

STEAM CORNERSTONE HIGHLIGHTS

SY 2016-17



Cornerstones are high-quality, in-depth core curricular experiences that students will engage in through the DCPS units of study. Anchored by high-impact content-specific instructional models Cornerstone tasks will lead to a variety of meaningful student work products.

Kdgn, Science/Physical Education

Students will have the opportunity to taste new fruits and vegetables, while learning how to sort foods according to their food groups and sources. They will preserve the experience by creating a drawing of a fruit or vegetable they enjoyed and identifying whether it is a fruit or a vegetable. Through project based learning, students will learn about fruits and vegetables, sample fruits and vegetables, and demonstrate learning by drawing and classifying one fruit or vegetable. Students will be assessed with a four point rubric, graded on the following: ability to draw a picture of the fruit or vegetable, ability to color the fruit or vegetable the correct color, ability to draw the fruit or vegetable on a plate, and the ability to identify whether the food is a fruit or vegetable.

Kdgn, Music -Improvised Accompaniment-*How do I understand and benefit from difference?*

Following an exploration of contrast through the elements of music, students will hear a familiar story and connect these elements to communicating physical, emotional and dramatic elements of the narrative. Students will use instrumentation and movement to provide accompaniment to a teacher-read narrative. Final product will be a performance.

1st Grade, Science/STEAM - Designing Model Membranes

Students will be challenged to design a membrane for a frog habitat that delivers just the right amount of water. Students learn how membranes function, and then apply their knowledge of the basic needs of living organisms to the engineering design challenge. They learn to think like bioengineers as they design a model membrane to mimic the properties of real membranes in live organisms.

2nd Grade, ELA/Library - The Best of Bugs: Designing Hand Pollinators

Students will take on the role of agricultural engineers. They will research insects, insect life cycles, pollination, and natural systems as they test a variety of materials, then engineer their own technologies for pollinating plants by hand.

2nd Grade: Forces of Art - What is the role of movement in the arts?

Students study the role that movement plays in the creation of work. They will examine a range of techniques used to make marks, both additive and reductive. They will examine the role that forces play on the resulting marks. Concurrently, students will examine movement in their world, both forced and natural. They will then create works that use mark-making to document movement.

3rd Grade, ELA/Library: Habitat Heroes

Third graders will become zoologists, understanding the various habitats where animals live. They will research a specific habitat and identify necessary environmental factors for the survival of a chosen animal. Analyzing and synthesizing information from multiple sources, students will create a triorama that represents the animal's habitat and perform a public service announcement advocating for the habitat's preservation.

3rd Grade, ELA/Library : Washington, DC: It's Right Outside My Door.

Students will further their study of the District of Columbia's various monuments, historical and cultural landmarks, and neighborhoods. Utilizing text features and informational text writing, they will create a travel guide or webpage to encourage people to visit their communities.

3-5th Grade Music: Narrative Composition

During this unit, students will compose lyrics and melodies based on a chosen narrative. Inspired by a real-life story of a child who created change, students will learn how to use patterns of rhyme and meter to compose lyrics. Students will develop a balanced composition by creating and performing a simple rap over a rhythmic ostinato.

4th Grade, ELA/Art: Powerful Characters, Powerful Words

Students will create puppets and scenery to express how an individual's motivations, feelings, and actions can alter a course of events. A performance component of this Cornerstone will require students to act out scenarios during which their individual characters interact based on their motivations and feelings.

4th Grade: Science/STEAM: Designing Windmills

Students will take on the role of mechanical engineers, explore natural resources and energy, and plan, create, test, and improve a windmill.

5th Grade, Math & PE - Basketball Shootout

Students will compete in 30-second, in-class basketball shooting competitions to determine the number of shots they can make out of the total attempted. The class will then determine its overall fraction of the shots made and the class average.

5th Grade, Science/STEAM - Teyha's Pollution Solution

Students will investigate how living things interact in an ecosystem, as well as how energy is transferred in the river ecosystem outlined in the unit.