or using the same one.</p> <p>Facilitate a conversation on possible audiences (patients at a children’s hospital, CEOs of medical technology companies, purchasing directors at hospitals, patients with the disease, museum curator).</p> <p>Give an overview on reputable internet sites, how to cite other authors’ work, and a checklist for items that need to be completed.</p> <p>Give an overview on organizing writing around an essential question. Identify Tier 2 and 3 words as students encounter them in a text to add to Word Wall.</p> <p>Establish groups based on diseases and students’ needs.</p> <p>Provide feedback.</p>

### C. Criteria for Formative Feedback and Summative Evaluation (**EXCERPT OF RUBRIC**)

What are the criteria that will guide 1) self-assessment 2) feedback to students and 3) scoring of culminating work?

<b>Learning Standards</b>	<b>Beginner (Level I)</b>	<b>Developing (Level II)</b>	<b>Established (Level III)</b>	<b>Advanced (Level IV)</b>
<p>To what degree did the student describe the disease being studied? <i>(LE 1.2j)</i></p> <p><b>Pre – Letter</b> <b>Post – Annotated Timeline</b></p>	<p>The student only identifies the name of the disease. He or she does not distinguish between causes, symptoms, and/or treatments.</p> <p>The summary contains inaccurate information.</p>	<p>The student's description is incomplete. He or she identifies the name and basic information about the disease or confuses the cause, symptoms, or treatment.</p> <p>The summary contains misleading information.</p>	<p>The student's description is complete. He or she accurately identifies the disease, causes, symptoms, and possible treatments for the disease.</p> <p>The summary consists of accurate information.</p>	<p>The student's description is complete, going beyond what's generally known by the public. He or she accurately identifies the disease, causes, symptoms, and possible treatments for the disease and includes emerging and/or controversial research.</p> <p>The summary consists of accurate, including not widely known, information.</p>
<p>To what degree did the student communicate his/her knowledge of how disease impacts multiple body systems? <i>(LE 1.2j)</i></p> <p><b>Pre – Letter</b> <b>Post – Annotated Timeline</b></p>	<p>The student did not communicate his or her knowledge of body systems. For example, he or she may have:</p> <ul style="list-style-type: none"> <li>described the major organs and function of only one body system or</li> <li>explained how the disease impacts the body system with major missing details and/or inaccuracies</li> </ul>	<p>The student struggled to communicate his or her knowledge of body systems. For example, he or she may have:</p> <ul style="list-style-type: none"> <li>partially described the major organs and function of at least two body systems with no reference to how they are dependent on one another or</li> <li>partially explained how the disease impact both systems with many missing details</li> </ul>	<p>The student successfully communicated his or her knowledge of body systems. For example, he or she:</p> <ul style="list-style-type: none"> <li>accurately described the major organs and function of at least two body systems and explained how they are dependent on one another</li> <li>accurately and thoroughly explained how the disease impacts both systems</li> </ul>	<p>The student successfully communicated his or her knowledge of body systems in a way that goes beyond what is expected. He or she may have:</p> <ul style="list-style-type: none"> <li>accurately described the major organs of more than two systems, describing the disease from a holistic view</li> <li>accurately and thoroughly explained how the disease impacts the entire human body</li> </ul>
<p>To what degree did the student communicate his/her knowledge of how the medical technology to deal with this disease has evolved over time? <i>(Technology 6)</i></p> <p><b>Pre – Letter</b> <b>Post – Annotated Timeline</b></p>	<p>The student did not to communicate his or her knowledge of medical technology. He or she may have provided a limited history/timeline of the medical technology but there is no information on how the medical technology works.</p> <p>The description is missing obvious, key details and makes no reference as to what the future holds for the medical technology.</p>	<p>The student struggled to communicate his or her knowledge of medical technology. He or she may have provided a history/timeline of the medical technology but the supporting description of how the medical technology works is limited, lacking, or too confusing.</p> <p>The description is missing minor details and makes only limited or vague reference to the future of the medical technology.</p>	<p>The student successfully communicated his or her knowledge of medical technology. He or she provided a history/timeline. He or she has included a layperson's explanation of the technical description of how the medical technology works.</p> <p>The description is thorough, complete, and informative. Specific references are made to the future of the technology.</p>	<p>The student successfully communicated his or her knowledge of medical technology in a way that goes beyond what is expected. He or she has provided an accurate complete history/timeline that makes connections between seemingly unrelated events and includes a technical description that is easily accessible.</p> <p>The description is detailed and includes recommendations for the future of the technology based on his/her review of the current research.</p>

