The Common Core in Action: How Arts Integration and the Common Core Converge
Common Core State Standards (CCSS):
A Brief History

Where are we? How did we get here?
Goal of CCSS Initiative

• Develop a set of shared national standards

• Ensure that students in every state are held to the same level of expectations as students in the highest performing countries

• Gain knowledge and skills to prepare students for success in postsecondary education and in the global arena
Criteria for CCSS Established

- Fewer, higher, and clearer standards to best drive effective policy and practice;
- Aligned with college and work expectations;
- Inclusive of rigorous content and application of knowledge through higher-order skills, so students are prepared for the 21st century;
- Internationally benchmarked; and
- Research- and evidence-based (CCSS Initiative)
A Closer Look at the Standards

Two overarching sets of standards:

(1) English Language Arts

(2) Mathematics
Language and Literacy

Four strands:
Reading
Writing
Speaking and Listening
Language
Instructional Shifts in Literacy

- Balancing informational and literary text
- Building Staircase of Complexity
- Wedge in the disciplines
- Text based answers
- Writing from sources
- Academic vocabulary
Informational and Literary Texts

- Students read a true balance of informational and literary texts.

- School classrooms including elementary classrooms become places where students access the world – science, social studies, the arts, and literature – through text.

- At least 50% of what students read is informational.
Common Core Standards for Math are divided into two sets of standards:

- **Mathematical Content**
  Organized by “conceptual categories” such as numbering and quantity, algebra, functions, geometry, modeling, and probability and statistics

- **Mathematical Practice**
  Describes areas of expertise in mathematics that students must develop and practice from kindergarten through 12th grade
Key Aspects of the Mathematics Standards

• Focus – structured to address content at an effective level of depth; essential topics are specified at each grade level and described in detail

• Coherence – requires and reinforces depth of understanding and comes through the organization of ideas
Standards for Mathematical Practice

- Emphasis on conceptual understanding is not only a part of the Standards of Mathematical Content, but also a part of the Standards for Mathematical Practice.

- Dual role emphasizes that eight standards of practice describe varieties of expertise at all levels.
Eight Standards of Mathematical Practice

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.
The Core Six: Essential Strategies for Achieving Excellence
by H. F. Silver, R. T. Dewing, & M. J. Perini

1. Reading for Meaning – helps students develop skills proficient readers use to make sense of rigorous texts
   • Managing text complexity
   • Evaluating and using evidence
   • Developing the core skills of reading: finding main ideas, making inferences, and analyzing characters and content

2. Compare and Contrast – teaches students to conduct a thorough comparative analysis
   • Conducting comparative analyses of academic content
   • Conducting comparative readings of two or more texts
   • Integrating information from multiple sources

3. Inductive Learning – helps students uncover patterns and structures in the content through an inductive process (analysis of the specific to form generalizations)
   • Finding patterns and making logical inferences
   • Supporting thinking with evidence
   • Mastering academic vocabulary
4. **Circle of Knowledge** – a strategic framework for planning and conducting classroom discussions that engage students in deeper thinking and thoughtful communications
   • Speaking, listening, and presenting
   • Integrating and evaluating information
   • Collaboration with peers

5. **Write to Learn** – helps teachers to integrate writing into daily instruction and develop students’ writing skills in the key text types associated with college and career readiness
   • Developing higher-order thinking through writing
   • Writing in the key Common Core text types: arguments, informative/explanatory texts, and narratives
   • Writing for a wide range of tasks, audiences, and purposes

6. **Vocabulary’s CODE** – a strategic approach to vocabulary instruction that improves students’ ability to retain and use crucial vocabulary terms
   • Mastering academic vocabulary
   • Improving literacy across all strands (reading, writing, speaking/listening, and language)
   • Building background knowledge as a foundation for success in school, college, and career

Arts Integration: A Complement to CCSS

A strategy for teaching and learning that engages the arts as central to the acquisition of content and skills required to master core academics.
Arts Integration Attributes: Supporting CCSS

- Teaches students how to analyze, explain, and apply knowledge
- Perseverance and grit: Orients students to achieve results
- Teaches students how to make decisions
- Teaches students how to work more cooperatively
- Encourages individuality and diversity
- Improves students’ retention of knowledge
- Teaches students how to transfer knowledge
- Provides meaning to students’ experiences
- Teaches students that learning can be fun and a life-long pursuit
Arts Integrated Projects: How to Connect to CCSS

- Understand the Arts as core content
- Engage in purposeful planning that connects the arts to content area instruction
- Determine what students need to know: Identify concepts and skill sets that students need to develop
- Employ “Big Ideas” and “Essential Questions” to deepen students’ learning experiences and provide avenues for higher level thinking
- Establish a few clear learning goals that connect to content area instruction and align with the arts concepts and skills
- Make the learning project based or experiential, have a research component, and require writing that meets a variety of Common Core text types
- Use reflective practice: Require students to reflect on the content they have learned as well as their learning process
- Assess student learning from multiple perspectives; engage students in the assessment of their own learning
Build Literacy Skills From a Creative Perspective

Common Core Standard: CC5.R.L.3 Key Ideas and Details:
Compare and contract two or more characters, settings, or events in a story or drama, drawing on specific details in the text (e.g., how characters interact.)