## ***How do essential questions support quality curriculum and assessment?***

### ***How can essential questions support students to tell their own stories?***

<ul style="list-style-type: none"> <li>• Who counts as a real American?</li> <li>• Can/should change be stopped?</li> <li>• How responsible are we for the behaviors of others?</li> <li>• How should we define poverty?</li> <li>• What is the meaning of life?</li> <li>• Who am I?</li> <li>• Is progress necessary?</li> <li>• Does history really repeat itself?</li> <li>• Are some stereotypes true?</li> <li>• Who decides what history is?</li> <li>• Where does perception end and reality begin?</li> <li>• How far is far?</li> <li>• Is there such a thing as a selfless act?</li> <li>• Is time an absolute thing?</li> <li>• What makes writing worth reading?</li> <li>• Is it better to live with the right question or the wrong answer?</li> <li>• How do we explain the unexplainable?</li> <li>• What is essential?</li> <li>• Do we have control over our destiny?</li> <li>• What is space?</li> <li>• What's the point of a point-of-view?</li> <li>• Is there anything original?</li> <li>• If we are so alike, how do we explain our differences?</li> <li>• Can there be good without evil?</li> <li>• Is war inevitable?</li> <li>• What is war for?</li> <li>• Can a child be a scientist?</li> <li>• Are humans inhumane?</li> <li>• When is the price/cost of discovery too high?</li> <li>• Is terrorism ever justifiable?</li> <li>• Can a moral person be immoral?</li> </ul>	<ul style="list-style-type: none"> <li>• What of mathematics is essential?</li> <li>• Are numbers real?</li> <li>• When is freedom not worth fighting for?</li> <li>• Are all cultures equally valuable?</li> <li>• What is satisfaction?</li> <li>• What is happiness?</li> <li>• What is the most important discovery of the 20<sup>th</sup> century?</li> <li>• Can we love the work but loath the creator?</li> <li>• Is love at first sight love?</li> <li>• Can a virtue be a vice?</li> <li>• What makes art art?</li> <li>• When does a sound become music?</li> <li>• When does movement become dance?</li> <li>• When does loyalty become cowardice?</li> <li>• Can you win and lose at the same time?</li> <li>• Are there any absolutes?</li> <li>• Are all teachers learners?</li> <li>• What is worth teaching?</li> <li>• What is worth learning?</li> <li>• What part of what makes a good employee is teachable?</li> <li>• What is good parenting?</li> <li>• When is cheating not bad?</li> <li>• Is education essential for life's success?</li> <li>• When does patriotism become jingoism?</li> <li>• What is justice?</li> <li>• What is beauty?</li> <li>• Do people really rule?</li> <li>• Should the government legislate morality?</li> <li>• Is religion a necessary component of society?</li> <li>• Is there a planetary culture?</li> <li>• What makes language "beautiful"?</li> <li>• When is the whole greater than the sum of the parts?</li> </ul>
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## How do essential questions become a part of curriculum and assessment?

Read the following examples and determine how teachers use essential questions.

A middle school Social Studies/English Language Arts unit on sustainable systems addresses the question: **What does it take for the people of the world to sustain themselves?** Students begin the unit by looking at human's impact on the earth and exploring questions such as: What does hunger mean to you? What obligation do farmers in part of the world have to the rest of the world? Later, at the end of the first of the four blocks in the unit, they analyze documents and answer two questions: **What are the causes of hunger? What are the causes of drought?** Students then identify if they'll be focusing on the experiences of someone experiencing hunger or someone dealing with a lack of water. They storyboard a rough draft of what they think someone experiencing hunger or drought would experience based on what they've learned so far.

In the second block of the unit the inquiry proceeds into an investigation of food systems: its components, the energy expenditures within the system, the historical development, and the properties of a sustainable food system, including access to fresh water in urban and rural settings. In the third block the students tackle the question: **What does "the right to food" or "the right to water" mean?**

Finally, the assessment calls on these middle school students to explicitly draw connections between hunger in America and their own actions. This inquiry results in a student-created story based questions that has them explicitly tell their own food story and compare and contrast it to the story they imagined, after they make revisions based on their new learning. They explicitly address the question: **What should I do to help the people of the world help themselves?**

An eighth grade class has been working with Steven Covey's Seven Habits of Highly Effective People. As part of this work, they apply principles to evaluate their own habits and decisions. Before beginning the data collection unit, they rank order what matters to them in response to the question, **What really matters?** by considering the things they spend time on or the people they spend time using what matters to them as a criteria. In the unit, they:

- track the amount of time spent watching television and playing video games and appropriately display their results
- read two selections, *Television: the Third Parent* and *Menace to Society* and then they analyze their viewing habits; they develop an argument for the viewpoint opposing the one illustrated in the two texts
- use a project from the mathematics text, Mathematics: Applications and Connections, Course 3, students follow Neilson ratings for a television show as a model for how to engage in a structured study
- develop and conduct a survey of television and video game habits to distribute to a 3<sup>rd</sup> grade and 6<sup>th</sup> grade class; after analyzing the data, they report back to the study participants about their findings and cite recommendations from experts about "ideal" habits
- observe, classify, and analyze television commercials aired during an hour of common television viewing time to identify what the media appears to be communicating about what matters
- interview 2-3 adults in their lives and ask them about lessons learned about what matters; they analyze their interviews as a class and look for patterns
- they develop a rating system to classify shows, video games, and commercials to establish a "Does it matter?" rating scale using modified rating scales established by the media to help students make better decisions about how they spend their time
- students develop a public service announcement (as a culminating assessment) in the form of a poster or video that explains the study and its findings

They then return to the essential questions and answer them in light of what they have learned in the unit.

## ***What can you measure with essential questions?***

### ***Are numbers real?***

*This response is from a sixth grader. There were approximately two months between the pre and post, but the question was addressed multiple times during that period.*

#### **Pretest Response:**

*Sure numbers are real. If I have three pens, that's real. And if I have thirty dollars, that's really real. You can write numbers and use them to measure and count. All of that is real.*

#### **Post-test Response – Journal entry:**

I think that numbers are real, but sometimes they are more real than other times. If numbers are used to count things or to measure size or distance, then they are pretty real because they are connected to something that is real. But if numbers get really big or really small, or if they are negative, then they just mean something in your head, and I think that makes them less real. Like infinity. Is infinity real? How do we know? Or 0.000000000000000000000002. What is that? Is that real?

Another thing that makes numbers real or not is if you understand them. Numbers are real when they mean something to the people using them. XVII meant something to Ancient Romans, so it was real to them. It doesn't mean anything to me, so I don't think it is real. Scientists use scientific notation, but since I'm not a scientist, a number like  $34^{23671345}$  isn't real to me.

When we did our Marketing Unit, we had to order candles and figure out how much money we would make and how much we could spend buying more candles to sell. Sometimes, we were just thinking about numbers that could be- like how many candles we would probably sell the next day and how much money we could invest in new candles. So I don't think those numbers were really real, because they were guesses. But the numbers that the accountants reported every day were very real, because there was money in the lock box that matched those numbers. The number of candles that were sold was real because we didn't have them in our inventory anymore. And the number of candles that we bought was real because they came wrapped in boxes and we had to pay for each one. The numbers that told us our profit at the end were real, too.

I think numbers are real when we use them to mean things that we have or that we understand.

What changed between the pre-test and the post-test? What criteria would you use to assess the response?

## *Considering Authentic Tasks*

AUTHENTIC TASKS require that students engage in actual problems, operating as adults do outside of school, and that they demonstrate and share their learning with audiences that could benefit.

### CHECKLIST FOR AUTHENTIC TASKS

- ☐ Does the task provide a REAL AUDIENCE AND/OR PURPOSE (beyond the teacher and the classroom) for students? *Identify and explain the audience.*
- ☐ Does the task INTEGRATE SUBJECTS/CONTENT AREAS and allow students to naturally use knowledge and skills from more than one discipline? *Identify and explain the subjects.*
- ☐ Does the task require DISCIPLINED INQUIRY and ask students to research in a variety of ways using a variety of resources? *Identify and explain the nature of the inquiry and the resources.*
- ☐ Does the task tap various LEVELS OF THINKING (summarize, analyze, evaluate, create) and DIFFERENT TYPES OF KNOWLEDGE (factual, conceptual, procedural, metacognitive)? *Identify and explain the levels of thinking and knowledge.*
- ☐ Does the teacher provide EXPLICIT STANDARDS AND CRITERIA for quality in the form of models, checklists and or rubrics? *Identify and explain how students will be able to self-assess the quality of their work.*
- ☐ Does the task require ELABORATE COMMUNICATION OR DEMONSTRATION by students of their understanding and skills? *Identify and explain how students will communicate or demonstrate.*
- ☐ Does the teacher build METACOGNITION, SELF- AND PEER- ASSESSMENT, and FEEDBACK into the various phases of the learning task? *Identify and explain when and how this is done.*
- ☐ Does the task / teacher provide any FLEXIBILITY IN CONTENT or STRATEGIES or PRODUCTS that allows for STUDENT CHOICE? *Explain the choices that students will be able to make.*
- ☐ Does the task allow students to INTERACT WITH OTHERS to exchange ideas, to provide feedback or to collaborate? *Identify and explain how students will interact with others.*