PA Arts and Humanities Standard:
9.3D Compare similar and contrasting important aspects of works in the arts based on a set of guidelines using a comprehensive vocabulary and critical response.
Arts Integration - Arts Link: Building Mathematics and Science Competencies

A Case Study

A quasi-experimental research design to improve core content learning in mathematics and science in four School District of Philadelphia schools, grades 2\textsuperscript{nd} through 5\textsuperscript{th}. 
Promotes a learning model structure that focuses very specifically on core content learning in mathematics and science and promotes reading, research, and writing across these content areas.

Identifies relevant standards (now CCSS) and requires each grade level collaborative team, which includes two classroom teachers, the art teacher, and a master teaching artist who works in each classroom over the course of 8 months (30 sessions), to develop units of study based on “big ideas” and “essential questions” taken directly from The School District of Philadelphia’s required curricula.

Employs an arts integration model that aligns concepts and skills in core content academic areas with concepts and skills in the arts to reinforce learning from multiple perspectives.

Focuses student learning on in-depth experiential engagement with the core curriculum.
Math Learning Objectives (PA CCSS/SDP curriculum)
1.
2.
3.

Science Learning Objectives (PA CCSS/SDP curriculum)
1.
2.
3.

Art Learning Objectives (PA CCSS/SDP curriculum)
1.
2.
3.

Arts Concepts/Skills & Integrated Subjects Activities
1.
2.
3.

Assessment of Project Learning
1.
2.
3.
4.
5.

Aligning Concepts and Skills to Promote Learning
<table>
<thead>
<tr>
<th>School</th>
<th>Morton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 2</td>
<td>Marking Period 2</td>
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**Concept/Big Idea:** Weather patterns

**Essential Question:** How can we observe and predict weather patterns using math to collect data?

<table>
<thead>
<tr>
<th>Math Content Descriptor</th>
<th>Science Content/Performance Descriptor</th>
<th>Art Content/Performance Descriptor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data collection and identification of various polygons</td>
<td>Observe natural phenomena, record observations, and make predictions</td>
<td>Functional design</td>
</tr>
</tbody>
</table>

**Teaching Objective:** (What I will teach) (Classroom teachers complete)
- Reading and using tally marks
- Making graphs from tally marks
- Identifying polygon shapes

**Math Learning Activities:** (What students will do) (Classroom teachers complete)
- Students will be able to identify and create various polygons
- Students will accurately measure materials
- Students will make predictions of which kite will fly and record the results using tally marks

**Science Learning Activities:** (What students will do) (Classroom teachers complete)
- Students will keep track of daily weather
- Students will construct a windsock to record wind direction
- Students will make predictions on which shapes will best suit building a kite that flies

**Art Skills & integrated Learning Activities:** (What students will do) (Art teacher/Teaching artist complete)
- Students will explore master kite designs that use geometry
- Students will create a “design plan” drawing
- Students will use popsicle sticks and paper to create their kites

**Vocabulary**
- Triangle, square, pentagon, hexagon, data, tally mark
- Natural phenomena, prediction, weather patterns
- Functional design, design plan, form/shape, multi-media, craft

**Assessment strategies:** Students will explain the results of simple experiments verbally and through drawing and writing; students will be assessed on their “design plan” and math tally charts

**Describe strategies that will be used to meet Common Core State Standards including how you will meet CC English Language Arts Standards:** Students will conduct weather experiments and report the data in both written essays and verbal explanations. They will research shapes of kites, make assumptions about which kite forms will fly best, and compare and contrast results discussing their findings with other students.

**Math Standards:** M3.A.2.1.2, M3.A.3.1.1
- Record addition and subtraction facts

**Science Standards:** S4.A.1.1.3
- Observe daily weather and record daily weather observation

**Art Standards:** 9.1.B
- Make works of art

9.1.H
- Identify properties of materials and tools
How do Arts Link and arts integration based programs meet Common Core requirements in a mutually beneficial way?

- Project content is anchored in CCSS/PA SAS (Standards Aligned System).
- By using “Big Ideas” and “Essential Questions” to guide curricular development, Arts Link taps into higher order thinking skills as defined by Webb (1997) in “Depth of Knowledge”.
- Arts Link provides additional instructional text resources to classroom teachers in science and mathematics.
- Teachers plan together with the teaching artist and art teacher to reinforce concepts through multiple perspectives and experiences. They meet formally and informally on a frequent basis. They all share a private Facebook page that allows for cross fertilization of ideas among the four schools.
- Ample time (8 months, 30 sessions) affords artists and teachers the opportunity to delve deeply into projects allowing students to read, research and write along with creating a visual understanding of their mathematics and science concepts.