<p>The assessment is contrived and divorced from plausible or realistic problems and audiences.</p> <p>The assessment requires students to work independently through all phases.</p>	<p>The assessment involves students in plausible problems/tasks with the class or teacher as the audience.</p> <p>The assessment requires students to work independently but they may have an opportunity to confer with another student.</p>	<p>The assessment involves students in plausible or realistic problems/ tasks with possible audiences beyond the classroom.</p> <p>The assessment requires students to work independently at times and cooperatively at other times to research or give feedback.</p>	<p>The assessment requires that students to engage in real problems, operating as people do outside of school, and that they demonstrate and share learning with audiences beyond the school.</p> <p>The assessment requires students to work collaboratively and interdependently through different phases of the work to deepen each other's learning.</p>
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## MEANINGFULNESS AND AUTHENTICITY

### *What do meaningful and authentic performance tasks look like?*

Individuals:

1. Think of a successful learning experience from your life. It may be from your personal or professional life. Jot a list of the factors that supported your success:

Triads/Small Groups:

2. Make a list of common factors.

3. Review 3-4 of the classroom tasks on the following pages. (Select 1-2 of the ones in your grade level range but at least 1 other as well). As a group, identify the attributes of these tasks that produce learning and make them authentic. Write your list below:

## Elementary tasks

### 1. Are we what we eat?

Students...

- learn about different ways of graphing information in an integrated unit on nutrition and math
- use Survey Monkey to create a survey for their peers in Grade 4 about lunch choices
- write an invitation to complete the survey to all 4<sup>th</sup> grade teachers
- visit classrooms to explain why they are conducting the survey and to provide information about how to access the survey via the school website
- import data from survey into excel to create visual data displays of their peers lunch choices and nutritional value
- learn how to use PowerPoint and view several models of PowerPoint presentations
- create presentations to summarize data, illustrate the results of the survey, and make recommendations for change
- self-assess using the rubric for PowerPoint presentations.
- after rehearsing and giving feedback to each other, they make presentations to all 4<sup>th</sup> grade classrooms in the district, a parent group, the district food service, and the school board.

### 2. Art and Science Analysis: Raising Social Awareness – Who is responsible for planet Earth?

Students....

- examine the closing of the LIPA Power Plant in their community through an interdisciplinary approach to learning with a focus on the arts and science
- after visiting, asking questions about, and exploring the background of the LIPA, they generate questions surrounding the environmental impact of the plant
- They are grouped based upon areas of interest to design experiments that investigate these questions.
- After carrying out the experiments, they write individual scientific abstracts based upon their work and share the results of their experiments.
- are also divided into groups based upon their choice of media (i.e., song, dance, painting, sculpture, photography, digital media). In these groups, they apply their scientific findings as well as their understanding of the role artists play in society to create artistic presentations.
- They then write individual art abstracts based upon their work and share their work with the North Shore Board of Education and local community to raise their awareness.

### 3. Insects Galore: What is our responsibility to other species?

Students ...

- select a specific insect to research
- use a variety of non-fiction materials (books, magazines, websites, videos) to gather information about the insect chosen
- take notes using graphic organizers about the insect's physical appearance, eating habits, habitat, reproduction and other interesting information.
- keep a research journal about the research process and use their notes to draft and revise a chapter for a class book titled "Insects Galore!"
- conference with a peer about the content of their drafts during writing workshop and submit a draft to the teacher for feedback.
- revise and edit the draft for publication and use the classroom desktop publisher to create their chapter and to scan and/or import illustrations of their insect.
- write a publication announcement to be printed in the school newspaper and to be announced during morning announcements.

#### **4. Dirt Detectives: Who am I?**

In a unit in which students learn about their classmates' lives, discover the similarities and differences between them, and experience the complex challenges faced by archeologists when they try to learn about the past, students...

- create their own personal culture bag and present it to the class, while taking notes on each other's presentations.
- secretly (at home) create a box filled with dirt and personal artifacts for other students to excavate during class. The items in the box are related to each artifact from their personal culture bag.
- review a rubric for analysis
- participate in an "archaeological dig" where they try to use their powers of deduction and their notes from the presentations to decipher the objects found in each student's box, just as real archaeologists use facts to learn about artifacts from the past.

<http://www.hightechhigh.org/projects/?name=Dirt%20Detectives&uid=4649fc314b6b37aad3e57b14c0f3617>

#### **5. How Real is Fiction?**

During a unit on fiction, students ...

- choose a novel from a list of 6-8 books provided by the teacher
- keep a reader response journal or design and maintain a blog in which they respond to various prompts related to themes, issues and personal reactions
- exchange journals with a peer at least twice to read each other's entries, discuss emerging themes or respond to blog entries using a checklist for reader responses
- choose a theme or issue from the book that interests them (such as peer pressure, cheating, divorce, individuality, diversity, friendship, intolerance) and get approval to research that theme from the teacher
- locate and read 2-3 non-fiction articles about that theme
- draft, revise and edit a book review for the novel they read that addresses the essential question, "How real is fiction?", and that incorporates information learned from non-fiction articles
- peer assess using the class-developed rubric for book reviews
- publish book reviews in either the classroom newsletter, the school newspaper, the school website or a local newspaper

## Middle School Tasks

### 1. What is courage?

Students...

- read and discuss a series of fictional stories that illustrate the theme of courage.
- For each story, they complete a literary response in which they reflect upon the following questions “What is courage? How did the character reveal he/she was courageous? What qualities made the character in this book courageous?”
- They read several articles about people who have performed courageous acts.
- They write an additional response explaining how each of these people demonstrated courage.
- They use their literary responses to write an essay answering the essential question ‘What is courage?’ supporting their claims by connecting the literature and the world around them.
- The class selects and submit the winning essays to a local newspaper.

### 2. History in My World – Who determines the truth?

During a study of United States history, students work in cooperative groups to...

- choose an important historical event from a list of events provided by the teacher
- use a variety of sources to research the significance of the chosen event in the political, social, and economic areas
- draft, revise and edit a script for a short play that teaches about the significance of the historical event and the impact the event has had on life today
- self-assess using a rubric for historical plays and submit the script to the teacher for feedback
- revise the script based on feedback
- prepare costumes and props, perform and videotape the play
- respond to and assess each other’s performances using the rubric for historical plays

### 3. Music Portfolio

Students...

- videotape themselves singing two pieces in September
- self assess each performance using a voice rubric
- conference with the teacher about the performances
- write up an evaluation of strengths and weaknesses
- set goals for the year
- keep a journal of thoughts, ideas, reactions related to goals and practices
- videotape two pieces in May
- self assess each performance using the voice rubric
- evaluate whether or not goals have been met and write a reflective statement about successes, struggles, and growth over the course of the year
- prepare a final video portfolio for the year, shared at the end-of-year celebration
- repeat this process for 7<sup>th</sup> and 8<sup>th</sup> grade
- submit portfolio for college auditions

#### 4. Striving Toward Healthy

Students...

- conduct a personal health and fitness appraisal to determine areas of strength and health risk
- conduct research on a) guidelines and recommendations associated with specific health goals; b) needed behavioral changes; and c) medical findings about different approaches
- use the appraisal results to develop a personal vision and plan for achieving a health-enhancing goal that is realistic, attainable, and beneficial to health
- design an action plan, using goal-setting guidelines from previous lessons on personal and social skills.
- use a rubric for quality action plans to self-assess and revise their plans
- implement the action plans
- periodically assess and evaluate their progress towards reaching their goals by writing ongoing journal entries (include artwork, poetry, etc.) and working with their peers
- assess their progress at the end of the course and identify future goals through the lens of the essential question, "What does it mean to be responsible for our own health?"

#### 5. Is government necessary?

Students...

- ponder the essential question: *Is government necessary?* by participating in hands-on activities and analyzing a series of historical documents based on the themes of protection, resources, unity and trade
- are actively involved in a peer run writer's workshop These workshops are led by eighth grade students who have previously had the opportunity to study these documents and have honed their own essay and workshop skills over the course of this quarter.
- At the writers' workshop, seventh graders, led by the eighth grade students, craft arguments in support of or against the necessity of government, citing historical evidence from the documents.
- Students demonstrate their knowledge of the essential question in a town meeting format accessed by outside community members and school officials. Following this day, seventh grade students are responsible for expanding their arguments by writing a formal DBQ essay.

## High School Tasks

### 1. Designing a Garden

Students...work in cooperative groups to design a garden pond for a nearby courtyard in which they respond to the following questions:

1. *What factors will affect the choice of materials for the garden? (materials such as gravel, stones, fountain, etc.)*
2. *What properties are desirable in the materials? Why?*
3. *How will the environment affect the chosen materials?*
4. *Which of the rocks commonly found in the garden center would be most suitable for use in the garden? Why?*

They:

- determine which commonly available rock materials would be suitable as coping stones and decorations
- carry out their experiments
- record data
- revisit their hypotheses
- use a rubric for scientific method to self and peer assess.
- draft a design for the garden pond
- use teacher feedback on the draft to revise their design for the garden pond and write a justification for selected materials that discusses the properties and effects of weathering
- send designs to a landscape architect for feedback
- choose the best design for the courtyard based on feedback and submit the design to the Board of Education

### 2. Digital Debate Team

Students...

- use computer technologies to practice online communication and debating, including blogging
- learn how to design and produce a group webpage to establish an online presence
  - work in groups to design web pages
  - use a rubric to self-assess and revise the web page
  - use feedback from peers to revise web pages
- work in groups to conduct internet research around a controversial topic of their choosing
  - evaluate sources for reliability and accuracy of information
  - develop a class rubric for persuasive essays
  - draft persuasive essays and revise using the rubric
  - publish persuasive essays online
- read and respond to each other's essays, adding supplementary links/evidence as necessary
- participate in oral debates that are recorded and televised by the local/school news team and posted on the school website
- complete a reflection about their learning at the end of the project

### 3. The West Parking Lot

Students...

- learn about calculus of motion along a curve
- solve practice problems based on what they learn
- study the collected data on the incidence of accidents in the west parking lot of the high school
- use calculus of motion along a curve to calculate a safe speed limit for the lot
- peer- and self-assess using the rubric for problem solving
- prepare a written recommendation for a change in the speed limit, supporting the recommendation with data and calculations (in cooperative groups)
- review several quality business letters and discuss quality attributes
- draft, revise and edit a letter of recommendation to be submitted to the school board for review
- assess the letter with the writing checklist
- share letters and vote on the best letter to go to the board
- write a written reflection about the process of working collaboratively

### 4. Genocide

In this interdisciplinary unit, students....

- use the concepts of the Holocaust, as defined in their English class reading of Wiesel's Night, and as a Social Studies springboard for research about eight different genocides around the world.
- delve into genocide studies in both classes.
- generate ideas for eradicating genocide
- compete for best ideas
- present their proposals to the UN Committee of New Canaan.

### 5. Waste Generation and Disposal

In this parallel unit on waste and waste management in AP Environmental Science and inferential statistics in M2 Algebra 2, students...

- work with a specific waste stream product found during trash data collection such as glass, paper, or plastic water bottles.
- creates a persuasive campaign to educate members of the school community about the specific issues related to the disposal of their waste stream component and evaluate possible solutions to these issues.

## Planning for Day 2

**Task 1:** As a design team, determine what standards will likely be informing your design work. Possible standards may include:

- ☐ Common Core Learning Standards – Literacy (Reading/Writing)
- ☐ Common Core Learning Standards – Mathematics
- ☐ Common Core Learning Standards – Speaking and Listening
- ☐ Common Core Learning Standards – Language
- ☐ Common Core Learning Standards – Reading Foundations
- ☐ Common Core Learning Standards – Technical/Historical (Reading/Writing)
- ☐ Next Generation Science Standards
- ☐ New York State Revised Social Studies Standards
- ☐ New York State Content Standards (art, music, PE, FACS, etc.)
- ☐ Critical Thinking Standards/Habits of Minds, etc.
- ☐ District-created gradation expectations

**Task 2:** Acquire sufficient copies of the selected standards for all members of the team.

**Task 3:** Review the selected standards prior to Day 2. Be sure to bring your copy (copies) on Day 2.

**Task 4:** As a design team, consider the conversation today around essential questions and authenticity. Being to brainstorm possible essential questions and culminating summative tasks. Bring your brainstormed list to Day 2.